

C.O.P.E. INFLUENCE ON RESILIENCY AND SELF-EFFICACY IN A RURAL NORTH  
DAKOTA SCHOOL (CREATING OPPORTUNITIES FOR PERSONAL EMPOWERMENT)

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Ariel Kristine Schwarzrock

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**Title**

C.O.P.E. INFLUENCE ON RESILIENCY AND SELF-EFFICACY IN A  
RURAL NORTH DAKOTA SCHOOL (CREATING OPPORTUNITIES  
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**By**

Ariel Kristine Schwarzrock

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The Supervisory Committee certifies that this dissertation complies with North Dakota  
State University's regulations and meets the accepted standards for the degree of

DOCTOR OF NURSING PRACTICE

SUPERVISORY COMMITTEE:

Heidi Saarinen, DNP, FNP-C

---

Chair

Mykell Barnacle, DNP, FNP-BC

---

Daniel Friesner, PhD

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Molly Secor-Turner, PhD, MS, RN

---

Approved:

April 9, 2021

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Date

Carla Gross, PhD, RN

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Department Chair

## **ABSTRACT**

One in three teens is estimated to experience an anxiety disorder between 13 to 18 years of age. Developed mental health burdens in adolescents can go undetected and untreated. About 50% of those with mental health disorders noted in adulthood started by age 14 years. Therefore, adolescence may be a critical phase for developing positive coping mechanisms and one where nurse practitioners can proactively impact outcomes. Cognitive behavioral therapy (CBT) is an evidence-based strategy effective in decreasing mental health burden. Creating Opportunities for Personal Empowerment (COPE) is a program created for pediatrics using CBT strategies to manage emotions and promote healthy lifestyles. The purpose of the practice improvement project (PIP) was to improve resiliency and self-efficacy in junior high students at a rural North Dakota (ND) junior high school through COPE program implementation. Objectives included assessing if adolescent resilience and self-efficacy scores increased after implementation of the program with evaluation to make recommendations based on literature findings and project outcomes. The Integrated Theory of Health Behavior Change (ITHBC) helped guide the PIP and suggests adolescents can be taught to engage in healthy behaviors for effective mental health management through healthy coping skills and behaviors. A logic model helped guide and evaluate the program. The school counselor in a rural ND school became certified in COPE to facilitate and identified five students willing to participate. The COPE Teen seven-session program was implemented with parental consent and IRB approval; each session lasted approximately 30 to 45 minutes weekly in the school. Qualitative and quantitative data were collected via paper pre- and post- surveys for evaluation. Descriptive statistics were used to evaluate objectives. All data collected was entered and stored online in a Qualtrics database to aide security and statistical analyzation. Despite implementation during the COVID-19

pandemic, overall resiliency and self-efficacy scores increased for students after implementation. Students indicated they enjoyed the program and identified learned skills to be beneficial. The COPE program was recommended to continue in the school with further research and larger sample sizes to support proactive approaches to mitigate adolescent mental health care between the NP and school settings.

## ACKNOWLEDGMENTS

I am grateful for a supportive committee and unwavering committee chair throughout the whole process of implementing this practice improvement project. Dr. Heidi Saarinen, the committee chair, helped me not only find a way to put my passion for mental health into practice, but also helped me to navigate the deep waters of an ever-changing world with the coronavirus-19 pandemic during implementation. The supervisory committee, Dr. Mykell Barnacle, Dr. Daniel Friesner, and Dr. Molly Secor-Turner, also offered tremendous insight through their expert guidance and feedback throughout the whole process.

I also would like to recognize the junior high school counselor for being a rock throughout the implementation process as well. While we started making plans pre-pandemic for the implementation of COPE, the constant changes in health guidelines and school curriculum created a challenge for implementation. While we would have liked to reach more students, such as a whole grade, the timing and resources did not allow during the pandemic. I am grateful for the counselor continually advocating for the students and hope more students can be reached with the program in the future.

The funding of the project was mainly contributed by Ottertail Power Company Foundation. The grant allowed all COPE curriculum and materials to be purchased for the counseling center. With the gift of monetary support, students were able to participate without concern of finances.

Certainly, I would also like to recognize my husband, Jeremy, for his continual and steadfast support. He is always encouraging me to be the best I can. His own servant's heart encourages me to look towards how I can help those around me. Balancing home life with work

and academics can be a challenge at times, but he always has supported me through all circumstances.

And lastly, there are so many others involved when a project is in progress. Individuals going before me in research and development are not forgotten. Having the resources and research available to look into adolescent mental health is a large part of the practice improvement project. Being able to implement evidence-based curriculum like COPE and evaluate with tools developed for resiliency and self-efficacy such as the BRS and NGSE means many of hours of research before me. I am glad to be a part of an ever-progressing profession.

## **DEDICATION**

The dissertation project is dedicated to my husband, Jeremy. He is a constant inspiration in my life and unwavering support. While the process for implementing the project is demanding, he stayed by my side and encouraged me every step of the way. We also have many family and friends who struggle with mental health; I would also like to dedicate this project to them. I hope education related to mental health can become a part of every school so the burden into adulthood can be lessened.

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## **CHAPTER 1. INTRODUCTION**

### **Background and Significance**

Approximately 25% of teens have a behavioral disorder; one in every three teens is estimated to experience an anxiety disorder between the ages of 13 to 18 years of age (Erich et al., 2019; National Institute of Mental Health [NIMH], 2017). Developed mental health burdens in adolescents can often go undetected and, therefore, untreated. Of the low number of adolescents referred to treatment for mental health concerns, many drop out of treatment early (Viefhaus et al., 2019). About 50% of all those with mental health disorders noted in adulthood started by 14 years of age (World Health Organization [WHO], 2018). Due to an estimated 19.1% of adults in the US having had an anxiety disorder diagnosed within the past year, supporting adolescents to better equip against mental health disorders is important (NIMH, 2017). This practice improvement project (PIP) focused on empowering teens through improved resiliency and self-efficacy to possibly help prevent mental health concerns later in life such as anxiety and/or depression.

When mental health goes untreated, safety concerns with self-harm can arise. Suicide is the second leading cause of death for adolescents, with suicide rates continuing to climb (Esposito-Smythers et al., 2019). In the US, suicide rates resulting in death for adolescent males ages 15-19 years of age peaked in the 1980-1990s at 18.1 per 100,000 people, declined in the early 2000s to 10.8 per 100,000 people, and were on the rise again in the 2010s (Curtin et al., 2017). Suicide rates resulting in death for adolescent females 15-19 years of age followed a similar pattern as males (Ivey-Stephenson et al., 2017). Overall, females had lower rates of suicide than males with the peak female suicide rates in the 2010s. While male rates were highest in the 1980-1990s, female rates are highest in the 2010s at 5.1 per 100,000 people and climbing.

For comparison, in 2015 there were 1,537 male suicides and 524 female suicides in the adolescent ages of 15-19 years. Without regard to age, rural areas across the US consistently have higher rates of suicide than even mildly urbanized areas.

Often, mental health conditions result in high healthcare costs and community loss (Olthuis et al., 2015). For example, an individual experiencing high anxiety symptoms may be unable to perform everyday activities such as self-care, attend work, or care for a family. Early intervention during childhood and adolescence can help prevent individuals with anxiety from developing further mental health problems, such as substance abuse, later in life (James et al., 2016). In addition to risks for developing further concerning mental health issues, anxiety can also cause physical symptoms including gastrointestinal upset, uncontrolled pain, and dermatological irritation. Polloni et al. (2017) found an increased correlation between the body's mental stress and the presentation of allergies. While data is unclear if one precedes the other in terms of poor mental health and atopic diseases, the correlation has been found that the two can form a detrimental cyclical pattern. Strategies aimed at preventing and treating mental health diagnoses can also better mitigate other effects caused by mental health burden. Cognitive behavioral therapy (CBT) is one such strategy that has been shown to effectively decrease mental health burden.

### **Cognitive Behavioral Therapy**

CBT is a type of psychotherapy focusing on modifying emotions, behaviors, and thoughts (James et al., 2016). Generally, the person works with a mental health counselor, such as a psychotherapist or therapist, during scheduled therapy sessions (de Haan et al., 2013). By emphasizing solutions, CBT helps people to challenge distorted thoughts and, in turn, change negative patterns of behavior. Overall, the goal of CBT is to help patients realize that while they

may not be able to control the world around them, they are able to control their own thoughts, interpretations, and behaviors.

The foundation of CBT rests on the concept that thoughts and perceptions influence an individual's behaviors (Harley, 2018). These emotions may distort reality for patients. Through CBT, patients are guided to identify destructive thoughts, assess accuracy of reality, and employ strategies to challenge and overcome inaccurate perceptions. CBT targets change in the following areas: where people direct their attention, when people are able to use cognitive reappraisal, and how people can develop more beneficial coping strategies and behaviors.

### **Rural North Dakota**

CBT does not need to be confined to just an office setting; therefore, CBT can have great implications for practice within rural settings, such as the state of North Dakota (ND).

Researchers in one study focused on the effects of home-delivered CBT among rural, ethnically diverse older adults (DiNapoli et al., 2017). Adults included in the study were 65 years of age or older with a decreased quality of life and diagnosed with anxiety and/or depression. Throughout the study, in-home visits with a cognitive behavioral therapist were made. Significant decreases in anxiety and depression symptoms resulted, demonstrating the efficacy of CBT. While the study was aimed at older adults, the findings may be parallel throughout all ages.

In reviewing CBT with children and adolescents, sessions were equally effective between individual, group, and family/parental forms (James et al., 2016). In reviewing studies aimed at adults with anxiety, no differences in efficacy were shown between unguided CBT versus therapist-supported CBT, nor face-to-face CBT versus therapist-supported internet CBT (Olthuis et al, 2015).

CBT has been shown to be beneficial to all ages and in a multitude of modalities (James et al., 2016; Olthuis et al., 2015). Patients living in rural ND can participate by phone or online in self-guided sessions, decreasing the burden of travel and resources to maintain office visits. Patients do not need to be diagnosed with a mental illness to benefit from CBT. In simple terms, CBT is helping patients recognize their thought processes and train their emotions and behaviors to react appropriately rather than destructively.

Not only can any area of health care benefit from CBT, but also any patient age (Polloni et al., 2017). Individual sessions, group sessions, telephone, video, or in-home visits are all ways CBT can be delivered. Group sessions can be used in grade school settings to reach multiple students at once. Creating Opportunities for Personal Empowerment (COPE) is a program aimed at teens and children using CBT strategies to manage emotions while also enhancing healthy lifestyles (Cope2Thrive LLC, 2019).

Resiliency can be used as a measure to help gauge mental health risk. According to Merriam-Webster (n.d.), resiliency can be defined as “an ability to recover from or adjust easily to adversity or change.” Using time to process tragedy and adversity is considered an ordinary human adaptive response; with time to heal and process the event resiliency can be increased (Isaacs, 2017). When an individual is unable to adapt to change easily, mental health burden increases, and any present or underlying mental health disorder(s) can increase. Resiliency can be used as a measure for mental health burden because stress and change are inevitable in life; however, how one handles change can influence mental health risk (Hornor, 2017; Newman, 2005).

Self-efficacy is another measure to help gauge mental health risk (Chen et al., 2001; Sitzmann & Yeo, 2013). Self-efficacy is a measure of how one believes in his or her own



abilities. By believing in one's self, or not believing, feelings of confidence or doubt arise. Mood then plays off of these feelings and can either boost or burden the mind.

By using self-efficacy and resiliency measures for adolescents, stigma of mental health conditions such as anxiety and depression may be avoided or lessened (Burger & Samuel, 2017; Hornor, 2017). In turn, being able to increase self-efficacy and resiliency may lead to decreased likelihood of developing mental health disorders. Also, while some adolescents may have high levels of resilience and self-efficacy, they are still able to engage in activities to boost skills resulting in higher levels of resiliency and self-efficacy without feeling as though they do not pertain. However, adolescents scoring without risk on mental health scales may feel they do not need to participate in activities to avoid mental health strain in the future.

### **Problem Statement**

While mental health disorders are present among teens, adolescents are not receiving and maintaining proper mental health care (Viefhaus et al., 2019). For a variety of reasons, such as provider shortages, rural community access, and barriers such as stigma and finances, adolescents are unable to receive mental health care (Lindblom, 2017). A brief survey including a sample size of 129 ND youth with a mental health or behavioral condition ages three through 17 years suggested that 33.2% did not receive mental health treatment or counseling in 2017-2018 (National Survey of Children's Health, 2018). Previously, in 2007, the data showed that 27.6% of ND children with the same conditions did not receive mental health treatment or counseling; thus, statistics have slightly worsened over the past 10 years rather than improved.

With the current deficit of adolescent psychiatrists and growing adolescent mental health care needs, the estimated 7,000 adolescent psychiatrist needs are projected to increase by over 400% to approximately 30,000 providers (Aupont et al., 2013). Access to care is a large barrier

for rural communities; many of these communities do not have a clinic with a mental health care provider, or a clinic in general for even a primary care provider. Residents of rural communities, such as many in ND, travel for medical appointments due to the lack of access in their own community. By implementing school programs to equip adolescents with tools and healthy coping mechanisms, this gap in care can begin to be bridged.

Mental health burden continues to be a problem in the adolescent population and strategies to deal with stress are not always provided. Increased anxiety and depression can lead to multiple health consequences. In ND, more than 22,000 youth are estimated to face mental health challenges. However, ND has severe shortages of mental health services due to access difficulties (Canady, 2015). Nurse practitioners (NPs) can help to fill the void in these rural communities. In addition, when poor access to mental health care services remain, NPs can help to advocate for these communities and educate on the importance of mental health. The purpose of the practice improvement project (PIP) was to determine if there was improvement in resiliency and self-efficacy scores in seventh through eighth grade students at a rural ND junior high school through implementing the COPE program.

The rural ND junior high school was chosen based on reaching out to school counselors in the rural areas surrounding the community where the co-investigator was located. Inquiries were made based on the counselors' feedback regarding availability to community resources and mental health care needs, or lack thereof. Many counselors reported recently purchasing and implementing other mental health program with the hope on improving the mental health concerns identified. The school chosen did not have any mental health care program currently utilized and the counselor indicated mental health burden within the student population could be improved with evidence-based resources.

## **Objectives**

1. Determine if COPE increases resiliency scores in a rural ND junior high school after implementation.
2. Determine if COPE increases self-efficacy scores in a rural ND junior high school after implementation.
3. Evaluate COPE as a pilot program within a rural ND junior high school and make recommendations based on literature synthesis and project outcomes after implementation.

## **CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

### **Literature Review**

#### **Search Strategy**

A systematic literature search was conducted, guided by the problem statement and objectives. The databases searched included Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Complete (EBSCO), PubMed, and Ovid – *Lippincott Williams & Wilkins* – Full Text Nursing Journals. Literature, included within the COPE website, relating to implementing the program was also reviewed.

Keywords used to search databases included varying combinations of “anxiety”, “depression”, “adolescent”, “COPE”, “cognitive behavior therapy”, “mental health”, “coping”, “resiliency”, and “self-efficacy”. Not all words were used in the same searches, but rather one- to four- word combinations in a single search. Parameters for publication within the last five years were set and limitations included peer reviewed, research within the US, and English language. Titles of the search results were then scanned for relevance. When pertinent articles were not found within the last five years, the search was broadened to the past 10 years. However, information related to theory, definitions, and the COPE program were expanded further.

Appraisal of the literature identified was conducted to ensure each publication was relevant, valid, reliable, and applicable to the PIP. Throughout the appraisal process the following were considered: design of the study, level of evidence, methods, and whether the outcomes contributed to the PIP.

#### **Risk Factors for Decreased Mental Health in Adolescents**

Brain development is crucial during the adolescent years, as full brain development is not complete until young adulthood (Ahmed et al., 2015). The prefrontal cortex and limbic systems

are key areas under development during adolescence and help regulate emotions and make decisions. Since these areas of the brain are still developing, there is higher risk for mental disorders and more room for influence or peer pressure. The mental health disorders mostly focused on in this PIP were anxiety and depression since they were most prevalent in the literature and correlated to resiliency and self-efficacy.

As with any health disparity, there are risk factors associated with mental health disorders. One risk factor for depression is obesity. While there is a correlation between obesity and depression, there is no specific evidence if one precedes the other (Jennings, 2015). However, over 50% of individuals with one disorder, either depression or obesity, will then develop the other (Wang et al., 2019). As body weight increases, depression risk also increases. Coping with stressors and depression by eating unhealthy food or reducing physical activity contributes to further increasing weight, thus, continuing the cycle.

Additional risk factors for mental health burdens include, but are not limited to: low self-esteem, minimal social support, poor body image, negative cognitive thought processes, inadequate coping, family history of mental health disorders, substance use, and traumatic life events (Forman-Hoffman & Viswanathan, 2018). Prior or current history of depression, anxiety, substance abuse, and/or suicide also increase risk for further or additional mental health disorders in adolescents. Chronic health problems such as asthma, diabetes, and epilepsy are conditions that adolescents may have; the constant stress of chronic health complications along with making comparisons to peers can also lead to increased risk for mental health disorders.

Age and gender can also play a role in risk factors (Forman-Hoffman & Viswanathan, 2018). Adolescents who are female and over 12 years of age are at increased risk. These individuals have an even greater risk with a positive family history of depression, suicidality, or

other mental and substance use disorders. Living in a family with relationship difficulties or relationship difficulties with peers can also increase risk for mental health disorders.

Lastly, past trauma from adverse childhood events causes the brain of adolescents to interpret minor events at highly threatening triggers (Herting, 2020). The limbic system responses disproportionately to fear and emotion, cortisol and adrenaline are readily released leading to increased heart rate and respiration, the fight-flight-freeze response occurs, and the prefrontal cortex is skipped leading to impulsive reactions due to lack of reasoning. All of these responses are learned from the past adverse event. The toxic stress results in brain chemistry imbalances and structural changes.

