ABSTRACT

EXAMINING MENTAL HEALTH AND RESILIENCY FACTORS OF GIFTED AND
TALENTED STUDENTS PARTICIPATING IN AN ACCELERATIVE,
RESIDENTIAL PROGRAM

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Early intervention around mental health and wellness is a vital piece for the school
system to address when working holistically with students. The American School Counselor
Association (ASCA) and the Substance Abuse and Mental Health Services Administration
(SAMHSA) emphasize the importance for schools to develop a comprehensive systemic
framework around the academic, social, and emotional needs of students. By using the Multi-
tiered System of Supports (MTSS), school districts can administer Universal Mental Health
Screening (UMHS), a Tier 1 intervention, to help identify students who may be considered at
risk for mental health and wellness issues. Unfortunately, less than 15% of K–12 schools in the
United States engage in UMHS with their students. For one specialized population, gifted and
talented students, specifically ones attending an accelerative, residential program, there is
minimal published data regarding their mental health, wellness, and intervention-based supports.
Also, none of the publicly-funded schools for these students in the United States have a UMHS
process for their student population. This quantitative study aimed to institute a Tier 1 UMHS
process for gifted and talented students attending an accelerative, residential program to evaluate
mental health and resiliency factors. The researcher used the Beck Youth Inventories--2nd
edition (BYI-2) and the Resiliency Scales for Children and Adolescents (RSCA) to assess

prevalent concerns, identified strengths, and potential correlation between screening factors and gifted and talented students who are at risk.

Keywords: gifted and talented students, residential school, multitiered system of supports, universal mental health screening, Beck Youth Inventories--2nd edition, Resiliency Scales for Children and Adolescents, mental health

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RESIDENTIAL PROGRAM

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I want to thank all of the other people in my life who have helped me over the past few years. From my sister and brother, Jaclyn and Jon, my family, and many of my friends—Sean,

DEDICATION

I dedicate this work to my friend and brother, Brian Czaplewski. Life is not the same without

you around. You left us too soon, and I miss you.

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CHAPTER ONE: INTRODUCTION

In this chapter, I will provide a brief overview of the current research around prevalent mental health and wellness issues that youth struggle to cope with, including information around early intervention outcomes. Next, I will define the term gifted and talented students and include some of the more common challenges for these students. I will then explore some high-level concepts around what resiliency is and the basic effect it has on young adult development. In the fourth section, I will review some of the relevant information of residential living for gifted and talented students. The fifth section will discuss what the Multi-Tiered System of Supports (MTSS) is and how it is implemented within K–12 education. Lastly, I will touch on what Universal Mental Health Screening (UMHS) is and its relevance in the school system.

Mental Health and Youth

According to the World Health Organization (WHO, 2019), mental health conditions account for 16% of the global burden of disease and injury for people aged 10 to 19 years, with depression as one of the leading issues and half of all conditions starting by age 14. Mental, behavioral, and developmental disorders are related to negative outcomes that can continue into the adult years for adolescents (Evans & Cassells, 2014). The most prevalent emotional and behavioral disorders with severe impairment and/or distress are mood disorders (depressive disorders, dysthymic disorder, and bipolar disorder), anxiety disorders, and behavioral disorders such as attention deficit hyperactivity disorder (ADHD; Merikangas et al., 2010).

The National Alliance on Mental Illness (NAMI) documented that approximately 50% of lifetime mental health conditions begin by age 14 and 75% by age 24 (2020). The concerning

fact is that the average delay between showing symptoms of mental illness and getting some

form of intervention is 11 years (NAMI, 2020). Length of time between symptom onset and

intervention is critical and can affect recovery. McGarry et al. (2007) performed two meta-

analyses and cited research that looked at early detection and intervention involving youth with

active psychosis. The findings suggested that early intervention in cases of psychosis led to

better clinical conditions, less risk of suicide, and increased likelihood of social recovery after

three months, as well as one year (Larsen et al., 2006; Melle et al., 2004; Melle et al., 2006).