### **Consequences**

Some of the consequences noted for not treating mental health disorders, or terminating treatment early, include substance abuse, failure to complete or obtain a General Education Diploma, unemployment, and engagement in delinquent or illegal activities (de Haan et al., 2013). Up to 75% of youth drop out of mental health care treatments early leading to an increase in adverse consequences and continued poor mental health into adulthood.

School absences are increased in adolescents with mental health burdens such as depression or anxiety; these students are estimated to miss 18-22 days of school per academic year (Cooper et al., 2012). In turn, higher dropout rates result which lead to economic and social consequences for these students and the rest of society.

### **Barriers**

A large barrier to mental health care is negative social stigma (Clark et al., 2018; Murphey et al., 2013). Adolescents are more hesitant to seek help for mental health or even

discuss mental health concerns due to the stigma attached to such topics. Due to the reluctance to start a conversation or seek guidance, treatment can be delayed or prevented.

Another barrier to mental health care is cost (Cope2Thrive LLC, 2019). Teens are less likely to seek care if they do not have health insurance. Also, even with health insurance, copays can be costly. Treating mental health generally entails a series of initial appointments, then continuing appointments for maintenance. For low-income families, the cost for any medical care can be detrimental. Without the funds for care, adolescents are less likely to receive care.

Obtaining specialized services, such as mental health care, can be a barrier in rural settings (Anderson, 2020). If trained personnel are not available to provide adequate services, adolescents are left without the care they need. Medical education is limited in terms of pediatric psychiatry training, and most medical or nursing programs have little to no training in the subject matter. Also, even if a specialty is present in their region, age-appropriate interventions may not be available (Osius & Rosenthal, 2009). In addition, specialties may present a time barrier. Even if the services are available, the wait time to receive care may be extensive (Clark et al., 2018).

Lastly, disparities related to access to care exist related to socioeconomic status, gender, age, race or ethnicity, geographical location, and sexual orientation (Murphey et al., 2013). Murphey et al. (2013) estimate black adolescents are less likely than Hispanic or Caucasian adolescents to receive outpatient depression treatment. Males in their late teenage years are also predicted to be least likely to receive mental health care services. These tendencies arise from data collected in surveys; the data are not suggestive of cause for these adolescent groups being higher risk. Geographical location in relation to services also affects adolescents' care; communities without mental health services pose a barrier to teens seeking care as they may not have adequate transportation or time to travel to in-office appointments.

## **Prevalence**

One in every three US teens is estimated to experience an anxiety disorder between the ages of 13 to 18 years (Erlich et al., 2019; Health, 2017). Beyond anxiety, many mental health conditions commonly occur together. Three out of four children age 3-17 years diagnosed with depression also have anxiety and almost one out of two also has behavior problems such as attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorders (Centers for Disease Control and Prevention [CDC], 2020). Youth living in low-income households, exposed to child welfare, and juvenile justice systems have higher rates of mental health disorders. The highest rates of reported neurodevelopmental and mental health disabilities were seen in children living in poverty (Anderson, 2020). Chronic stress is more prevalent for youth living in communities where there is chronic poverty, residential instability, violence, crime, lack of adequate green space, and noise (Wang et al., 2019).

Throughout the years, rates of mental health conditions such as depression and anxiety have risen. In 2003, the rate of children ages six to 17 years who had ever been diagnosed with either anxiety or depression was 5.4% (CDC, 2020). In 2007, the rate rose to 8%; in 2012, the rate was up to 8.4%. Overall, 13-20% of US pediatrics experience a mental health disorder in a given year (Anderson, 2020). However, an estimated 75% of these children go untreated. The risk of suicide is heightened with mental health disorders; without regard to age, rural areas across the US consistently have higher rates of suicide than even mildly urbanized areas (Ivey-Stephenson et al., 2017). Suicide rates are now the second leading cause of death in youth ages 10 to 24 years (Anderson, 2020). Middle school students surveyed in ND reported the following in 2019:



- 26% felt sad or hopeless almost every day for two or more weeks in a row leading to decreased usual activities in the past year
- 19% seriously thought about killing themselves
- 15.5% made a plan about how they would attempt suicide in the past year
- 10.5% attempted suicide one or more times in the past year

In terms of risky behavior, alcohol is the most commonly abused drug among adolescents in the United States (Shogren & Harsell, 2020). Adolescents age 12 to 17 years who admit to current alcohol use is 9% with 1.6% diagnosed with an alcohol use disorder. About 5%, or 1.2 million teens stated they were binge drinking in the last 30 days from the survey in 2018. There are 4,300 deaths each year related to excessive drinking underage; any alcohol use is considered unhealthy for teens. ND ranks number one for binge drinking among 12 to 20-year-olds. High school students in ND reported:

- 31% current alcohol use
- 18% binge drinking in last 30 days
- 18% riding with a driver who had been drinking
- 8% drove themselves after drinking

Additionally, 16.7%, or 4.2 million, adolescents age 12 to 17 years used illicit drugs in the year before a survey in 2018 (Shogren & Harsell, 2020). The following are statistics related to specific drug use in the reported year for United States teens:

- 6.7% used marijuana
- 0.2% used methamphetamine
- 2.8% misused prescription pain medication with 0.1% past heroin users
- 0.4% used crack or cocaine

In ND, the most frequently encountered substances for adolescents are marijuana, alcohol, methamphetamines, and opioids. The following are ND reported teen use:

- 4% cocaine use
- 4% nonmedical use of pain relievers

Trauma is also a contributing factor in adolescent mental health (Herting, 2020). An estimated two thirds of children have experienced a traumatic life event by the age of 16 years.

The following are statistics related to youth in the United States:

- Over 1,500 children, or 2 per 100,000, die of abuse or neglect each year
- In 2010, 695,000 unique children were victims of sustained child maltreatment
- 60% were exposed to violence or abuse in their homes or communities in a year's time
- 25.2% of adult foster care alumni had PTSD, which is nearly double the rate of United States war veterans
- 10-13% of America's children have been physically abused by a parent in forms of being kicked, burned, bit, punched, hit with an object, beaten, or threatened with a weapon
- 21-32% of United States women were sexually abused before the age of 18 years

The following data relates to child abuse and neglect in ND during the year 2017:

- 3,982 reports of child maltreatment
- 6,728 children suspected to be maltreated
- 1,981 children in high-risk situations requiring immediate emergency services

In 2019, ND counties were evaluated for suspected victims of child abuse and neglect (Annie E. Casey Foundation, 2020). Six counties were suspected to have up to 6.7% of youth

identified as victims of child abuse and neglect. Most counties fell into the range 0.3 - 4.9% of youth suspected to be victims of child abuse and neglect. Twelve counties did not have any data available for interpretation. Cass county was suspected to have 3.4 - 4.9% of youth identified as victims.

Lastly, adverse childhood events also lead to increased trauma and stress for youth (Herting, 2020). Ten adverse childhood experiences are defined and as follows:

1. Child physical abuse
2. Child sexual abuse
3. Child emotional abuse
4. Emotional neglect
5. Physical neglect
6. Mentally ill, depressed or suicidal person in the home
7. Drug addicted or alcoholic family member
8. Witnessing domestic violence against the mother
9. Loss of a parent to death or abandonment, including abandonment by parental divorce
10. Incarceration of any family member for a crime.

Adverse childhood experiences are considered common. In 2016, United States children ages birth to 17 years were found to have:

- 55% had 0 events
- 24% had 1 event
- 11% had 2 events
- 10% had 3 to 8 events

In 2016, the same cohort of birth to 17 years in ND were found to have:

- 60% had 0 events
- 25% had 1 event
- 8% had 2 events
- 8% had 3 to 8 events

As the number of adverse childhood events increase, the percent of children with any type of health problem also increased (Herting, 2020). Similarly, rates of suicide increase from below 5% for no events to two events up to 18% for four or more events. Studies have found significant associations between childhood adverse events such as abuse and mental health disorders such as depression, generalized anxiety disorder, both anxiety and depression, phobia, post-traumatic stress disorder (PTSD), and psychosis.

### **Preventative Adjunct Recommendations in Adolescent Mental Health Care**

Proactive treatment is recommended for mental health disorders rather than treating symptoms later in life (Ahmed et al., 2015). As previously mentioned, neurological development is still actively occurring during the adolescent years, thus adolescence is an impressionable time. By teaching coping strategies during development, mental health burden may be lessened into adulthood and the remainder of life.

#### ***Exercise and Nutrition***

Exercise has been shown to help improve mental health disorders. By improving mood with exercise, healthy choices are more appealing such as choosing healthy foods and improving self-control (Flaskerud, 2015). Exercise also releases endorphins, hormones in the body that help to boost mood. Beta-endorphins (B-endorphins) are part of a natural reward system involved in basic human functions such as feeding, drinking, and sex (Sprouse-Blum et al., 2010). B-endorphins are primarily synthesized and stored in the anterior pituitary gland. When the

hypothalamus signals the pituitary gland, endorphins are either released or withheld to signal the body of pain or pleasure. In the central nervous system, B-endorphins bind to opioid receptors with an end result of the production of dopamine. The body associates dopamine with pleasure. Ultimately, exercise creates endorphins which then result in a euphoria from the dopamine release into the body. By making the body feel pleasure, mental health burden can be decreased by improving self-esteem, decreasing pain, and improving pleasure.

Current recommendations include 60 minutes of physical activity per day for school age adolescents (CDC, 2020; Timo et al., 2016). In 2017, less than 24% of students, age 6-17 years, participated in physical activity 60 minutes per day, thus revealing difficulties with implementation and adherence (CDC, 2020). By increasing exercise adherence, natural protective factors from the endorphins released with exercise could help to improve mental health for adolescents. During the time of the PIP, the Coronavirus 19 (COVID-19) pandemic was occurring; students had times of distanced learning at home, potentially without the resources for physical activity such as adequate space to run and move around.

Beyond exercise, nutrition can be important for maintaining mental health. Mental health especially can be influenced by micronutrients (Jennings, 2015). Maintaining a healthy balance of nutrients is the goal for maintaining and managing mental health. However, too much nutritional intake leading to weight gain and obesity can decrease cognitive functions and, in turn, become detrimental to mental health (Flaskerud, 2015). Individuals with obesity have a 55% increased risk of developing depression over time; similarly, individuals with depression have a 58% increased risk of becoming obese (Jennings, 2015).

A few examples of micronutrients and their effect on the body are as follows. Folate has been linked to depression for many years likely due to folate being required for the synthesis of

neurotransmitters necessary to prevent depression (Jennings, 2015). Zinc has also been suggested to reduce depressive symptoms, however there is still a lack of controlled trials to confirm.

Lastly, fatty acids are also thought to improve mood. Omega-3 has anti-inflammatory effects and is encouraged in the management of many chronic diseases. Again, further research is needed to further correlate a strong association.

### ***Cognitive Behavioral Therapy***

CBT is an evidence-based intervention to help improve resiliency and self-efficacy, as well as treat mental health disorders such as anxiety and depression (Harley, 2018). The foundation of CBT rests on the concept that thoughts and perceptions influence individuals' behaviors. These emotions may distort reality for patients. Through CBT, patients are guided to identify destructive thoughts, assess accuracy of reality, and employ strategies to challenge and overcome inaccurate perceptions. The areas CBT targets to change include where patients direct their attention, when patients are able to use cognitive reappraisal, and how patients can develop more beneficial coping strategies and behaviors.

The psychotherapy focusing on modifying emotions, behaviors, and thoughts is a large component of CBT (James et al., 2016). By guiding participants during scheduled sessions, CBT can help to identify destructive patterns and instead implement positive strategies to overcome inaccurate perceptions (Harley, 2018). CBT uses an educational approach to help individuals learn useful tools to help manage stress and difficult life situations. Many times CBT incorporates homework for participants to practice new learned skills at home between sessions (Tallon et al., 2019). By emphasizing solutions, CBT helps patients to challenge distorted thoughts and, in turn, change negative patterns of behavior. Overall, the goal of CBT is to help

patients realize that while they may not be able to control the world around them, they are able to control their own thoughts, interpretations, and behaviors (de Haan et al., 2013).

CBT has great flexibility and can be delivered in a multitude of forms, such as in-person, online, over the phone, and through group sessions (James et al., 2016). Both prevention and treatment of mental health issues has been shown to be effective with CBT in adolescence (Esposito-Smythers et al., 2019; Zhou et al., 2015).

More recently, school-based interventions have been promoted for treatment and prevention of mental health disorders in adolescents. By implementing programs such as school-based health centers with mental health services in schools, many barriers are removed for the students such as cost, stigma, and access (Bains & Diallo, 2016). Students with high-risk behaviors were more likely to use and seek services at school-based health centers than in the community. Also, school counselors and/or teachers are able to better identify high-risk students and help to intervene more as needed. Many students find school to be a safe place when home life may be unsteady. By providing direct access for students, higher rates of participation in services related to mental health or substance abuse are shown by tenfold.

Overall, CBT has been used to improve a multitude of disorders with the strongest support related to anxiety disorders, somatoform disorders, bulimia, anger control, and general stress (Hofmann et al., 2012). Of 11 studies conducted comparing CBT to various forms of treatments, 7 studies indicated increased positive response rates with CBT and 1 study showed CBT had a lower response rate. In reviewing CBT studies related to pediatrics, support was shown for treating internalizing disorders with the benefits outweighing pharmacological approaches in mood and anxiety symptoms. As to externalizing disorders, mixed support was shown for disorders such as chronic pain or problems following abuse. Even with the need for

additional information and studies to be performed, CBT has strong support in efficacy. Due to being a highly cost-effective intervention, CBT is promoted as a first-line therapy in treating mental health disorders.

### **Protective Factors**

Resilience has been shown to be a protective factor in preventing and controlling mental health disorders (Reid, 2010). Resiliency refers to how one recovers from an incident or sustains stress. Newman (2005) defines resilience as, “the human ability to adapt in the face of tragedy, adversity, hardship, and ongoing significant life stressors.” The American Psychological Association (2016) notes resiliency is not a trait, but rather a learned skill involving behaviors, thoughts, and actions that anyone can develop. Building resilience is a newer concept to the general public with growing recognition in the 2000s (Newman, 2005). By equipping teens with tools to recognize negative thoughts and behaviors and encourage replacement with positive thoughts and behaviors, resiliency can be learned and increased which in turn can help prevent and treat mental health disorders. If one feels overwhelmed or overburdened mentally, reckless behaviors along with substance abuse and frivolous relations become more prominent as the search for instant gratification is triggered (Hermens et al., 2015).

Similarly, self-efficacy is noted to be a protective factor for mental health care (Begun et al., 2018; Reid, 2010). Self-efficacy is a personal belief in one’s own ability to accomplish a task. Begun et al. (2018) note youth with high self-efficacy overcome negative life experiences and adverse health outcomes. In addition, youth with high self-efficacy are able to successfully address emotional struggles before the struggles elevate to diagnostic levels. Individuals with low self-efficacy tend to avoid tasks and are convinced certain tasks are unable to be accomplished (Cherry, 2020). Building self-efficacy starts with setting obtainable goals; when



unreasonable goals are set, self-efficacy is lowered due to not being able to accomplish the task. Additional ways in increase self-efficacy includes witnessing people who are similar to one's self complete the same goal, receiving positive social reinforcement and encouragement, celebrating successes, and maintaining a positive attitude should a goal not be met.

### **Screening/Diagnosis**

As previously noted, 50% of all mental health disorders noted in adulthood started by age 14 years with approximately 25% of US teens considered to have behavioral disorders (Erlich et al., 2019). The United States Preventive Services Task Force (USPSTF) recommends adolescents to be routinely screened for depression if systems are in place for adequate treatment after diagnosis (Siu, 2016). A variety of screening tools are available for mental health disorders with clinical tools mainly focusing on depression and anxiety. In the primary care setting, routine screening for mental health disorders is recommended for all children and adolescents 12 years of age and older (Forman-Hoffman & Viswanathan, 2018).

To help reduce mental health burden, resiliency and self-efficacy can also be promoted and measured. Both are protective factors against mental health conditions. There are many tools to measure both resiliency and self-efficacy. The Brief Resilience Scale and New General Self-Efficacy Scale were utilized for this PIP.

### ***Brief Resilience Scale***

The Brief Resilience Scale (BRS) was found to have some of the best psychometric ratings along with the Connor-Davidson Resilience Scale (CDRS) and the Resilience Scale (RS) for Adults when compared among 19 different resiliency tools and scales (Windle et al., 2011). The eight properties evaluated in this study when looking at resiliency scales were content validity, internal consistency, criterion validity, construct validity, reproducibility,

responsiveness, floor and ceiling effects, and interpretability. The RS for Adults was ruled out for this project since the age focus was adolescents. The BRS was chosen for use over the CDRS due to the length of the survey. Wenschlag (2018) used the Wagnild and Young's Resilience Scale (WYRS) when implementing the COPE program in a rural high school. She found inconclusive results with the WYRS and noted that the survey may not have been suitable to the participants. The BRS was chosen based on length and target audience of adolescents rather than adults. The BRS uses a Likert scale to score six statements, then the answers are numerically averaged to determine results. By averaging the answers, no submission was invaluable as participants could skip a question. Also, by using a shorter tool, participant interest could be optimized along with encouraged completion.

The BRS six statements are as follows:

1. I tend to bounce back quickly after hard times.
2. I have a hard time making it through stressful events.
3. It does not take me long to recover from a stressful event.
4. It is hard for me to snap back when something bad happens.
5. I usually come through difficult times with little trouble.
6. I tend to take a long time to get over set-backs in my life.

When using the BRS, responses range from "Strongly Disagree", "Disagree", "Neutral", "Agree", to "Strongly Agree" and a numerical value one through five being assigned to the answers. "Neutral" always scores a three, while the "Disagree" and "Agree" may score high or low depending on the statement. For example, if a statement indicates high resiliency, the "Disagree" scores low and increases with agreeing. However, if the statement indicates low resiliency, the "Disagree" end is scored high and decreases with agreeing.

Scoring is done by averaging the numerical values of the responses. The scores were calculated by the co-investigator. If a participant answered all six statements, the six responses were added together then divided by six. While no participants skipped any scoring statements, resiliency scores would have still been able to be calculated if statements were skipped since interpretation is based on averaging the score rather than totaling the score. Interpretation is as follows:

- 1.00-2.99 indicates low resilience
- 3.00-4.30 indicates normal resilience
- 4.31-5.00 indicates high resilience

The BRS was administered both before the first session of COPE and after the last session. The pre- and post- surveys were administered as part of the respective session to help increase completion rates. Results were kept blind to participants, so participants were not tempted to alter their answers purposefully. Also, numerical scoring values were assigned to completed surveys so that students were not tempted to pick based on numerical values of answers during completion.

### ***New General Self-Efficacy Scale***

The NGSE scale was used in Wenschlag's (2018) dissertation and brought statistically significant data even with the small sample size of 13 students. When compared to the Schwarzer and Jerusalem's (1995) General Perceived Self-Efficacy Scale, Sherer et al. (1982) General Self-Efficacy Scale, the Chen et al. (2001) NGSE outperformed both (Scherbaum et al., 2006). Items on each scale were considered to relate to general self-efficacy, self-esteem, or other. The NGSE scale was able to gather information more efficiently and with more accuracy than the other two

scales. Also, since the scale is succinct with only eight items to assess, the tool can be completed within a few minutes, thus increasing compliance and completion from participants.

The NGSE scale uses a five-point Likert scale ranging responses from “Strongly Disagree”, “Disagree”, “Neutral”, “Agree”, to “Strongly Agree”, with numeral values one through five respectively (Chen et al., 2001). There are eight statements the participant then grades his/her agreement with using the numeric scale to represent their opinion. The statements are as follows:

1. I will be able to achieve most of the goals that I have set for myself.
2. When facing difficult tasks, I am certain that I will accomplish them.
3. In general, I think that I can obtain outcomes that are important to me.
4. I believe I can succeed at most any endeavor to which I set my mind.
5. I will be able to successfully overcome many challenges.
6. I am confident that I can perform effectively on many different tasks.
7. Compared to other people, I can do most tasks very well.
8. Even when things are tough, I can perform quite well.

For example, one statement included reads, “Even when things are tough, I can perform quite well.” The participant then determined how much he/she agrees with the statement and gave that statement the corresponding numeric value. Perhaps he/she disagreed with the statement, for example, a numeric value of “two” might be assigned as his/her response. After each of the eight statements were rated by the participant, all of the numeric values were added together for a total score. Total scoring is as follows:

- 8-23: low self-efficacy
- 24-27: below average self-efficacy

- 27-31: average
- 32-34: above average
- 35-40: high self-efficacy

Self-efficacy was assessed with the NGSE scale prior to the first session of COPE as well as after the last session of COPE. The scale was administered with the other tools and surveys as part of the respective sessions. Participants were kept blind to their results and scale interpretation so results were less likely to be altered.

### **Nurse Practitioner Role**

Nurse practitioners are a valuable asset to any community, as they work as educators and advocates for their patients and community health. The benefits of screening all young patients, even in pediatrics, for mental health disorders far outweigh the risks of screening processes (Forman-Hoffman & Viswanathan, 2018). With rural communities, access to routine healthcare is often limited.

By advocating for these communities, NPs can help to educate about the importance of mental health. Utilizing evidence-based practices to improve community health is a large proponent of how NPs can use leadership skills to encourage health promotion behaviors. A quality of a great leader is someone who motivates others to pursue a common cause (Foster, 2017). NPs are one community leader, especially in rural areas.

Not only are NPs an expected leader, but they have training and practice in communication (Pidgeon, 2017). Being able to translate medical terminology and medical findings in layman's terms is a skill frequently practiced by NPs. Communications skills are key to helping communities understand the importance, prevalence, and risk associated with mental health.

Guidelines recommend routine mental health screenings at wellness visits along with noting signs of mental health disorders especially in teens with known risk factors such as family history, substance use, or traumatic life events (Forman-Hoffman & Viswanathan, 2018). While adolescents in rural ND communities may not have regular access to healthcare or resources for continued appointments, school programs such as COPE help bridge the gap for mental health care. By advocating for such programs, NPs can help increase access to care for young individuals.

### **COPE Program**

COPE is an evidence-based curriculum using CBT strategies to help students learn positive stress management skills (Cope2Thrive LLC, 2019). The program was developed by an NP with the goal of reaching students in adolescents so that their mental health may be improved. Academic platforms are traditionally used in the COPE program to deliver the curriculum such as a classroom setting or group counseling.

Bernadette Melnyk is the pediatric NP who developed the COPE program. Her intent is to use CBT strategies to help adolescents, children, and young adults learn strategies to help deal with life stresses and overall health promotion. She based her curriculum on the Cognitive Theory of Depression and Psychotherapy developed by Aaron Beck (Beck et al., 1979). Like CBT, Beck's theory hypothesizes an individual's thoughts will affect his or her behaviors, feelings, and emotions. Therefore, Beck believes that when an individual has negative thoughts, he or she is more likely to have negative emotions leading to depressive and anxious states. The negative states then lead to negative behaviors, such as poor school performance. Teaching skills to help manage stress and difficult situations can lead to more positive coping mechanisms.

While Melnyk has based the COPE program on Beck's theory, she has constantly molded COPE based on feedback and findings from individuals who have completed the program (Lusk & Melnyk, 2013). Overall, in Melnyk's studies, decreases of anxiety, depression, anger, and destructive behaviors have been noted along with increases in self-concept and personal management of negative emotions (Lusk & Melnyk, 2011). Improvement in learned skills for stressful situations such as deep breathing, imagery, and altering negative thoughts to positive thoughts were also noted (Lusk & Melnyk, 2013). Implementation of the COPE program can take place in a variety of settings, but main modes of delivery take place in clinics and schools (Melnyk, Kelly, & Lusk, 2014). The program is delivered in-person over seven sessions. There is an extended program that can be delivered in 15 sessions as well, which include more topics and promotions related to diet and exercise. The 15-session curriculum can also be delivered online for adolescents with parental guidance rather than classroom instruction if preferred. After the COVID-19 pandemic started, the seven-session curriculum was also made accessible for students to complete online independently with parental guidance. The instructor delivering the COPE program curriculum can have a varied background including nurses, health care providers, counselors, teachers, and administrators. To become a COPE instructor, an online training taking three to four hours must be completed and certification can be renewed annually.

By educating youth about risk factors and equipping them with tools to overcome barriers, Melnyk has designed a program that can be implemented proactively in a variety of settings whether at school with a counselor or in the clinic with a NP. The following topics titles are covered in the seven-session curriculum:

1. Thinking, Feeling, and Behaving: What is the Connection?
2. Self-Esteem and Positive Thinking/Self-Talk

3. Stress and Coping
4. Problem Solving and Setting Goals
5. Dealing with your Emotions in Healthy Ways through Positive Thinking and Effective Communication
6. Coping with Stressful Situations
7. Pulling it all Together for a Healthy YOU

Other dissertation projects have been conducted on the efficacy of COPE in schools.

Maria McCormick implemented COPE in a second-grade cohort (McCormick, 2016). While the students enjoyed the program and were able to recall concepts six weeks after completing the program, documentation was made indicating the material delivered during the COPE sessions may have been too advanced for younger ages.

Another dissertation project by Jessica Lindblom was conducted in a rural ND high school during the study hall hour of students, ages 14-18 years (Lindblom, 2017). Statistical significance could not be determined due to a small sample size of 11 students participating. However, half of the participants did show improvement in anxiety and depression scores. All participants also were able to report new skills for managing thoughts, feelings, and behaviors in response to stress. Overall, the students did indicate they enjoyed the program and recommended the program for other students and peers.

Lastly, Monica Wenschlag also implemented the COPE program as part of her dissertation project (Wenschlag, 2018). The population targeted for Wenschlag's dissertation was high school seniors at a rural Midwestern high school. She also had a small sample size consisting of 13 students. While generalized conclusions were difficult to make with a small



sample size, clinically significant increases in students' self-efficacies were noted. The students also enjoyed the content and reported feeling COPE was a useful resource.

### **Theoretical Framework and Model**

The Integrated Theory of Health Behavior Change (ITHBC) helped guide the study along with a logic model. Polly Ryan (2009) believes that any advanced practice nurse should hold the characteristic of using a theory to guide practice. By using a theory for practice, structure and goals are more easily defined making evaluation more straightforward. Interventions are also able to be guided by the theory, again making goals and evaluation easily defined.

The ITHBC suggests that by fostering knowledge and beliefs, increasing self-regulation skills and abilities, and enhancing social facilitation that health behavior change will be enhanced (Ryan, 2009). Utilizing a theoretical framework, such as the ITHBC, improves practice by having the focus of assessments, directing use of best-practice interventions, and improving patient outcomes.

Historically, health promotion was viewed as optional (Ryan, 2009). In the past, when health promotion was embraced, the focus was on single interventions. Modern medicine directs health promotion behaviors to both individuals and populations. The focus for these promotions is on multiple behaviors simultaneously and delivered by both professionals and laypersons. Culture and age are considered when delivering the material, and a variety of settings such as schools, churches, and worksites are all being used to promote healthy behaviors.

Ryan (2009) notes, "Knowledge of technology and pharmacology has far outpaced knowledge of how to facilitate health behavior change, and new theories are needed to better understand how practitioners can facilitate health behavior change." She recognizes that medicine is continuing to expand and grow based on optimizing evidence-based practices. This

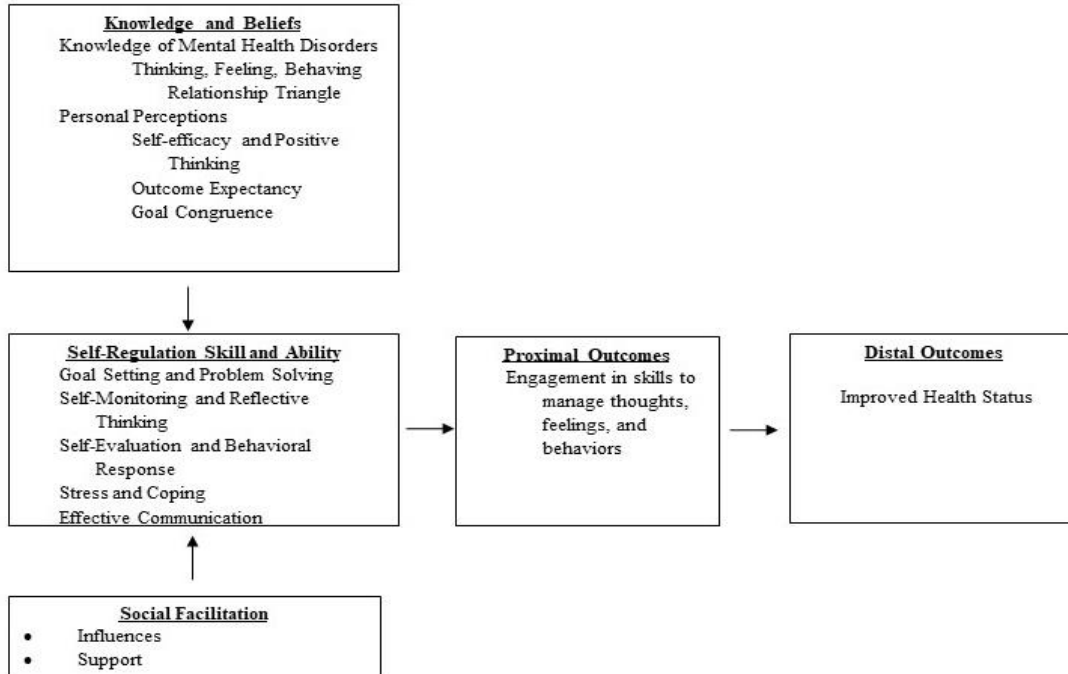
is why Ryan has created the ITHBC by combining a variety of theoretical frameworks including theories of health behavior change, self-regulation theories, and social cognitive theory.

The ITHBC suggests adolescent youth will be better equipped to engage in healthy behaviors leading to management of mental health if information about healthy coping skills and behaviors are provided to them (Ryan, 2009). Self-regulation ability should also be promoted such as goal setting, self-monitoring and reflective thinking, decision making, self-evaluation and self-management of physical, emotional, and cognitive responses. Lastly, social facilitation can positively influence and support the continuation of engaging in preventative health behaviors. According to ITHBC, the setting for education and promotion is appropriate in a school, and the information is appropriate to be delivered by instructors or counselors in the school rather than a medical professional.

The COPE program is based on Beck's Cognitive Theory of Depression. Beck's theory within the COPE program relates to the ITHBC well due to the focus on fostering knowledge about the relationship among negative thoughts, feelings, and behaviors. After participating in COPE, teens are better equipped with skills related to recognizing and replacing negative thoughts with positive thoughts leading to improved emotional states and healthier behaviors. The COPE program utilizing the ITHBC is depicted below (Figure 1) adapted from Lindblom (2017).

**Figure 1**

*Theoretical Framework: Integrated Theory of Health Behavior Change*

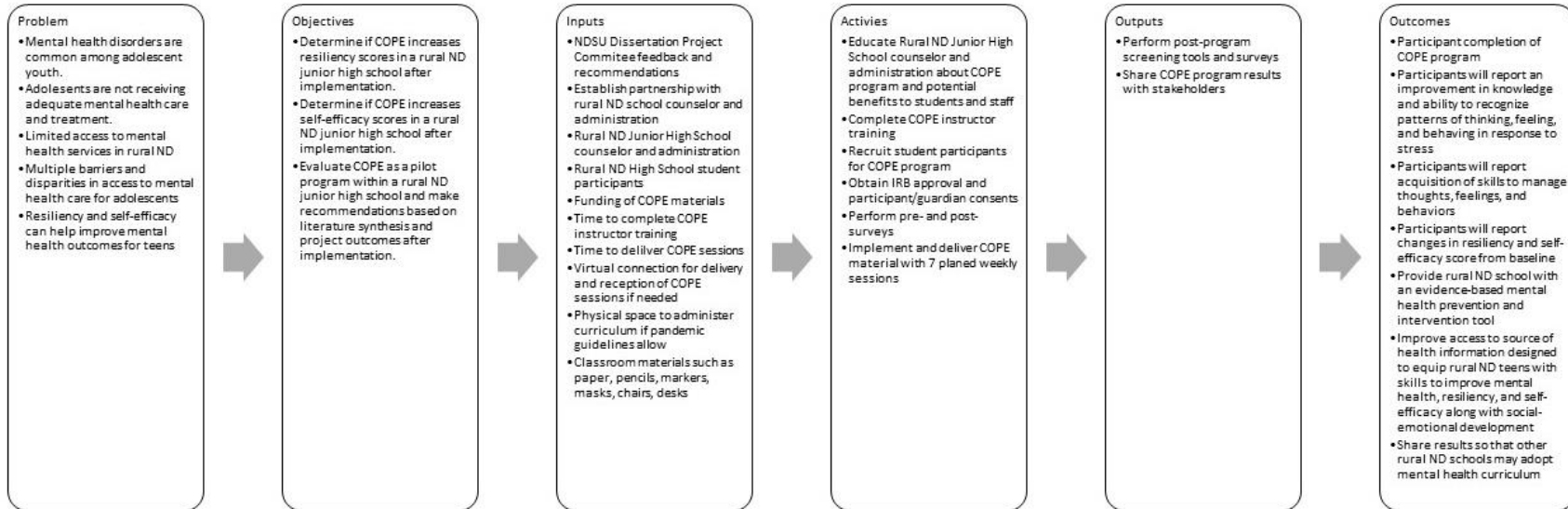


To help visualize the project, a logic model was used. The logic model helped represent relationships with the resources and view the project in the systematic manner. The logic model is shown below (Figure 2) and adapted from Lindblom (2017). The logic model used inputs such as interventions of the PIP to determine both short-term and long-term outcomes of the PIP for the rural ND school. By following the logic model, a clear plan and clear outcomes were able to be defined. After the PIP was identified, inputs were noted. Inputs included all the various resources need to support the project. Activities were then completed as action components to the program, leading to the outcomes. The outcomes from the program were the intended goals which included short-term and long-term outcomes.

**Figure 2**

*Logic Model*

Evaluation of a School-Based Intervention to Improve Mental Health, Resiliency, and Self-Efficacy of Rural ND Adolescent Youth



## **CHAPTER 3: METHODS**

### **Project Design**

The purpose of the study was to improve resiliency and self-efficacy in seventh and eighth grade students at a rural ND school by implementing the COPE program. The COPE program was be offered to junior high school students at a rural school in ND. The seven-session program, which was pre-developed and manual-based, was delivered by the school counselor. The school counselor completed online training to become a certified COPE instructor. Delivery times were held weekly on Mondays during the lunch period for seven weeks. The delivery time was determined by the school counselor to facilitate the students' schedules so that all could attend. Due to the COVID-19 pandemic taking place, a small group of five students were chosen as a pilot group for the program; all students were chosen and approached by the school counselor as identified as needing mental health care support. Coordinating a larger group such as an entire grade became unobtainable due to constant scheduling changes such as virtual versus in-person classes during the COVID-19 pandemic. Each session lasted approximately 30-minutes.

### **Project Implementation**

As previously noted, a gap in care exists regarding the prevalence of mental health concerns, particularly in rural areas, developing during adolescents and decreased access to mental health care services. Increasing skills to bolster resilience and self-efficacy could help to lessen future mental health burden. Improving access for rural ND teens through a COPE program in their school to improve resiliency and self-efficacy can possibly lead to possible improved mental health outcomes for participants.