Currently, our youth are living through a global COVID-19 pandemic. Research will

continue to be published over the next few months about the effects the pandemic has on the

mental health of our young people, and what is currently available reveals an increase in

depressive and anxiety symptoms in children and adolescents (Racine et al., 2020). Some of the

most vulnerable people, including youth in the lesbian, gay, bisexual, transgender, questioning,

intersex, asexual, and other sexual identities (LGBTQIA+) community, are at an increased risk

for external harm, depression, suicide ideation and suicide, substance use, as well as self-

harming behaviors because of the increased stress and anxiety of isolating during the pandemic

(Silliman Cohen & Adlin Bosk, 2020).

Because anxiety can negatively affect the social, emotional, and academic functioning of

students, long-term lack of treatment can reduce grades, increase absence, and affect the

likelihood of depressive symptoms and substance use in later life (Donovan & Spence, 2000).

Treatment can have a positive effect on one's mental health, but Donovan and Spence (2000)

note that when disorders become ingrained in individuals, treatment may often fail due to the

significant adversity that the individual experiences. When looking at specialized populations of

youth, an often-overlooked subset are students who are gifted and talented and their specific

needs. In the next section, the study will look at who these students are and describe some of their common wellness issues.

Gifted and Talented Students

Students engaging in disciplines in science, technology, engineering, and math (STEM) are academically prepared to bring knowledge and problem-solving skills to the workforce. These students can be identified by having high levels of intellectual talents or giftedness. Giftedness is, in fact, a highly complex set of interacting variables that are experienced internally by the individual and alter the meaning of life experience for them (Gardner, 2004). A definition of a gifted and talented individual must include both the concrete (externally observable) and existential (internally meaningful) aspects of being intellectually different (Daniels & Piechowski, 2008). According to the National Association of Gifted Children (NAGC, 2020) a gifted and talented individual can be:

> Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those qualities. (p. 1)

Gifted and talented individuals demonstrate outstanding levels of aptitude or competence in one or more domains (e.g., mathematics, painting, sports), which are defined as asynchronous development (Morelock, 1996). Those individuals with advanced abilities have heightened intensity which can create inner experiences and awareness that are qualitatively different from the norm (Bailey, 2007). This asynchrony can increase with higher intellectual capacity, and the uniqueness of gifted and talented students renders them particularly vulnerable such that they will need challenging programs and additional support services if they are to develop their ability and realize optimal levels of performance (NAGC, 2010).

Gifted and talented students do not have different experiences around social and emotional issues when compared to their peers, but it is common for these students to internalize the differences that they have when they compare themselves to others (VanTassel-Baska, 1983). Gifted and talented students may be able to recognize that they are different than their peers, but they may not be able to know why or how, leading to frustration and feelings of inadequacy (Kennedy-Moore & Lowenthal, 2011). Kennedy-Moore and Lowenthal (2011) stated that these students may also be more sensitive to criticism from themselves or others, which can cause difficulty when coping with struggles or setbacks in work or relationships. Gifted and talented students may also feel awkward around others, so it is common for them to want to work and play alone (VanTassel-Baska, 1983).

Due do these internal and external challenges, the common struggles of gifted and talented students tend to involve feelings of anxiety, pressure to achieve, and the pursuit of perfection (Fisher & Kennedy, 2016). According to several studies on resiliency, individuals with increased anxiety and depressive symptoms are more likely to have lower levels of resilience (Hu et al., 2015), increased neuroticism (Zhang, 2011), and lower levels of self-concept and social skills (Jaureguizar et al., 2018). Because gifted and talented students are at risk for mental wellness issues involving resiliency factors, looking at resiliency and how to develop these traits could be of benefit to this population.

Gifted and talented students possess a unique set of wellness concerns when compared to their peers. In order to understand what social and emotional factors gifted and talented students need to develop, exploratory research around understanding their resiliency and relationship building skills is needed to assist with helping them to overcome life's adversity.