**Input: Setting**

The implementation of COPE took place in a rural ND junior high school. The school was one of the larger rural schools in the area at the time of implementation with approximately 300 students enrolled in grades seven through 12 (Public School Review, 2021). The enrollment rate has stayed fairly constant since the early 2000s with approximately 50-60 students in each junior high grade. Minority enrollment is 4% with American Indian as the prominent minority group. Gender ratios are even at 50% for both male and female. Graduation rates are over 90% which is in the top 10% in ND. Proficiency ratings are 70-74% for math and 50-54% for reading and language arts. Overall student to teacher ratio is 13 students to one teacher. The community's population is over 700 citizens.

The setting was chosen by reaching out to rural schools in ND. The school was chosen based on staff response desiring a mental health program, such as COPE, to be implemented in the school due to lack of an existing program. One of the school counselors previously participated in implementing the COPE program in another school and expressed how positive the program appeared to be for participants. The counselor familiar with the program works with high school students, however felt the curriculum would best serve the school's junior high students. The junior high counselor had not had previous experience with the curriculum but due to the positive response from her colleague felt she would be well equipped after completing the online training. Other schools also responded but declined the invitation to participate due to recently purchasing alternative mental health material for their students and/or lack of resources and time for additional programs due to the ongoing pandemic.

**Input: Staff Training**

Instructors of COPE can be from a variety of backgrounds including nurses, counselors, teachers, administrators, health care providers, and many more. To promote sustainability of COPE within the school, the junior high school counselor was chosen to be the instructor. New instructors for COPE are required to complete an online 3–4-hour training before delivering the material. After completing the online training, instructors are tested with a 20-question multiple choice quiz to verify comprehension of the program elements. Certified instructors must pass with 80% or greater; after successfully completing the test the instructor must then complete delivering one practice COPE session to a family member or friend. The junior high school counselor completed the required training, practice session, and quiz the month prior to implementation. In the future, an annual renewal is needed to continue delivering the COPE program curriculum after first certification. The renewal is a reduced fee to continue certification as a COPE instructor.

**Input: Sample**

Discussion with the counselor helped to determine participants. The population targeted were adolescents enrolled at a rural junior high school in their seventh and eighth grade years. For the pilot program, five students were selected by the counselor based on previous history, risky behavior, and already being established with the counseling center. The counselor was starting to develop group counseling sessions for students, so she targeted students she had already identified to be a part of this group. By limiting the participant size to five students, social distancing was manageable during the implemented COVID-19 precautions to allow for in-person sessions based on the room size available. The five students were invited to participate in the program; if any students and/or their guardian(s) declined the invitation, the student would

not participate in the group sessions and rather would attend their normal lunch period. In subsequent years, an entire single grade may be targeted, such as the eighth graders, due to the transition to high school and optimal age for intervention. However, due to constant changes within the school secondary to the COVID-19 pandemic and planning for social distancing, the pilot group of five students were focused on for the PIP.

Inclusion criteria for the program consisted of being a current student in seventh through eighth grades at the rural ND school. Students without consent or assent forms were excluded from participating. Also, students outside of the targeted school or targeted grades of seventh through eighth grade were also excluded. Institutional Review Board (IRB) approval was obtained through North Dakota State University. Lastly, school administrative approval to implement the program was also obtained.

### **Input: Funding**

Financial cost for the COPE program included the instructor training, curriculum, and five student workbooks for a total of \$385. An additional \$100 in Target gift cards was spent for student participation; each student was awarded \$20 in Target gift cards due to completing participation in all seven COPE sessions and completing all workbook activities. Lastly, a \$25 gift card for the school counselor was also purchased along with thank you cards and \$5 postage to send all the cards and thank you notes to the school. Finances were mainly provided by a \$500 grant from a local power company. No data from the program was required to be shared due to funding nor was any volunteered. The costs beyond \$500 were provided by the coinvestigator; the additional costs totaled approximately \$20.



## **Activity: Recruitment**

Due to the COVID-19 pandemic along with lack of time and resources from the school, a pilot group of five students was chosen for the implementation of COPE. Originally, an entire grade was to be targeted, but constant changes resulting from the COVID-19 pandemic made scheduling uncertain for the fall semester when implementation took place. As previously mentioned, the school counselor selected five students to participate based on their personal history and current involvement with the counseling center. She also selected students who were in the same lunch period to facilitate session meeting times.

The co-investigator developed a consent (Appendix G) and assent (Appendix H) form along with a letter (Appendix F) for students and parent(s)/guardian(s). The forms and letter were sent home with each of the five students in paper form as well as emailed to each student and his/her parent(s)/guardian(s). In the letter, parent(s)/guardian(s) were encouraged to reach out to the school counselor, co-investigator, or primary investigator with any questions about the program, including contact information. The letter also outlined how stress levels have been high for everyone and home life has been quickly needing to be adjusted due to the COVID-19 pandemic precautions that were in place. Emphasis in the invitation stated that mental health was important for everyone, not just those with a mental health diagnosis. Consent and assent forms were sent at the same time as the informational letter. By sending the forms with the letter, one less step was required of needing to request the forms.

All students and their parent(s)/guardian(s) were fluent in English as their first language. If any participants or their parent(s)/guardian(s) were not fluent or not literate in English, translated forms and letters would have been offered or assistance in reading through the forms and letter would have been prepared.

Students with completed consents/assents prior to the first session of COPE were able to participate in the program. Consent was allowed to be returned in written format or phone/verbal consent with the counselor due to COVID-19 precautions and the possibility that students may not physically be at school during the consent process timeline; also, their family may not have access to a scanner to send the forms back virtually.

As incentive, students accepting to participate were eligible to receive Target gift cards. Each student received a \$10 gift card for attending all seven COPE sessions and each student received an additional \$10 gift card for completing assigned workbook activities throughout the program. Gift cards were awarded at the end of the program. No partial payments were given in regard to not attending all sessions nor were partial payments given in regard to not finishing all assigned workbook activities. All five students attended the full seven sessions and completed all assigned workbook activities.

### **Activity: Implementation and Delivery**

The COPE program was delivered in one weekly session over seven weeks and facilitated by the school counselor. The co-investigator was also available virtually during weekly sessions over the seven-week timeframe to answer questions, collect data, and assist as needed. The counselor and co-investigator would use email for communication between sessions along with occasional phone calls. The chosen session delivery day was Mondays and time was over the lunch period at 1145 so students would not have any conflicts in their schedules. Sessions were held November 2020 through December 2020.

Using a lunch period for a group counseling session also worked well for the counselor as she was looking to initiate group counseling during lunch sessions already. Using COPE as a curriculum helped her to establish the first group, thus, was mutually beneficial and helped with

stakeholder buy-in. Sessions were held at the counseling center to provide a safe and private space for students to feel comfortable participating. Sessions were held in a closed room for privacy and to facilitate student comfort along with decrease the chance for social stigma. The room used also aided social distancing with each student sitting six feet apart and wearing face masks. Recommendations from health care guidelines were followed during each session related to COVID-19 pandemic guidelines already in place within the school system.

The counselor was present to instruct the sessions of COPE as well as to be a resource to students. COPE recommends school counselors to be the certified instructor for sustainability and to support students. Even though the counselor may be seen as an authority figure, she was also already in this role of counseling and discussion of similar topics, so she would not have other influence not already given to her.

Due to cost of instructor training, the one junior high counselor completed the training module to become a COPE certified instructor. In the event that the counselor became ill or exposed to COVID-19 pandemic, planned sessions were to be postponed or fully virtual at the counselor's discretion and following the school's policies. In the same manner, should a student have become ill or exposed to COVID-19, he/she would be permitted to join the session(s) virtually or if any student preferred. All of the students and the school counselor already had an account with Microsoft Teams for distance learning if the need arose. No unexpected illnesses or absences occurred during implementation of the PIP.

Each student was provided a manual workbook designed specifically for COPE with activities for skill building. The manual content was designed to be completed during the week between sessions to allow the students to practice the content learned with the goal of positive changes. To increase accountability of completing the manual content, a \$10 Target gift card was

awarded to each student who completed all assigned workbook activities. Students were also able to keep the manuals for future reflection. The seven sessions focused on the following topics, one each week:

1. Thinking, Feeling, and Behaving: What is the connection?
2. Positive Thinking and Forming Healthy Thinking Habits
3. Coping with Stress
4. Problem Solving & Setting Goals
5. Dealing with your Emotions in Healthy Ways through Positive Thinking and Effective Communication
6. Coping with Stressful Situations
7. Pulling it All Together for a Healthy You

**Activity: Data Collection**

Pre- and post-implementation surveys were collected for the project. The students filled out paper forms of the surveys and the co-investigator entered and stored the data online in Qualtrics to increase information security and aide statistical analysis. The week of the first COPE session, participants were asked to fill out demographic information along with the self-efficacy tool and resiliency tool. Demographic information included age, grade level, gender, ethnic background, and mental health history. Surveys and tools are found in Appendix A through Appendix D. After administration of all seven sessions, participants and counselors were asked to fill out post-surveys seen in Appendix D and Appendix E respectively. The participant post-survey also included the repeat resiliency and self-efficacy scales. Resiliency was assessed with the BRS (Appendix B) while self-efficacy was assessed with the NGSE scale (Appendix

A). Both tools were included in the pre- and post- surveys for students. Participants were kept blind to their results and scale interpretation so that results were less likely to be altered.

Surveys and screening tools (Appendix C - Appendix D) were filled out by students in paper form. The school counselor assigned each student a number and relayed only the data, without identifiers, to the co-investigator. The co-investigator then entered the data into Qualtrics for storage based off the coded student number, so only the school counselor had the information to link the coded number to the student. The similar post-survey (Appendix D) was administered to students after the last session of the program in paper form. The same number code was used to strip the surveys of student identifiers. The student post-survey included the same BRS and NGSE as the pre-survey as well as gathering information related to how they felt about the program as a whole. Again, the surveys were administered in paper form and coded in the same fashion as the pre-survey with only the school counselor having access to the identifying information and the co-investigator receiving data only after it was coded. The co-investigator entered the information into Qualtrics.

If a student would have been participating from home, the student may have used his or her own personal electronic device, or a school device previously provided to the student for distance learning, to enter the responses directly into Qualtrics or to send their responses back to the school counselor in email. Only the counselor and co-investigator had access to the data which were password protected.

The school counselor provided feedback regarding the program through completing a questionnaire (Appendix E). Post-information was entered into Qualtrics in the same fashion as the other surveys. Paper surveys with identifiers were securely shredded by the school counselor after completion of the COPE program and full dissemination of the project.

## **Outputs: Evaluation and Data Analysis**

### **Short Term Outcomes**

The BRS and NGSE scales evaluated the influence on participants in the COPE program related to resilience and self-efficacy. Overall, objectives one and two were evaluated with descriptive statistics regarding BRS and NGSE pre- and post-survey data. Both of these scales used a 5-point Likert reference. Pre- and post-survey scores were compared using a paired T-test. The BRS was compared pre- and post-session completion to measure objective one of the PIP: “assess adolescent resiliency scores at baseline for comparison after implementation of the COPE program in a rural ND junior high school”. The NGSE scale evaluated objective two, “assess adolescent self-efficacy scores at baseline for comparison after implementation of the COPE program in a rural ND junior high school”. Assessing the change from baseline, or lack of, in descriptive statistics gathered from the BRS and NGSE also helped to determine sustainability within the school system relating to the third objective of overall evaluation.

**Table 1***Outcome Evaluations*

<b>Objective</b>	<b>Data</b>	<b>Evaluation</b>
Determine if COPE increases resiliency scores in a rural ND junior high school after implementation.	Descriptive Statistics from BRS Likert scale in pre- and post- participant surveys	Compare pre- and post-participant survey scores using paired T-test
Determine if COPE increases self-efficacy scores in a rural ND junior high school after implementation.	Descriptive Statistics from NGSE Likert scale in pre- and post- participant surveys	Compare pre- and post-participant survey scores using paired T-test
Evaluate COPE as a pilot program within a rural ND junior high school and make recommendations based on literature synthesis and project outcomes after implementation.	Qualitative and quantitative data from participant post-surveys and feedback from counselor post-survey; feedback related to opinions and perceptions acceptability, feasibility, and benefits of providing the COPE program from both participants and counselor	Content analysis and qualitative focus group feedback

**Long Term Outcomes**

The last objective, “evaluate the COPE program’s acceptability and sustainability within the school system upon completion of the PIP”, was able to be completed by administering a survey to participants and the counselor. A logic model was used to help evaluate the COPE program implementation during the PIP. Evaluation by content analysis per feedback of the participants and qualitative focus group feedback from the counselor was used. The surveys included opinions and perceptions related to acceptability, feasibility, and benefits of providing the COPE program in a rural ND school. In these surveys, both qualitative and quantitative data was included. Again, surveys were administered pre- and post-implementation. Surveys are

found in Appendix C through Appendix E. Results of the project was disseminated back to key stakeholders such as the school counselor and principle through an executive summary.

### **Protection of Human Subjects**

Since the project included human subjects, IRB approval through North Dakota State University (NDSU) was obtained prior to implementing COPE in the junior high school. The human subjects included students participating in the program and the school counselor delivering the content.

Potential risks included conflict of anonymity, possible student distress when discussing difficult topic areas, reminders of mental or psychological distress, possible stigma, possible disclosure of suicidal ideation, and possible contact with COVID-19 or other illness. Safety and confidentiality were highly sought and practiced. Both the school counselor and the co-investigator were available at the seven sessions to address any student concerns; the counselor was available in person and the co-investigator was available virtually. School policies and procedures were already in place and were followed for any student disclosing psychological distress or suicidal ideation. If risk did arise, the participant could stop participating at any time and the pre-existing steps from the school regarding psychological distress and/or suicidal ideation would have been followed. Should any student have disclosed information about abuse or neglect, appropriate mandated reporting would have been followed. Risk was not considered to be more than minimal risk since the counselor was already planning for group counseling with the same students identified for this intervention; therefore, no additional risks were anticipated by using COPE as the curriculum for these sessions.

Potential benefits of completion of the COPE program included an improved ability to cope with and manage stress. This may have improved overall mental health, resilience, and



social emotional development for participants. However, participants may not have received any benefit from participating in the program. If the program was successful, likely continuation was to be recommended with possible inclusion of partnering school to promote the development of resiliency and self-efficacy of students. Lastly, the program may have helped to provide students with tools to help manage stressful events and mental health burdens.

Information gathered was kept confidential and findings were written without personal identifiers. Data reported in writing was referred to as the collective group rather than individual results. Only the school counselor had any identifying data with the plan to shred all identifying data upon completion of the project spring 2021; identifying information was kept in a secure, locked location in the school counselor's office where she was the only person able to access such information. No identifying data was able to be traced back to specific individuals in the report written by the co-investigator.

Mandated reporting and following school policies/procedures for reports of abuse or neglect would have been followed in the event was needed. Any topics brought up in the COPE curriculum that may have created psychological or emotional distress or discomfort were paired with positive tools and management strategies for overcoming these potential mental and emotional concerns.

As the COVID-19 pandemic continued, physical illness related to COVID-19 or other illness such as influenza were possible risks. Social distancing such as sitting six feet apart during sessions and wearing facial masks while moving around the room were followed per health guidelines. If guidelines were to suggest in-person meetings be prevented, the school was prepared for virtual meetings using Microsoft Teams. The co-investigator always participated virtually as part of COVID-19 precautions and school limitations regarding outside personnel.

## **Confidentiality**

Confidentiality of the participants was emphasized. Each participant was given a coded number by the school counselor to keep results confidential. The school counselor was the only person with access to the coded numbers relating to identifying personal information. The counselor and co-investigator were the only individuals with access to the survey data as the counselors gave the co-investigator the surveys after personal identification was removed. The counselor kept the paper surveys locked in her office and the co-investigator kept the non-identified data on Qualtrics with a secure password account. The counselor could then use the list of names and numbers to intervene if an emergent situation comes to light such as thoughts of harming one's self or others.

Also, should a student forget their number to complete the surveys the counselor will be able to help recover the student's information when time came for the post-survey. With the coded number system, student information was better protected because the co-investigator would not be able to connect students with identifying information. Along with using numbers for identification, the forms completed and submitted by students were also kept confidential by the school counselor. Results were given to the co-investigator in aggregate form. In compliance with IRB protocol, all data collected was held in a secure location of a password protected laptop only accessed by the co-investigator and destroyed after a three-year holding period.

## **Resources**

Resources used for the project included an instructor certified in COPE delivery, student manuals equal to participants, IRB approved personnel, meeting space to accommodate all participants, time to complete COPE sessions, and funds to purchase COPE curriculum package

including student manuals. Approval and cooperation from all involved including school administration, counselor, guardian(s), and participants was also key.

Existing classroom materials such as white board markers and other teaching utensils were used; since the materials were already owned by the school, no additional purchases were needed. While an online venue was not utilized for this project, the possibility of needing an online classroom was covered by the school using Microsoft Teams. Each student already had an account available should the need arise due to the COVID-19 pandemic. Again, since the online platform was already in use for the staff and students of the school, no additional purchases were needed for an online model. Students also already had personal protective equipment, such as face masks, due to requirements for other pre-existing class requirements.

## **CHAPTER 4: RESULTS**

Five student participants joined in the COPE program at the school, and all five students completed the pre- and post-survey before and after COPE implementation in turn (Appendix C and D respectively). The surveys consisted of demographic data, BRS and NGSE scales, and COPE program evaluations. With the small sample size of five students, IRB recommendations were followed to present the data collectively to protect anonymity and therefore described in aggregate form. As such, no direct comparisons between an individual participant's datum from pre- and post-surveys were reported, but rather collective, aggregate data. Comparisons of BRS and NGSE scores were made by the co-investigator outside of the formal report; these comparisons are noted below by stating how many students had change in their scores rather than reporting the individual data.

### **Participants**

A total of five junior high students participated in the PIP. All five students attended the full seven sessions of COPE and completed the pre- and post-surveys with almost all questions being fully answered. All data that was collected was used, even though a few questions were left blank by participants; the questions left blank were areas for participants to expand on their selected answers. The counselor was present when students filled out their participation surveys as well as after each COPE session. The Participant Pre-Survey was completed prior to starting the first COPE session, and the Participant Post-Survey was completed by students at the end of the last COPE session (Appendix C and D respectively). Characteristics of the focus group were summarized in Table 2.

The demographic information gathered in the pre-survey asked participants about their mental health history. One student reported a prior mental health diagnosis, one student reported

a prior hospitalization due to past suicidal thoughts, and one student reported receiving “Other Treatment” related to mental health history. One more student may have actually had a possible mental health condition as the student marked “No” to the question “Mental Health Diagnosis” but then commented “not diagnosed anyway”.

**Table 2**

*Demographics of Participants*

<b>Characteristics</b>	<b>Participants (N=5)</b>	<b>Comments</b>
Age (years)		
13	4	
14	1	
Grade level		
7th	1	
8th	4	
Gender		
Male	4	
Female	1	
Ethnicity		
Caucasian	5	
Other	0	
Mental Health diagnosis		
Yes	1	
No	3	“not diagnosed anyway”
Unanswered	1	
Received treatment for Mental Health		
Yes	1	
No	3	
Unanswered	1	
Hospitalized due to Mental Health		
Yes	1	“Suicidal thoughts”
No	4	

Perceptions of self were also asked in the pre- and post-surveys related to healthy habits, such as exercising regularly, and academic achievement, such as receiving “good” grades in school. In the pre-survey, most students reported getting regular exercise of 30 minutes per day, had increased stressors or recent life changes, and reported a solid support person in their life.

In the post-survey, all five students reported getting regular exercise of 30 minutes per day. Over half of the participants disagreed that they received good grades in school. Most students continued to report increased stressors or life changes and having a solid support person in his/her life in the post-survey.

**Table 3**

*Perceptions and Healthy Habits of Participants*

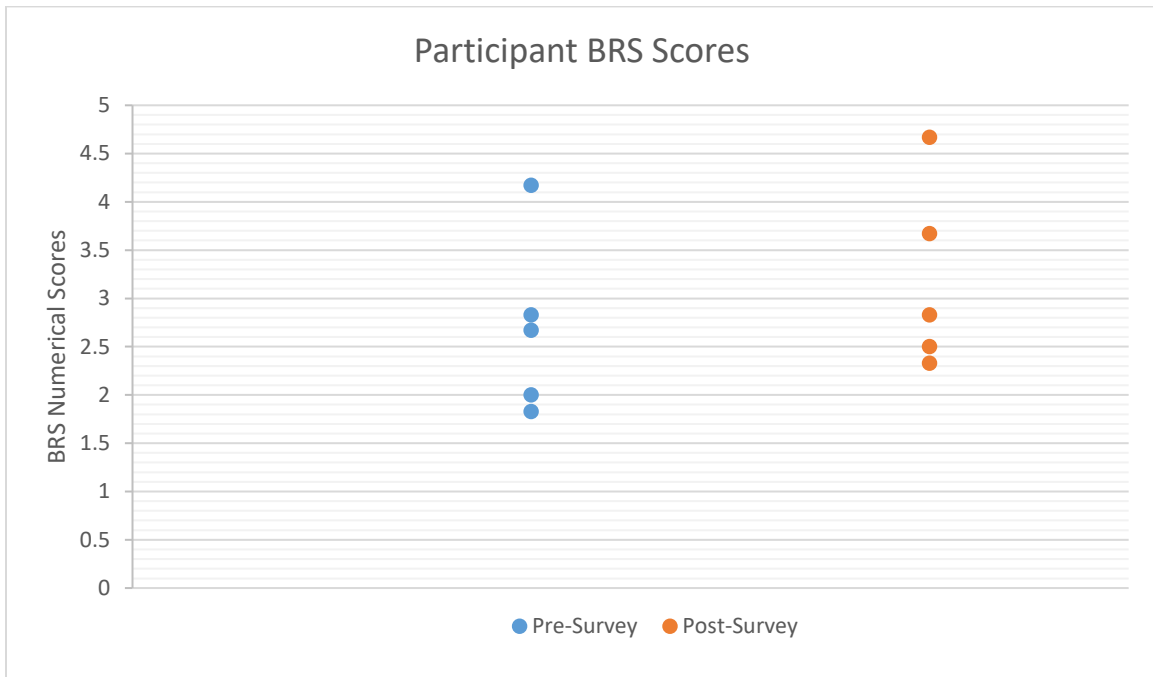
<b>Characteristics</b>	<b>Pre-Survey Participants (N=5)</b>	<b>Post-Survey Participants (N=5)</b>
<b>Exercise 30 min/day</b>		
Strongly Disagree	0	0
Disagree	0	0
Neutral	1	0
Agree	4	4
Strongly Agree	0	1
<b>Have good grades in school</b>		
Strongly Disagree	1	0
Disagree	0	3
Neutral	3	1
Agree	1	1
Strongly Agree	0	0
<b>Recent changes/stressors in life</b>		
Strongly Disagree	0	0
Disagree	0	0
Neutral	1	2
Agree	1	1
Strongly Agree	3	2
<b>Have adequate tools/resources to help deal with stress in daily life</b>		
Strongly Disagree	1	0
Disagree	2	1
Neutral	2	1
Agree	0	2
Strongly Agree	0	1
<b>Have solid support person in life</b>		
Strongly Disagree	0	0
Disagree	1	1
Neutral	1	1
Agree	1	0
Strongly Agree	2	3

### **Objective One: Resiliency Results**

A paired T-test ( $\alpha=0.05$ ) was performed to compare the pre- and post-BRS scores. As BRS scores increase, an increase in resiliency is indicated. Resiliency is scored as “low” with values 1.00 to 2.99, scored as “normal” with values 3.00 to 4.30, and scored “high” with values 4.31 to 5.00 when using the BRS. The average difference of BRS scores from the pre-survey to the post-survey was an improvement of 0.5 in numerical scores, meaning the post-scores averaged larger than the pre-scores for participants. Using an alpha value of 0.05, the null hypothesis was rejected as the p-value was 0.0341. Since the null hypothesis assumes no change to take place, the p-value of 0.0341 indicates overall statistically significant change between the students’ pre- and post-survey scores occurred. The lowest change was no improvement of zero points up to an improvement of one point. When evaluating each student’s cumulative BRS score, there was an increase in most students’ numerical scores from the pre- to post-surveys ( $n=4$ , 80%).

**Figure 3**

*Participant BRS Scores*



**Figure 4**

*Paired T-Test BRS Scale*

N	Mean	Std Dev	Std Err	Minimum	Maximum
5	0.5000	0.3536	0.1581	0	1.0000

Mean	95% CL Mean	Std Dev	95% CL Std Dev
0.5000	0.0610	0.9390	0.2118

DF	t Value	Pr >  t
4	3.16	0.0341

Beyond the numeric scores of the BRS, two participants improved when looking at the interpretations for the BRS scores and three participants remained in the same interpretation bracket for pre- and post-surveys. Four students started with low resiliency and one student started with normal resiliency. By the end of the COPE program, three participants remained



scoring low resiliency, one participant scored normal resiliency, and one participant scored high resiliency.

**Table 4**

*Resiliency Interpretation*

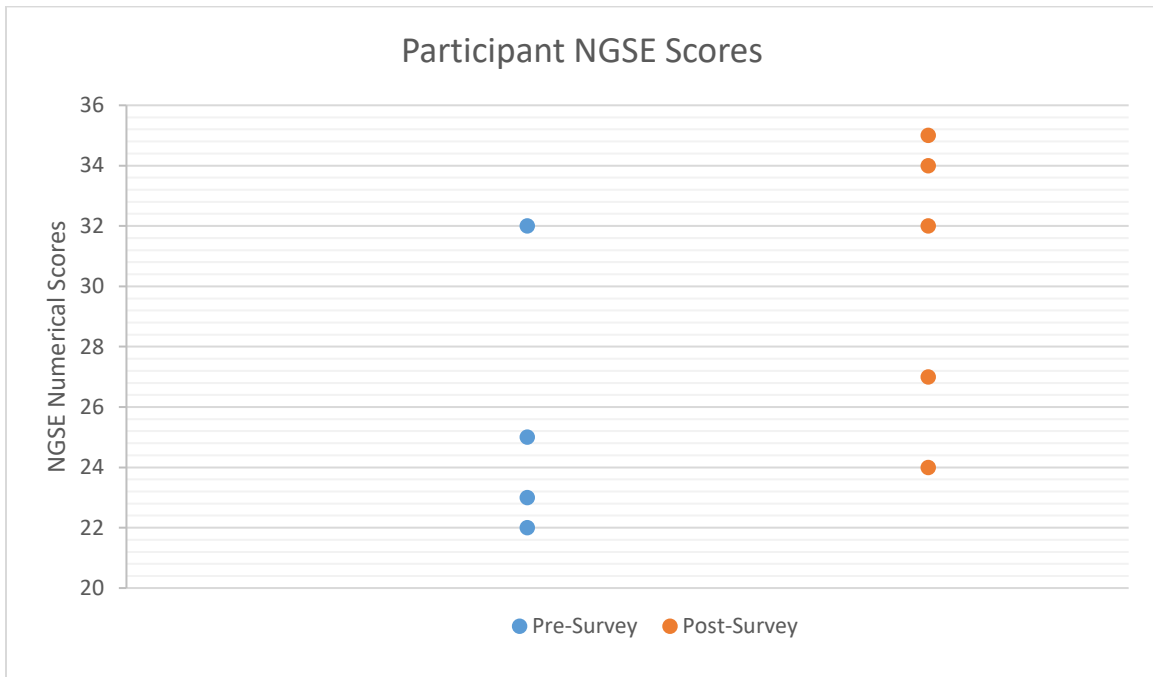
<b>Interpretation</b>	<b>Pre-Survey Participants (N=5)</b>	<b>Post-Survey Participants (N=5)</b>
Low: 1.00-2.99	4	3
Normal: 3.00-4.30	1	1
High: 4.31-5.00	0	1

**Objective Two: Self-Efficacy Results**

A paired T-test ( $\alpha=0.05$ ) was performed to compare the pre- and post-NGSE scores. As the scores increase, an increase in self-efficacy is indicated. Self-efficacy is scored as “low” with values 8 to 23, scored as “below average” with values 24 to 27, scored as “average” with values 27 to 31, scored as “above average” with values 32 to 34, and scored “high” with values 35 to 40 when using the NGSE. The average difference of NGSE scores from the pre-survey to the post-survey was an improvement of 6.2 in numerical score, meaning the post-scores averaged larger than the pre-scores for participants. Using an alpha value of 0.05, the null hypothesis was rejected as the p-value was 0.0249. Since the null hypothesis assumes no change to take place, the p-value of 0.0249 indicates overall significant change between the students’ pre- and post-scores occurred. The lowest change was an improvement of one point up to an improvement of 10 points. When evaluating each student’s cumulative NGSE score, an increase was found in all students’ numerical scores from the pre- to post-surveys ( $n=5$ , 100%).

**Figure 5**

*Participant NGSE Scores*



**Figure 6**

*Paired T-Test NGSE Scale*

N	Mean	Std Dev	Std Err	Minimum	Maximum
5	6.2000	3.9623	1.7720	1.0000	10.0000

Mean	95% CL Mean	Std Dev	95% CL Std Dev
6.2000	1.2801 11.1199	3.9623	2.3740 11.3860

DF	t Value	Pr >  t
4	3.50	0.0249

Beyond the numeric scores of the NGSE, interpretations for the NGSE scores are found in Table 5.

**Table 5**

*Self-Efficacy Interpretation*

<b>Interpretation</b>	<b>Pre-Survey Participants (N=5)</b>	<b>Post-Survey Participants (N=5)</b>
Low: 8-23	3	0
Below Average: 24-27	1	1
Average: 27-31	0	1
Above Average: 32-34	1	2
High: 35-40	0	1

**Objective Three: Evaluation of COPE**

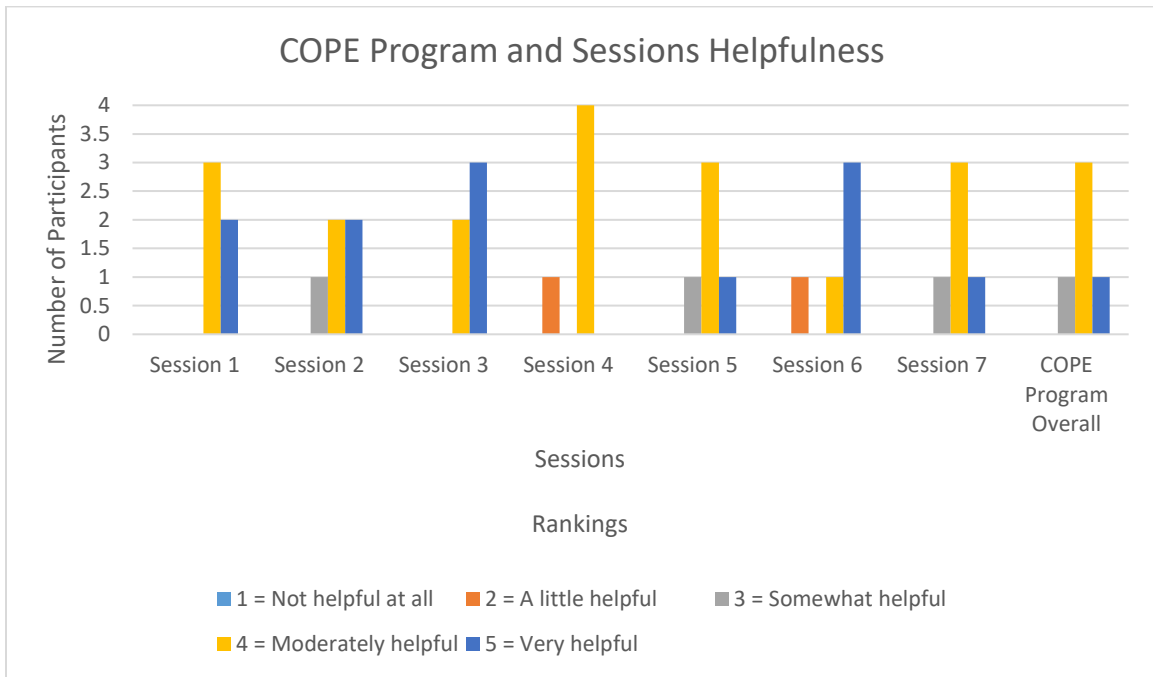
**Perceived Program Helpfulness**

In the post-survey, participants were asked to rank overall helpfulness of the COPE program and the helpfulness of each specific COPE session. A Likert scale was used for participants to rank the program and each session ranging from one to five (1=not helpful at all, 2=a little helpful, 3=somewhat helpful, 4=moderately helpful, 5=very helpful). Each week, one of the seven session topics were covered and progressed in the following order:

1. Thinking, Feeling, and Behaving: What is the connection?
2. Positive Thinking and Forming Healthy Thinking Habits
3. Coping with Stress
4. Problem Solving & Setting Goals
5. Dealing with your Emotions in Healthy Ways through Positive Thinking and Effective Communication
6. Coping with Stressful Situations
7. Pulling it All Together for a Healthy You

**Figure 7**

*COPE Perceived Program Session Helpfulness*



Beyond students' perceived helpfulness regarding each session and the program overall, students were asked to indicate which skills taught through the program were being used before the sessions, which skills were learned through the sessions, which skills were being used at the time of the post-survey, and which skills the participant would have liked to learn more about after completing the COPE program. Table 6 summarizes the responses.

**Table 6***Participant Feedback on Skills Learned*

Participants ( <i>N</i> =5)	What skills were you using BEFORE the COPE sessions? ( <i>n</i> )	What skills did you LEARN through the COPE sessions? ( <i>n</i> )	What skills are you CURRENTLY USING? ( <i>n</i> )	What skills would you like to LEARN MORE about? ( <i>n</i> )
Positive Thinking	0	5	5	4
The ABC's (Antecedent, Belief, Consequence)	0	5	2	1
Positive Self-Talk	1	5	4	3
Staying in the Present Moment	2	5	2	1
Goal Setting	4	4	4	2
Monitoring/Regulating my Emotions	2	5	4	2
Seeing the Cup "Half-Full"	1	5	3	0
Changing Unhealthy Habits	3	4	2	2
Coping Positively with Stress	1	5	2	3
Seeking Help when I Need it	2	5	4	1
Using the 4-Step Approach to Problem Solving	0	4	1	0
Being Thankful	3	4	3	2
Practicing Mental Imagery	2	5	2	1
Effectively Communicating	2	5	4	1
Practicing Self-Control	3	5	4	3
Planning for how to Respond to Negative Events	3	4	2	1
Other: "can't remember right now but remember something"	0	1	0	0

Lastly, related to the COPE program delivery, participants were asked to respond on how they thought the delivery of the program went. Options were "Strongly Disagree", "Disagree", "Neutral", "Agree", or "Strongly Agree". Most of the participants denied barriers to attending

all the sessions and would recommend the program to other students. All participants were satisfied with the session length of approximately 30 minutes per session along with the delivery location and method of COPE, which was the in-person counseling center. Most of the participants knew friends who could benefit from the COPE program, and one student commented how his/her friends were already in the pilot program.

**Table 7**

*Overall COPE Program Delivery Feedback*

<b>Rankings (N=5)</b>		
<b>Statement</b>	<b>Responses (n)</b>	<b>Comments</b>
I had barriers to attending all the COPE sessions.	n=1 “Neutral”	N/A
	n=4 “Strongly Disagree”	N/A
I was satisfied with the COPE session length of approximately 30 minutes per session.	n=4 “Agree”	N/A
	n=1 “Strongly Agree”	N/A
I liked the location/delivery method of the COPE program. (possibly virtual aspect)	n=4 “Agree”	N/A
	n=1 “Strongly Agree”	N/A
I know friends who would benefit from the COPE program.	n=1 “Strongly Disagree”	N/A
	n=3 “Agree”	N/A
	n=1 “Strongly Agree”	“most did!”
I would recommend the COPE program to other students.	n=1 “Neutral”	N/A
	n=2 “Agree”	N/A
	n=2 “Strongly Agree”	N/A
I think the COPE program should be delivered to ALL students.	n=1 “Disagree”	N/A
	n=2 “Neutral”	N/A
	n=1 “Agree”	N/A
	n=1 “Strongly Agree”	N/A

*Note.* Student answers ranged from “Strongly Disagree” to “Strongly Agree” on a 1-5 scale with 1 “Strongly Disagree” and 5 “Strongly Agree”. The full survey questions are in Appendix D.

## Additional Student Feedback

Throughout both of the pre- and post-surveys, students were given the opportunity to comment and expand on any answers they gave in the scoring tools and tables. While minimal comments were given during the pre-survey, the following table shows the comments written by participants on their post-surveys.

**Table 8**

*Summary of Post-Survey Regarding the COPE Program*

<b>Question</b>	<b>Comments</b>
What went well about this program?	<ul style="list-style-type: none"><li>• “I think more positive”</li><li>• “Coping with stress and negative thoughts”</li><li>• “Just the ability to learn this”</li></ul>
What could be better about the program if you were to be part of it again?	<ul style="list-style-type: none"><li>• “I am satisfied with the program”</li><li>• “Helping with suicidal thoughts”</li></ul>
If you found the COPE sessions helpful, how were they helpful to you?	<ul style="list-style-type: none"><li>• “I gained coping skills”</li><li>• “They helped me not have as much stress”</li><li>• “Dealing with the things were helpful”</li></ul>
If you did NOT find the COPE sessions helpful, why were they NOT helpful to you?	<ul style="list-style-type: none"><li>• “It also didn’t help because setting goals (causes) slight stress”</li></ul>

## Counselor Feedback

The counselor was able to provide feedback on the COPE program as well through the Facilitator Feedback Survey (Appendix E) created by the co-investigator. Overall, her feedback indicated she was satisfied with the COPE program and would like to continue using COPE for her students in the future.

A table with statements regarding COPE and satisfaction levels was presented with the options of “Extremely Dissatisfied”, “Dissatisfied”, “Neutral”, “Satisfied”, and “Extremely Satisfied” for responses as noted in Table 9.

**Table 9***COPE Facilitator Satisfaction Results*

<b>Statement</b>	<b>Response Rating</b>	<b>Comments</b>
How satisfied are you with the COPE facilitator training?	“Extremely Satisfied”	“The preparation and training needed for leading the Cope program was sufficient. I was excited to start the program with students.”
How satisfied are you with the manual-based format of the COPE sessions?	“Extremely Satisfied”	N/A
How satisfied are you with the (physical/virtual) location of the COPE sessions?	“Extremely Satisfied”	N/A
How satisfied are you with the cost to deliver and renew COPE?	“Extremely Satisfied”	N/A
How satisfied are you with the extent to which the program positively influences teens’ abilities to manage thoughts, feelings, and behaviors?	“Extremely Satisfied”	N/A
How satisfied are you that COPE covered main topics that adolescents could relate to and use on a daily basis?	“Extremely Satisfied”	N/A
How satisfied are you with the ease of delivering materials/sessions?	“Extremely Satisfied”	N/A
Satisfaction of overall program usefulness?	“Extremely Satisfied”	N/A

A similar table from the Participant Post-Survey (Appendix E) about skills was given to the counselor to fill out as part of her feedback. Six out of the 16 main skills taught through the COPE program were observed as being used by students prior to implementation. She indicated all 16 skills were learned and actively being used and observed after completing the COPE program. She did not indicate that any of the skills needed further teaching or instruction. The counselor noted, “The students mentioned the ABC model was new to them. They gained skills in coping positively with stress and felt their positive self-talk improved, and even became more comfortable. Practicing mental imagery became more straight forward, and they reported they began using it more often.”



**Table 10***Student Skills Observed by COPE Facilitator*

	<b>What skills were students using BEFORE the COPE sessions?</b>	<b>What novel skills did students LEARN through the COPE sessions?</b>	<b>What skills are students CURRENTLY USING?</b>	<b>What skills could students LEARN MORE about?</b>
Positive Thinking	1	1	1	0
The ABC's (Antecedent, Belief, Consequence)	0	1	1	0
Positive Self-Talk	1	1	1	0
Staying in the Present Moment	0	1	1	0
Goal Setting	0	1	1	0
Monitoring/Regulating my Emotions	1	1	1	0
Seeing the Cup "Half-Full"	0	1	1	0
Changing Unhealthy Habits	0	1	1	0
Coping Positively with Stress	1	1	1	0
Seeking Help when I Need it	1	1	1	0
Using the 4-Step Approach to Problem Solving	0	1	1	0
Being Thankful	0	1	1	0
Practicing Mental Imagery	0	1	1	0
Effectively Communicating	0	1	1	0
Practicing Self-Control	0	1	1	0
Planning for how to Respond to Negative Events	1	1	1	0

*Note:* Options were 0= "No"; 1= "Yes"

Table 10 was presented to the counselor through the Facilitator Feedback Survey. The table had statements related to overall perceptions about the COPE program and implementation for the PIP. Options for responses were "Strongly Disagree", "Disagree", "Neutral", "Agree", or "Strongly Agree".

**Table 11***Facilitator COPE Overview*

<b>Statement</b>	<b>Response Rating</b>
Overall, I found COPE to be helpful to student participants.	“Strongly Agree”
I have seen positive changes in the students since starting COPE.	“Strongly Agree”
I found the COPE sessions easy to deliver.	“Strongly Agree”
Session length of 30 minutes was appropriate.	“Strongly Agree”
Barriers were present for students to attend COPE sessions.	“Disagree”
I would recommend COPE for other students.	“Strongly Agree”
I would recommend COPE for ALL students.	“Agree”
I would like to continue to use COPE in this school.	“Strongly Agree”
Other schools should implement COPE.	“Strongly Agree”
As the instructor, I learned new positive tools and strategies to work on with students during future counseling sessions.	“Strongly Agree”

Open-ended questions along with a spot for additional comments finalized the facilitator survey. Overall, comments indicated positive experiences for the students and reports of valuable coping skills being used in everyday life for the students.

**Table 12***Additional Facilitator Comments*

<b>Question</b>	<b>Response</b>
Comments on what went well (themes you were hearing from students or observations during or outside of sessions, etc.)	“This group of students enjoyed sharing the different struggles they have had in their past. They also enjoyed sharing each week what they had gained by applying these new skills.”
Suggestions for improvements (either in delivery, desired target age for participants, in-person or remote participation, timing in study hall or lunch, etc.)	“I didn’t feel there was anything that needed improvement. The 7 <sup>th</sup> and 8 <sup>th</sup> graders were an ideal age for this material and program. I worked with them in-person once a week. We met during their lunch, and we often used about the first 15 minutes of their study hall, which was right after their lunch.”
Any additional comments	“This group of students gained numerous strategies to manage their stress & anxiety. They learned from each other through their discussions and skill-building activities. They enjoyed sharing their strengths and even their struggles with each session. These students even gained a friendship with each other through our sessions. They mentioned they didn’t want it to end. The Cope program was an excellent experience for these students.”

## CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

### Discussion

#### Objective One: Resiliency

Overall students' scores improved not only numerically, but also categorically when comparing pre- and post-survey BRS scores. Objective one was partially met. The short-term goal of improved resiliency scores was observed, however, due to the small sample size, one cannot determine if the improved scores were directly related to the COPE program alone or not.

Using a paired T-test, the results for objective one were statistically significant for this PIP. Comparatively, Wenschlag (2018) did not find overall statistically significant results regarding resilience when using the Wagnild and Young's Resilience Scale. Wenschlag (2018) did find two items from the Wagnild and Young's Resilience Scale out of the 25 to show statistical significance which were "I take things one day at a time" and "I have enough energy to do what I have to do".

Resiliency is considered a learned trait. Hornor (2017) acknowledges both positive and negative occurrences can teach an individual resilience; the determining factor in whether the individual develops resilience is by how they cope with the circumstance. Repeated brief exposures to negative life experiences where the individual is allowed to successfully cope with the experience will allow resilience to be improved. Since the students involved in the PIP had been identified to have increased stress, perhaps their negative life experiences contributed to positive resiliency results once taught appropriate coping skills through COPE.

Due to the small sample size, assumptions were not able to be made conclusively; however, resiliency scores were higher overall after completing COPE for students despite COPE at this rural location being implemented during the COVID-19 pandemic. Perhaps the

increased stress and change with the pandemic allowed students to use their newly learned coping skills more readily and immediately see the positive change the learned skills could bring. Scores could have also been blunted during the PIP due to students experiencing higher levels of stress. Strategies to implement CBT programs through the COVID-19 pandemic have been a focus in hopes of improving resiliency (Naeem et al., 2020). Furthermore, mental health disorders could potentially be positively influenced by increasing resiliency; by increasing resiliency, mental health disorders could possibly be prevented and/or have improved control (Hornor, 2017; Reid, 2010).

### **Objective Two: Self-Efficacy**

All student scores related to self-efficacy also improved when comparing the pre- and post-surveys. Objective two was partially met. The short-term goal of improved self-efficacy scores was observed, however, due to the small sample size, one cannot determine if the improved scores were directly related to the COPE program alone or not.

The paired T-test showed the change in NGSE scores were significant for this PIP. Not only did numerical scores improve, but all students also had improvements in their score classification relating to the interpretations of the NGSE. Comparatively, Wenschlag (2018) did not find statistically significant results regarding self-efficacy and also used the NGSE. However, Wenschlag compared each statement item of the NGSE rather than the overall scores per student when comparing pre- and post-survey results (Wenschlag, 2018). She did note an improvement in students' NGSE interpretation categorizations such as "average" self-efficacy improving to "above-average".

One item on the post-survey that stood out as declined student perceptions regarding academic grades. When students were asked in the pre-survey to rank how much they agreed

with “I have good grades in school” most were “Neutral” or “Agreed”. In the post-survey, for the same question, students mostly reported “Neutral” or “Disagree”. When looking at the timing of the surveys, the pre-survey was given at the beginning of November when academic work was still in progress and may not have been graded by teachers yet. The post-surveys were given mid-December right before winter break when the first half of the school year was almost completed and grades may have been returned to students; comparatively, assignments were likely not yet graded when the pre-survey was given. Speculation could be made that students felt better about their grades before finding out the outcomes of graded assignments.

The findings of this PIP are consistent with another study involving self-efficacy relating to stress with academics. Since school is a main source of stress for adolescents, increasing self-efficacy can help to mitigate the negative effects of stress and in turn improve life satisfaction (Burger & Samuel, 2017). Individuals with low self-efficacy were more likely to leave post-compulsory education early. However, individuals with increased self-efficacy tend to have increased academic success. Since this PIP did not measure actual graded, but rather perceived grades relating to self-efficacy, further investigation is warranted. In Western culture, not obtaining a post-compulsory degree leads to poor prospects in the labor market in many cases. Beyond obtaining work, individuals with mental health conditions needing a leave from work experienced a faster return to work timeframe when self-efficacy was high (Lagerveld et al., 2017).

CBT also teaches strategies to increase self-efficacy. By teaching adolescents skills to increase self-efficacy, overcoming negative life experiences becomes easier along with addressing emotional struggles before mental health disorders can potentially arise (Begun et al., 2018). COPE helps students set obtainable goals which is an important way to start building self-

efficacy (Cherry, 2020). The counselor involved in the PIP noted how the students involved in the group created friendships through their participation in COPE; positive social reinforcement and encouragement is another way COPE helps to increase self-efficacy (Cherry, 2020).

### **Objective Three: Evaluation**

Four of the five students reported they would recommend the COPE program to other students; most of the students also reported they had friend(s) who could benefit from the program. The counselor also strongly agreed that COPE would be valuable for students she worked with and felt that all students could benefit from the curriculum.

When looking at other dissertation projects on COPE, Wenschlag (2018) reported some students participating stated they felt the COPE material was too simplified. The participants in Wenschlag's project were high school seniors. Lindblom (2017) reported positive feedback regarding recommendations from participants; participants in Lindblom's project were a wider range of ages from 12 to 18 years. None of the students in the current study reported feeling the material was too basic, and their ages were 13 to 14 years.

The counselor for the current PIP also indicated the material to be ideal for the seventh to eighth grade students involved. Although the results of this PIP were based on a small sample size, there is a possibility that the recommended ideal age targeted with COPE could be aimed at younger adolescents in junior high grades rather than older adolescents in high school grades. Due to the fact that results from this PIP and the previous Wenschlag and Lindblom dissertations all had small sample sizes, further research should be completed for optimal implementation age recommendations.

Another dissertation project by McCormick (2016) involved a cohort of second graders; while she noted the students enjoyed participating in the program, the material did seem too

advanced for their age. Other studies completed with COPE looked at anxiety and depression in ages from childhood to college; recommendations were made to use COPE but no mention of inappropriate ages were made (Erlich et al., 2019b; P. Lusk & Melnyk, 2013; Pamela Lusk & Melnyk, 2011; McCormick, 2016; Melnyk et al., 2014)

Students also reported they did not feel like they had any barriers to attending the COPE sessions and the counselor also indicated no identified barriers for students. By having the COPE sessions at school during a time they could participate freely, such as lunch, all students participating felt they had easy access to the program. While absences related to illness or changes in delivery from the physical to a virtual classroom were anticipated due to the COVID-19 pandemic occurring during implementation, no illnesses or changes were necessary.

The COPE program has high sustainability traits (Cope2Thrive LLC, 2019; Lindblom, 2017; Melnyk et al., 2014; Wenschlag, 2018). COPE can be facilitated and maintained by many different titled professionals from health care providers, counselors, administrators, teachers, nurses, or other professionals in roles overseeing adolescents. The cost of the program does include an annual renewal fee, but if the same individual is instructing the class, then the training fee is not needed for subsequent years. The counselor noted the curriculum was easy to deliver and she felt well prepared after completing the training module online for COPE certification. Students participating in the program indicated they enjoyed participating and thought others could also benefit. Having the COPE program in their school helped increase adherence and access for the involved students.

The COPE program is ideal for a school setting because of the simple, manual based method of instruction (Lindblom, 2017; Melnyk et al., 2014; Wenschlag, 2018). If the instructor chooses, the manual can be followed verbatim for each session. No direct planning is needed

when administering the content. By having the instructor become certified in COPE administration, competency of the instructor was ensured for the program delivery.

While renewal fees for the program is lower than the initial fees, an annual cost does go with the curriculum. For many schools, counseling centers have an allotted budget for the academic year to purchase curriculum and support materials. For rural schools without a dedicated counseling center, a general budget or nursing office budget may be able to cover the costs. For the PIP, grant funding was used to reduce costs and allow the COPE pilot program to take place.

Each school will likely have differing schedules and preference as to when and how to implement the COPE program. For the involved school, the best time for students to participate was over their lunch period. The counselor noted how students were able to not worry about missing academic work due to the meeting time of lunch period. There was no extra time to incorporate the COPE program with other classes because of the constant changes with pandemic planning. However, the counselor noted how many sessions did flow into the next hour after lunch which was study hour for the involved students. Therefore, a longer period of time would be recommended for future implementation.

The counselor involved in the PIP indicated she enjoyed facilitating the COPE program. She found the curriculum easy to follow and administer. She also noted the COPE program would be valuable for more students in future years and hopes to continue the program in the school. The counselor is also hopeful for a budget to allow for renewal of COPE certification once the COVID-19 pandemic is more settled. Whether or not she is able to specifically use COPE in the future, the counselor also reported she learned more skills to pass on to future students by facilitating the COPE program. Overall, previous studies involving COPE supported



the continuation of the program due to high level of acceptance from participants and facilitators (Erlich et al., 2019a; Lindblom, 2017; Melnyk et al., 2014; Wenschlag, 2018).

### **Limitations**

The most notable limitation of the PIP was sample size. Only five students were able to participate as part of the pilot program. Small sample sizes are generally seen as less reliable and have less precision. By having a whole grade participate, the sample size would grow to approximately 60 students at the rural junior high. The small group size may have actually led to improving the experience for students by enhancing the group dynamic, facilitating discussion and sharing, and having the feeling of a safer environment. However, the data was limited due to the small size.

The higher the number of participants, the more reliable the results leading to better representation of the population of interest. The other two dissertations also noted sample size to be a limiting factor in their projects (Lindblom, 2017; Wenschlag, 2018). Future projects would benefit from expanding the target audience to a larger participant group. Reproducing the PIP with a larger sample size would help improve accuracy, making results more generalizable. Unfortunately, the PIP was implemented during the timeframe of the COVID-19 pandemic when the school system was overwhelmed with adapting to numerous changes and administration did not feel that a larger sample size could have been attempted. Originally, the school administration communicated wanting several whole grades to be able to participate; that changed with more restrictive COVID-19 expectations.

Beyond the small sample size, students were identified by the school counselor as at-risk students for participation. By choosing participants rather than randomly selecting participants, selection bias should also be considered. Not only did selecting the participants lead to bias, but

access for other students in the school was denied. While having COPE directly in the school should increase access for students to participate, having to choose a small pilot group of students actually decreased access during the PIP. Selection bias also prohibited generalization of the results since not all students were eligible to participate. Should a randomized group of students have participated in COPE, their baseline scores for resiliency and self-efficacy may have been increased compared to the selected pilot group. The original intent of the PIP was to allow all students from an identified grade to participate. However, due to the COVID-19 pandemic, limitations in resources and shifting student schedules meant the only way for the PIP to continue in the selected junior high school was to start with a small, selected focus group.

Selection bias can also be considered when looking at the finalized location of the PIP. The co-investigator reached out to schools surrounding the Fargo, ND area. The option for schools into the western half of the state were not offered the opportunity to participate due to the co-investigator's location. While many other schools surrounding the Fargo, ND area indicated interest in starting a mental health program, the selected school had one counselor already familiar with COPE who helped to push for acceptance.

Beyond the location preference, the selected school had unique dynamics in terms of population and location. Each grade in the school has approximately 50 students, however the town itself has a population of approximately 700. This indicates the school district serves many surrounding communities. With each grade having 50 or more students, the school is also considered a larger school which can be unique for a rural setting. Because the school enrolls students from varying communities, funding for the school is higher. The town the school is located in is considered a wealthier demographic group for ND as well. Rural schools without these unique features likely would not have the same level of resources and could have more

diverse populations. The opportunities for COPE to impact other rural schools may be increased, but the challenges for implementation would likely be higher. For example, barriers such as transportation are increased in rural schools; implementation of COPE during school hours would be important to consider since many students would not be able to come early or stay late secondary to bus schedules.

Another limitation of the study included long-term outcomes. A goal of implementing COPE as a pilot program was to show the involved junior high school the value for having COPE in subsequent years. By comparing the pre- and post-surveys, short-term conclusions were able to be seen despite the small sample size; however, the long-term outcomes and impacts on the involved students will not be known without having a formal follow-up at defined increments in the future. Most of the students showed short-term, immediate improvement after the COPE program was implemented, but in a few years their scores and perceptions could change again, and skills gained could not be assessed over time. Also, there was no control group to draw comparisons to the student participants.

The COPE program spanned seven weeks. Many external factors could have also been playing a role in the student feedback. As previously mentioned, the timing of the semester could have also influenced responses on surveys due to decreased or increased stress related to academic timing. With the post-survey occurring mid-December, the upcoming holiday season could also have influenced students' moods and perceptions depending on if the holidays create emotions of joy or illicit reminders of family hardships.

The COVID-19 pandemic also influenced timing of the PIP and may have contributed to extra stress to students participating in the COPE program. Adolescents are considered vulnerable during times of crisis (Fegert et al., 2020; Guessoum et al., 2020). Limited

information is currently known on the long-term effects the COVID-19 pandemic has on mental health, but early studies show an increased risk for conditions such as PTSD, depression, and anxiety for adolescents. Higher risk adolescents include those with a psychiatric history, females, and low economic status. Not only are mental health disorders at higher risk during crisis, but intrafamily violence is also increased with the confinement of social distancing and community lock-down. When 719 adolescents were asked what three biggest challenges they faced due to the COVID-19 pandemic, the four top themes included academics, mental health, physical health, and friends (Scott et al., 2020). Due to increased stressors with the COVID-19 pandemic, the PIP evaluation scores could have been negatively influenced.

### **Recommendations**

While statistical significance was shown for the PIP through paired T-tests, the limited sample size makes interpretation impossible to generalize. For the involved students, improvements were seen in their BRS and NGSE scores. The program was well-accepted by the students and overall found to be helpful and beneficial. Based on the limited data from the pilot group, recommendations to continue COPE at the junior high and increase participation are recommended.

With delivery occurring over the lunch period, the sessions were consistently planned to run 30 minutes in length due to scheduling time constraints. The counselor did note many times the sessions lasted 45 minutes in length with 15 minutes being used from the students' study halls following lunch. The group of students enjoyed talking about the content and relating to each other through life circumstances. To allow for more discussion, especially if group sizes are recommended to be expanded, the session times should likely be increased to at least 45 minutes. Not only would discussion be more freely allowed, but work-book activities could also be

reviewed. For the PIP, all students did complete their workbook activities; however, there was no monitoring of the quality of completion during the project. With the increased session time to allow for discussion, students would be able to ask about their workbook activities and relate more directly to real-life applications. In subsequent years, COPE could be added as part of a health class or even continue as a lunch special seminar for students. School staff and administration would need to discuss the best scheduling times for continuation of the program.

Since COPE is a structured curriculum, value in students being able to participate in all sessions should be considered. Should a student have been ill, allowing the student to make up the session individually with the counselor or having a recording of the session material delivery could have been options to allow the student access to all sessions and materials. Also, if the student felt well enough to participate virtually, a hybrid classroom could have been made with both physical and virtual capabilities for the day.

As the COPE program was a pilot program for the school, improvements can be recommended. As mentioned, future interventions should include an increased number of student participants. Rather than having a small focus group, implementing COPE as part of the normal curriculum for a whole grade would increase the likelihood of continuation in future years. Not only would accessibility be improved for all students, but the stigma surrounding mental health challenges may also be reduced. If the school adopts COPE as a program for continued use, a suggestion would be to open the program to all students in the grades above the chosen grade. By allowing older students to participate the first year, they would not miss out on the strategies taught through COPE due to being above the chosen implementation grade.

Value was found in having the small group for COPE implementation. The students and counselor commented on how new friendships were formed creating a trusting atmosphere for

discussion and accountability outside of the sessions. While participation should be increased, continuing small groups would be of value. Several options would allow for the small group discussions. One option could be for the curriculum to be presented to a large group, but then the students break into small discussion groups at the end of each session. Another option would be to continue the lunch hour into study hall implementation with a different small group participating each weekday. For example, group one meets on Mondays, group two meets on Tuesdays, group three meets on Wednesdays, group four meets on Thursdays, and group five meets on Fridays.

Small groups could be made by using the BRS and NGSE scales for screening. Students considered higher risk would benefit from being with others who are also higher risk. Similarly, students considered lower risk would benefit from being with others who are also lower risk. By screening students and making groups based on risk level, peer connections may be enhanced, and more meaningful discussion facilitated.

No matter the chosen implementation method, emphasis on keeping COPE during regular school hours is also of importance. For rural communities, many students ride the bus to school and options to come early or stay late are not possible for these students due to the bus schedules. For COPE to be completely accessible to all students, options for participation during the regular school day is vital.

To help with cost, bulk purchasing student manuals in a quantity of 200 or more could decrease costs. When purchasing over 200 student manuals a file would be sent to the school for printing with the rate of five dollars per manual rather than 20 dollars per manual. Manuals could also be used more like a textbook and loaned to each student for the sessions with each student using their own personal notebook to take notes and complete workbook activities.

Grant funding could also be an option, and many electric companies participate in the “Round-Up” program. The Round-Up program lets community members round up their bills for donation. The donations are then put into a fund for grant awards to local causes. A grant through the Round-Up program is how the COPE program was started for the junior high school participating in this COPE pilot program.

While adolescent years are full of change and stress, the added stress of the COVID-19 pandemic was unexpected. Further research is needed to understand how adolescents are affected long-term from times of crisis such as the pandemic. Little is known regarding the level of stress an individual experiences relating to mental health outcomes. Research into resiliency and self-efficacy levels along with level of stress influences is important to consider.

### **Framework: Theory and Module**

#### **Theory**

By implementing COPE, students were able to foster knowledge and beliefs from the curriculum and increase self-regulation skills and abilities leading to enhanced behavior change (Ryan, 2009). Going along with the ITHBC, modern health promotion should use community settings such as schools to allow better access for the students. By removing the barrier of access to mental health resources in rural ND, these students were able to participate more freely and readily in health promotional behaviors taught in the COPE program. The COPE program also focused on many of the specific interventions of the ITHBC such as goal setting, self-monitoring and reflective thinking, decision making, self-evaluation and self-management of physical, emotional, and cognitive responses. The ITHBC was a good fit to help guide the PIP within this school setting in rural ND.

## **Logic Model**

As depicted in the logic model (Figure 2), after implementation and collection of data, statistical evaluation was performed to determine the outcomes on resiliency, self-efficacy, and overall acceptability and feasibility of the COPE program. One limitation with the statistical evaluation was the small sample size of five students. When looking at the paired T-test for both the BRS and NGSE scales, both produced a p-value indicating the null hypothesis should be rejected, meaning the changes in student scores were significant. However, a larger sample size is needed to show true statistical significance.

The logic model helped organize objectives for the PIP and frame the short and long-term goals to disseminate back to the rural school counselor and administration. The model was an effective tool that contributed to the PIP and could be used in future similar projects.

### **Implications for NP Practice**

Mental health conditions can be common among the adolescent population. However, teens are not always receiving appropriate mental health care due to stigma and barriers. When adolescents are not equipped with healthy coping mechanisms, turning to unhealthy behaviors such as substance abuse, physical violence, or unsafe sexual activity is more likely (Anderson, 2020; Shogren & Harsell, 2020). Having community partners such as schools is important for NPs to effectively impact the adolescent population.

NPs are known to focus on health promotion and disease prevention. Education through programs such as COPE is a way for NPs to promote evidence-based methods for mental health access. While NPs strive to focus on mental health conditions in the clinic, disease prevention through community interventions, such as COPE, could help improve outcomes. When looking at rural areas, such as most of ND, mental health care is not readily available within the



community (Anderson, 2020). Health care in general may not even be present in the community in terms of clinic access. Community partners and programs are essential, especially in rural populations.

Adolescence is a time for developing life-long behaviors and habits. By ensuring access to learning positive coping mechanisms, a school partnership is helpful in promoting optimized mental health. Most adolescents attend their local public school, leading to increased access to programs such as COPE. However, school partnerships do not only need to be public schools; any private or home school organizations would be valuable partners as well. By implementing COPE for all students, normalization can be encouraged related to mental health topics leading to a reduction in stigma.

NPs can use their leadership skills to help encourage and educate key stakeholders in the community. Collaboration and approachability are also important traits for NPs to convey. By helping to identify, implement, and evaluate evidence-based solutions such as COPE, NPs can help improve patient outcomes and health care delivery in their community.

The mental health barriers, noted previously, are greatly decreased when bringing materials directly to students in their own normal environment, such as school. No extra transportation was needed to bring these students to an appointment in the next major town. Not only is time lost for the students' studies when having to travel to other towns for care, but parents must take time away from work and potentially take a loss in wages for the day. NPs are still able to help manage these students as patients, but being able to refer to counseling services and know that each student has the ability to participate in a mental health program, such as COPE, within their own normal school environment, is an asset to any mental health care treatment plan.

## **Dissemination**

The PIP was disseminated via poster presentation virtually at the North Dakota Nurse Practitioner Association (NDNPA) Pharmacology conference during the fall of 2020 as well as at the NDSU campus during the spring semester of 2021. During the fall 2020 virtual presentation, the poster focused on background, objectives, and program design; no results were available at the time. During the spring 2021 presentation, the poster focused on results with analysis and discussion leading to recommendations. A summary of the results was also sent to key stakeholders, the school counselor, in the form of an executive summary (Appendix I). The NDSU library will also hold record of the PIP for others to view in the future.

## **Conclusion**

Overall, the students stated they enjoyed the program. The counselor reported back to the co-investigator how the students were always telling her during the days between sessions how excited they were to meet for the next session. Both BRS and NGSE scores improved for most students with most increasing not only numerically in their scores but also by interpretation of scores.

The purpose of the project was to improve resiliency and self-efficacy in junior high students at a rural ND junior high school by implementing the COPE program. Overall, the program was well accepted and received by the student participants and school counselor. Students did show improvements in their self-efficacy and resiliency scores, but the small sample size limits interpretation of the results. Even with limitations interpreting the data, all participants noted the program to be a positive experience with most recommending the program for continued use. The COPE program was also stream-lined for easy delivery by school staff no matter their role.

Adolescent years include many trials and changes leading to increased stress. The year of implementation for the PIP included even more stressors and changes when dealing with the COVID-19 pandemic. No matter what an individual's mental status, having tools and strategies to deal with stress can greatly decrease burdens of stress. Measurements of self-efficacy and resilience can help indicate how prepared one is to deal with increased stressors in life.

The COPE program helps to reinforce basic tools to handle stress through CBT strategies. While people cannot always control their surroundings, they can control their thoughts, feelings, and actions. By being able to acknowledge and control feelings, actions become thought out rather than reactionary. Long-term outcomes could relate to the impact on resilience and self-efficacy leading to possible decreases in mental health burden such as anxiety and depression for the students. The skills learned through the COPE program may help the students not only deal with stress during school, but also deal with stress into their adult lives. The COPE program was recommended for continued use in the currently involved school along with implementation in communities throughout ND.

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## APPENDIX A. PERMISSION TO USE NEW GENERAL SELF-EFFICACY SCALE



### New General Self-Efficacy Scale

PsycTESTS Citation:

Chen, G., Gully, S. M., & Eden, D. (2001). New General Self-Efficacy Scale [Database record]. Retrieved from

PsycTESTS. doi: 10.1037/t08800-000

Test Shown: Full

Test Format:

The measure's 8 items are rated on a 5-point Likert-type scale from strongly disagree (1) to strongly agree (5).

Source:

Chen, Gilad, Gully, Stanley M., & Eden, Dov. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, Vol 4(1), 62-83. doi: 10.1177/109442810141004, © 2001 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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**New General Self-Efficacy Scale  
NGSE**

Items

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1. I will be able to achieve most of the goals that I have set for myself.
  2. When facing difficult tasks, I am certain that I will accomplish them.
  3. In general, I think that I can obtain outcomes that are important to me.
  4. I believe I can succeed at most any endeavor to which I set my mind.
  5. I will be able to successfully overcome many challenges.
  6. I am confident that I can perform effectively on many different tasks.
  7. Compared to other people, I can do most tasks very well.
  8. Even when things are tough, I can perform quite well.
- 

*Note.* 1. More specific information with regard to the search we have conducted is available upon request from the first author. 2. Participants were told that (a) general self-efficacy relates to “one’s estimate of one’s overall ability to perform successfully in a wide variety of achievement situations, or to how confident one is that she or he can perform effectively across different tasks and situations,” and (b) self-esteem relates to “the overall affective evaluation of one’s own worth, value, or importance, or to how one feels about oneself as a person.”

**APPENDIX B. BRIEF RESILIENCE SCALE**



Brief Resilience Scale (BRS)

Please respond to each item by marking <u>one box per row</u>		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS <sub>1</sub>	I tend to bounce back quickly after hard times	□ 1	□ 2	□ 3	□ 4	□ 5
BRS <sub>2</sub>	I have a hard time making it through stressful events.	□ 5	□ 4	□ 3	□ 2	□ 1
BRS <sub>3</sub>	It does not take me long to recover from a stressful event.	□ 1	□ 2	□ 3	□ 4	□ 5
BRS <sub>4</sub>	It is hard for me to snap back when something bad happens.	□ 5	□ 4	□ 3	□ 2	□ 1
BRS <sub>5</sub>	I usually come through difficult times with little trouble.	□ 1	□ 2	□ 3	□ 4	□ 5
BRS <sub>6</sub>	I tend to take a long time to get over set-backs in my life.	□ 5	□ 4	□ 3	□ 2	□ 1

**Scoring:** Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

**My score:** \_\_\_\_\_ item average / 6

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, 15(3), 194-200.

**APPENDIX C. PRE-PROGRAM SURVEY (PARTICIPANT)**

**Directions:** Please fill in each question by filling in the blank or choosing the answer that best fits your personal information to the best of your ability and to your comfort level. All answers are voluntary and confidential. Thank you!

1. Age in years: \_\_\_\_\_
2. Grade level: \_\_\_\_\_
3. Gender:
  - a. Male
  - b. Female
  - c. \_\_\_\_\_
4. Ethnic Background:
 

a. White, non-Hispanic	e. Asian/Pacific Islander
b. Black, non-Hispanic	f. Multiracial
c. American Indian/Alaskan Native	g. Other _____
d. Latino/Latina	

Please fill out the following three questions to check “yes” or “no” to each sentence and write out anything else you would like us to know if you are comfortable.

	Y	N	Comments/Explanations if comfortable:
Has a doctor ever said you have a mental health related diagnosis? (examples: anxiety, depression, PTSD, etc.)			
Have you ever gotten treatment (medication, counseling) for a mental health diagnosis?			
Have you ever had to go to the hospital for a mental health diagnosis?			

New General Self-Efficacy Scale (NGSE) Please check **ONE BOX** per row:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
NGSE 1	I will be able to achieve most of the goals that I have set for myself.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 2	When facing difficult tasks, I am certain that I will accomplish them.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 3	In general, I think that I can obtain outcomes that are important to me	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 4	I believe I can succeed at most any endeavor to which I set my mind.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 5	I will be able to successfully overcome many challenges.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 6	I am confident that I can perform effectively on many different tasks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 7	Compared to other people, I can do most tasks very well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 8	Even when things are tough, I can perform quite well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Please write out any additional thoughts about the above table if you would like:

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Brief Resilience Scale (BRS) Please check ONE BOX per row:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 2	I have a hard time making it through stressful events.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 3	It does not take me long to recover from a stressful event.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 4	It is hard for me to snap back when something bad happens.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 5	I usually come through difficult times with little trouble.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 6	I tend to take a long time to get over set-backs in my life.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

Please write out any additional thoughts about the above table if you would like:

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Please check **ONE BOX** per row that best describes each sentence:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I exercise every day for at least 30 minutes per day.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2	I have good grades in school.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3	There are increased recent changes and stressors in my life.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4	I have adequate tools and resource to help me deal with stress in daily life.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5	I have a solid support person in my life.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Please share any additional comments that you would like (concerns, feelings, what you might think you will get out of this program):

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**APPENDIX D. COPE PROGRAM EVALUATION (PARTICIPANT)**

All responses are confidential and voluntary. Please fill out the following survey to the best of your ability and to your comfort level. Thank you!

New General Self-Efficacy Scale (NGSE) **Please check ONE BOX per row:**

		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
NGSE 1	I will be able to achieve most of the goals that I have set for myself.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 2	When facing difficult tasks, I am certain that I will accomplish them.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 3	In general, I think that I can obtain outcomes that are important to me	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 4	I believe I can succeed at most any endeavor to which I set my mind.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 5	I will be able to successfully overcome many challenges.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 6	I am confident that I can perform effectively on many different tasks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 7	Compared to other people, I can do most tasks very well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NGSE 8	Even when things are tough, I can perform quite well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**Please write out any additional thoughts about the above table if you would like:**

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Brief Resilience Scale (BRS) Please check **ONE BOX** per row:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 2	I have a hard time making it through stressful events.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 3	It does not take me long to recover from a stressful event.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 4	It is hard for me to snap back when something bad happens.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 5	I usually come through difficult times with little trouble.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 6	I tend to take a long time to get over set-backs in my life.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

Please write out any additional thoughts about the above table if you would like:

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**\*What went well about this program?**

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**\*What could be better about the program if you were to be part of it again?**

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Check the box you feel best tells how helpful each COPE session was:

	Not at all helpful	A little helpful	Somewhat helpful	Moderately helpful	Very helpful
<b>(Session 1) Thinking, Feeling and Behaving: What is the Connection?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 2) Self-Esteem and Positive Thinking / Self-Talk</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 3) Stress and Coping</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 4) Problem Solving and Setting Goals</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 5) Dealing with your Emotions in Healthy Ways through Positive Thinking and Effective Communication</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 6) Coping with Stressful Situations</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>(Session 7) Pulling it all Together for a Healthy YOU!</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>Overall program usefulness</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

If you found the COPE sessions helpful, how were they helpful to you?

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If you did NOT find the COPE sessions helpful, why were they NOT helpful to you?

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Please check ONE BOX per row that best describes each sentence:

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>I exercise for at least 30 minutes every day.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I have good grades in school.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>There are increased recent changes and stressors in my life.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I have adequate tools and resources to help me deal with stress in daily life.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I have a solid support person in my life.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I had barriers to attending all the COPE sessions.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I was satisfied with the COPE session length of approximately 30 minutes per session.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I liked the location/delivery method of the COPE program. (possibly virtual aspect)</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I know friends who would benefit from the COPE program.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I would recommend the COPE program to other students.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I think the COPE program should be delivered to ALL students.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Please mark all the skills that apply for each question in each column:

	<b>What skills were you using BEFORE the COPE sessions?</b>	<b>What skills did you LEARN through the COPE sessions?</b>	<b>What skills are you CURRENTLY USING?</b>	<b>What skills would you like to LEARN MORE about?</b>
<b>Positive Thinking</b>				
<b>The ABC's (Antecedent, Belief, Consequence)</b>				
<b>Positive Self-Talk</b>				
<b>Staying in the Present Moment</b>				
<b>Goal Setting</b>				
<b>Monitoring/Regulating my Emotions</b>				
<b>Seeing the Cup "Half-Full"</b>				
<b>Changing Unhealthy Habits</b>				
<b>Coping Positively with Stress</b>				
<b>Seeking Help when I Need it</b>				
<b>Using the 4-Step Approach to Problem Solving</b>				
<b>Being Thankful</b>				
<b>Practicing Mental Imagery</b>				
<b>Effectively Communicating</b>				
<b>Practicing Self-Control</b>				
<b>Planning for how to Respond to Negative Events</b>				
<b>Other:</b>				

## APPENDIX E. FACILITATOR FEEDBACK SURVEY

Please use the following chart to rate various responses:

	<b>Extremely Dissatisfied</b>	<b>Dissatisfied</b>	<b>Neutral</b>	<b>Satisfied</b>	<b>Extremely Satisfied</b>
<b>How satisfied are you with the COPE facilitator training?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you with the manual-based format of the COPE sessions?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you with the (physical/virtual) location of the COPE sessions?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you with the cost to deliver and renew COPE?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you with the extent to which the program positively influences teens' abilities to manage thoughts, feelings, and behaviors?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you that COPE covered main topics that adolescents could relate to and use on a daily basis?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>How satisfied are you with the ease of delivering materials/sessions?</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>Satisfaction of overall program usefulness</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5



Any additional comments regarding your preparation for leading COPE:

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**Please select all skills that apply for each question related to observations of students:**

	<b>What skills were students using BEFORE the COPE sessions?</b>	<b>What novel skills did students LEARN through the COPE sessions?</b>	<b>What skills are students CURRENTLY USING?</b>	<b>What skills could students LEARN MORE about?</b>
<b>Positive Thinking</b>				
<b>The ABC's (Antecedent, Belief, Consequence)</b>				
<b>Positive Self-Talk</b>				
<b>Staying in the Present Moment</b>				
<b>Goal Setting</b>				
<b>Monitoring/Regulating my Emotions</b>				
<b>Seeing the Cup "Half-Full"</b>				
<b>Changing Unhealthy Habits</b>				
<b>Coping Positively with Stress</b>				
<b>Seeking Help when I Need it</b>				
<b>Using the 4-Step Approach to Problem Solving</b>				
<b>Being Thankful</b>				
<b>Practicing Mental Imagery</b>				

<b>Effectively Communicating</b>				
<b>Practicing Self-Control</b>				
<b>Planning for how to Respond to Negative Events</b>				
<b>Other:</b>				

Please comment/expand on any answers from the table above:

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Please respond to each statement by marking **ONE BOX** per row:

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>Overall, I found COPE to be helpful to student participants.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I have seen positive changes in the students since starting COPE.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I found the COPE sessions easy to deliver.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>Session length of 30 minutes was appropriate.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>Barriers were present for students to attend COPE sessions.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I would recommend COPE for other students.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I would recommend COPE for ALL students.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>I would like to continue to use COPE in this school.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

<b>Other schools should implement COPE.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>As the instructor, I learned new positive tools and strategies to work on with students during future counseling sessions.</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**Comments on what went well (themes you were hearing from students or observations during or outside of sessions, etc.):**

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**Suggestions for improvements (either in delivery, desired target age for participants, in-person or remote participation, timing in study hall or lunch, etc.):**

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**Any additional comments:**

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## APPENDIX F. RECRUITMENT LETTER



School of Nursing  
1401 Albrecht Blvd, 136 Sudro Hall  
Fargo, ND 58102  
701-231-7395

Dear Student and Guardian,

I am a graduate student in the nurse practitioner program at North Dakota State University (NDSU). I am excited to let you know of a program coming to your school this fall 2020. The program is called Creating Opportunities for Personal Empowerment (COPE). COPE is an evidence-based program made to help teens to better learn healthy coping skills that can be used to help mental health or help prevent mental health issues, such as anxiety or depression. Being a teenager is a great time to develop positive life-long behaviors such as ways to deal with stress. While stress is unavoidable in any year, the events of 2020 has added extra stress for everyone.

The COPE program will be delivered weekly during the lunch hour led by the school counselor. The program is free to students wanting to participate. A workbook is used to help you practice and learn the skills. In the workbook, you will find ways to help with stress and handle difficult situations better. Seven sessions (one per week) will take place over seven weeks; each session will last about 30 minutes. COPE will start on an October or November Monday and will continue weekly on Mondays with a final date just before the holiday breaks. Should increased social distancing be needed, virtual connections for sessions through Microsoft Teams will take place. The school counselor will teach the sessions and talk about COPE during the sessions. I will help collect survey information for the program, measuring your resiliency and self-efficacy.

Attached are permission forms for both you the student and your guardian to fill out if interested in participating. Please return completed forms by scanning into an email to the school counselor or return a physical copy to the school counselor in-person. Please contact the school counselor or me by email or phone with any questions or for further information. The deadline to sign up and return permission forms is Friday, October 2<sup>nd</sup>.

Sincerely,

Ariel Schwarzrock, RN, BSN

Doctor of Nursing Practice Student

North Dakota State University

## APPENDIX G. PARENTAL PERMISSION FORM



School of Nursing  
1401 Albrecht Blvd, 136 Sudro Hall  
Fargo, ND 58102  
701-231-7395

### **C.O.P.E. Influence on Resiliency and Self-Efficacy in a Rural North Dakota School Parent/Guardian Permission Form**

**This study is being conducted by:** Ariel Schwarzrock, RN, Doctor of Nursing Practice Student (DNP-S) and will be supervised by Heidi Saarinen, DNP, RN, FNP-C, Assistant Professor of Practice at North Dakota State University.

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

We are offering the Creating Opportunities for Personal Empowerment (COPE) program to students in your child's cohort within the school. COPE is an evidence-based program made to help teens better learn healthy coping skills that can be used to help mental health or help prevent mental health issues such as anxiety or depression. The program will be offered during lunch hour, making your student eligible to participate. The program teaches teens skills to positively manage thoughts, emotions, and behaviors in response to stress.

#### **What is the reason for doing the study?**

The purpose of this project is to determine if the COPE program is an effective strategy for improving resilience and self-efficacy of adolescents. Research has shown that improving resilience and self-efficacy skills can help prevent mental health problems later in life, such as depression and anxiety.

#### **What will my child be asked to do?**

Your child will be asked to participate in seven sessions of the COPE program during school hours. The sessions will be held weekly during lunch period in a small group; the school counselor will lead these sessions. During the sessions, participants will be given the chance to reflect on what they are learning to try to apply these positive strategies to their own lives.

As part of the project, some information will be collected from your child to learn more about who participated and to measure the success of the program. Surveys will be given for your child to fill out before the first session and after the last session. Questions will ask about your child's

feelings, emotions, and coping skills. In addition, we will ask for descriptive information about your child such as age, grade, gender, race/ethnicity, and perceptions on subjects such as grades, exercise, and stress levels. All information collected is voluntary and kept confidential.

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

The COPE program will be delivered as part of group counseling during lunch period at the school. There will be seven, 30-minute sessions given over the course of seven independent days. Dates are projected to be on Mondays starting in October or November and ending in December. The total time commitment to participate is approximately 3.5 hours. The program is free of cost to any students participating. Due to COVID-19 health guidelines, the projected group of students will be limited to five students for participation so that social distancing of six feet may be maintained.



### **What are the risks and discomforts?**

Potential risks to your teen include the chance your child may feel uncomfortable during the program if asked sensitive information or could experience mental or psychological distress thinking about stressful situations. However, if your child experiences any of these, the school counselor will be present to help work through these issues. Any reports of thoughts about harming self or others or experiences of abuse or neglect will be reported to authorities following mandated reporting laws in the state of North Dakota and following policies already in place within the school. With the current COVID-19 pandemic, there is a risk to contracting illness due to in-person participation. Health guidelines will be followed such as students sitting six feet apart and masks to be worn while moving about the room. Online platforms such as Microsoft Teams may be used should recommendations for distance learning be made or if your child becomes ill or had contact with others positive for COVID-19.



### **What are the expected benefits of this research?**

**Individual Benefits:** Potential benefits of completion of the COPE program for you child may include an improved ability to cope with and manage stress. This may improve overall mental health, resilience, and social emotional development for your child, especially during these difficult times we are facing currently. However, your child may not get any benefit from participating in this program.

**Societal Benefits:** If this program is successful it may continue to be utilized by this North Dakota school, and possible other schools, to promote the development of resiliency and self-efficacy of students as well as help to provide students with tools to help manage stressful events and mental health burdens.

## **Does my child have to take part in this study?**

Your child's participation in this project is his/her choice with your permission. If your child decides to participate in the study, he/she may change his/her mind and stop participating at any time without any consequence or loss of benefits to which he/she has already gotten.

## **Will it cost anything to participate?**

Participation is free to all who choose to participate. The cost of the program and student manuals have already been paid for by the graduate student.

## **Who will have access to my child's information?**

We will keep all research records that identify your child private. Your child's information will be combined with information from other students taking part in the project. When we write about the project, combined information will be used and no individual reporting of information will be used. We might publish the results of the study; however, we will keep your child's name and other identifying information private. You should know that there are some circumstances in which we may have to break confidentiality. For example, the law may require us to report if we suspect your child has been abused or neglected or if s/he is a danger to him/herself or others, for which the school policies already in use will be used.

## **How will my child's information be used?**

- Collected data will not be used or distributed for future research, even if de-identified. The graduate student will use collected data to present results in aggregate form, or in a collective manner. Your child's information will never be used individually in this study nor be identifiable.

## **Is any compensation available for participating in the study?**

Incentives will be used to encourage the completion of all seven sessions. Each student who completes all seven sessions of the program will be eligible for a gift card valued up to \$20. A \$10 gift card will be given to each student completing participation in all seven sessions of the program. An additional \$10 will be added to the gift card if the student completes all workbook activities for a total of \$20 gift card compensation possible.

## **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 or later, if you or your child has questions about the study, you can contact Ariel Schwarzrock at [ariel.schwarzrock@ndsu.edu](mailto:ariel.schwarzrock@ndsu.edu) or by phone at 952-457-0466, or Heidi Saarinen at [Heidi.saarinen@ndsu.edu](mailto:Heidi.saarinen@ndsu.edu) or by phone at 701-231-7821.

**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



## APPENDIX H. YOUTH ASSENT FORM

NDSU North Dakota State University  
School of Nursing  
1401 Albrecht Blvd, 136 Sudro Hall  
Fargo, ND 58102  
701-231-7395

### YOUTH ASSENT FORM

**Title of research study:** C.O.P.E. Influence on Resiliency and Self-Efficacy in a Rural North Dakota School

#### **Invitation:**

- You are invited to take part in a research study to teach and equip teens with skills to help improve thoughts, feelings, and actions when facing stress and negative thoughts.
- The study is being done by NDSU graduate student Ariel Schwarzrock, RN, DNP-S and will be supervised by NDSU faculty Heidi Saarinen, DNP, RN, FNP-C.
- The program involved in this study is called Creating Opportunities for Personal Empowerment (COPE). COPE is an evidence-based program made to help teens better learn healthy coping skills that can be used to help mental health or help prevent mental health issues such as anxiety or depression. The program will be offered during your lunch hour on a weekly basis. The program teaches skills to positively manage thoughts, emotions, and behaviors in response to stress.

**What will the research involve?** If you agree to participate, you will:

- Go to seven sessions with some of your peers over seven different days for about 30 minutes for each session. Sessions are designed to teach you ways to manage stress in positive ways to help you during school and the rest of your life.
- You will be asked to answer two surveys (one at the beginning of the seven sessions and one at the end of the seven sessions) that will take about 5 to 10 minutes of your time and have information to learn more about you as a person and information about what you thought of the program. All information collected will be voluntary and we will keep your responses confidential.
- Your total time commitment will be about 3.5 hours. Each session will be approximately 30 minutes in length.

**What are any risks or benefits for me?**

- Possible risks may be that you will know other people taking part in the study and that you might feel uncomfortable or some distress during some of the topics of

discussion about stress, anxiety, or depression. Every effort will be made to ensure your safety, comfort, and confidentiality during this project.

- With the current COVID-19 pandemic, there is a risk to contracting illness due to in-person participation. Health guidelines will be followed such as students sitting six feet apart and masks to be worn while moving about the room. Online platforms such as Microsoft Teams may be used should recommendations for distance learning be made or if you become ill or have contact with others positive for COVID-19.
- It may be good for you to take part in this project because the COPE program has been shown to help teens learn skills to help you cope with and deal with stress both now and in the future. You can also feel good about helping to see if this program helps you so that future students might also be helped if the school decides to continue the program based on your thoughts.

### **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 at any time.
- Your decision will have no effect (bad or good) on your schoolwork or activities.

### **Who will see my answers and information?**

- We will make every effort to keep your information private; only the school counselor(s) and the graduate student will know your answers or see your information.
- Your information will be combined with the information from the other students in the project. When we write about the project, we will write only about this combined information, and no one will be able to know what your individual 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 project.
- 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 school counselor, the police, or a doctor.

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

- If you participate (either in person or online), you will be eligible for up to \$20 gift card compensation. By attending and completing all seven sessions, you will be given a \$10 gift card. An additional \$10 will be given if you complete all workbook activities. By attending all sessions and completing all workbook activities, a \$20 gift card will be given.

**What if I have questions?**

- You can ask any questions you have right now, before deciding whether or not to be a part of the research or later as you start participating too.
- If you or your parent(s) or guardian(s) have questions, contact Ariel Schwarzrock at ariel.schwarzrock@ndsu.edu or by phone at 952-457-0466 or her advisor Heidi Saarinen at Heidi.saarinen@ndsu.edu or by phone at 701-231-7821
- 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.
- For questions about your rights, or to tell someone else about a problem with this research, you can contact the NDSU Human Research Protection Program (HRPP) at:
  - 701-231-8995
  - Toll-free at 1-855-800-6717
  - ndsu.irb@ndsu.edu .
- The HRPP is responsible to make sure that your rights and safety are protected in this research. More information is available at: [www.ndsu.edu/research/irb](http://www.ndsu.edu/research/irb).

**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

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Your Signature

Printed Name

Date

---

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

---

Signature  
Researcher explaining study

Printed Name

Date

## APPENDIX I. EXECUTIVE SUMMARY

### C.O.P.E. Influence on Resiliency and Self-Efficacy

Mental health burdens are common among adolescent students. However, in rural areas, such as many North Dakota communities, resources for mental health are scarce. Increasing awareness along with implementing evidence-based solutions in rural communities can help improve mental health outcomes for students into adulthood. Teaching students tools to cope with stress may increase resilience and self-efficacy leading to decreased mental health burdens today and into adulthood.



1 in 4 teens have a behavioral disorder

1 in 3 teens experience anxiety

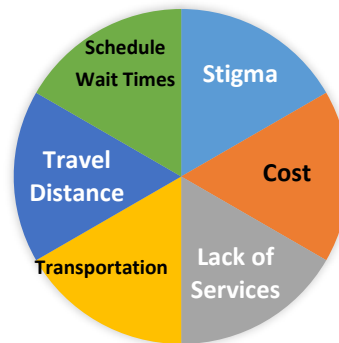
Rural populations are at increased risk for mental health disorders

1 in 5 North Dakota middle schoolers have suicidal thoughts

Implementing mental health care curriculum in schools can help overcome most all barriers for adolescents being able to participate in care. By educating youth on healthy behaviors to cope with stress, resiliency and self-efficacy can be improved leading to improved mental health status.

By implementing COPE in the school, no barriers to attend sessions were reported by students or the counselor. Allowing virtual access through online platforms could increase attendance and allow larger groups of students to participate simultaneously.

#### BARRIERS TO MENTAL HEALTH CARE IN RURAL NORTH DAKOTA



Most students showed a statistically significant increase in resiliency and self-efficacy after completing the COPE curriculum.

Overall, the counselor and students who participated in COPE reported a positive experience and would recommend the program to others.

New skills to manage stress were learned and friendships were made.