Resiliency

Resiliency can be described as one's ability to experience something challenging or difficult and to recover from this adversity (APA, 2012). Humans' ability to adapt to life circumstances in a positive fashion is relevant for counselors to explore when working with their clients, as counselors are looking to build relationships with clients to encourage the development of various coping strategies and skills. Historically, research around resiliency suggests it is not individual characteristics alone that can create resiliency; it is a dynamic concept that can vacillate during a lifespan (Rutter, 1985; Werner, 1989). Masten and Coatsworth (1998) stated that resiliency-based research now leads researchers to agree there is an ever-changing dynamic around protective and vulnerability factors that affect an individual's ability to bounce back from challenges.

At one point, Werner (1989) stated that positive outcomes can occur for children who experience adverse circumstances in their life. To create these resiliency factors in students, it is advised to focus on the premise of strengths and growth ability rather than look purely at pathology (Garmezy, 1991). Resiliency, according to Zhang (2011), consists of various traits that students develop, as it positively correlates around their well-being, and has an effect on their goals, motivation to engage, and overall learning outcomes. Transitional can also become difficult to adapt to, but results show that social support, connectedness, self-care, and life skills can create increased resiliency and more positive outcomes for students transitioning to collegiate environments (Leary & DeRosier, 2012). Gifted and talented students possess challenges related to adjustment and coping with changes, so students who engage in residential living likely need to learn how to build new relationships, adapt to a new environment at a young age, and build skills to handle their issues with internalization and externalization of factors.

Residential Life for Gifted and Talented Students

Gifted and talented students can possess asynchronous intellectual development, which means that they are able to perform at high levels or ability when compared to their peers (Peterson, 2009). Tasks such as mathematics, writing, or the ability to synthesize data may be easier for these students, which can lead to the need for more rigorous challenges in their academic life. According to the NAGC (2020), there were approximately 3.2 million students in public schools enrolled in gifted and talented programs. To accommodate this special population of students, several states have developed public high schools that are normally residential schools for later high school years (NAGC, 2020).

Specialized residential high schools exist in 15 states and focus on accelerated learning for students, typically in mathematics and science, but some can target arts and humanities (NAGC, 2020; Roberts, 2015). These public institutions are quality options for students for several reasons, which include gaining experience at an institution with the expectations of higher education, family fees based on income, and admission based on a combination of test scores, grades, recommendations, extracurricular activities, and maximizing resources within one's community.

One of the drawbacks of these public institutions is the lack of published research that addresses the mental health and wellness of the students. This lack of research can create difficulty around developing effective and beneficial interventions to use with these students. One of the more recent studies by Clark et al. (2018) explored students in an Honors College setting, which is a similar experience to accelerated residential schools. An interesting piece of information about these students was they expressed less self-confidence and placed greater importance on external factors related to college than peers not associated with the Honors

College (Clark et al., 2018). Although this information is beneficial to counselors, there is a significant difference between a 14-year-old person making a significant life transition to a residential school when compared to an 18- or 19-year-old. Because the research around gifted and talented students attending a residential school is minimal, conducting some type of needs assessment to understand how to best serve this population is needed. To engage in this task, using a multitiered systemic approach to data collection and intervention is a best-practices course of action.

Multi-Tiered System of Supports

Prior to any comprehensive framework, like Positive Behavioral Intervention Services (PBIS) or Response to Intervention (RTI), school systems were likely to use an insufficient method to identify students in need such as poor grades or behavioral outbursts (Burns et al., 2016). Once referred, students would have an evaluation by a multidisciplinary team to determine if qualifications for special services are met, which was ineffective for facilitating interventions for students (Donovan & Cross, 2002). According to research done by the National Center for Learning Disabilities (2017), some of the challenges schools face due to ineffective screening are that not all children with learning or attention issues are identified for services, early signs of learning or attention issues often go unnoticed, and there tends to be a disparity with low-income and racially diverse students who are also identified as having a specific learning disability.

The Multi-Tiered System of Supports (MTSS) is a comprehensive and systemic based framework that is meant to create changes around academic, behavioral, and social and emotional issues from the district to individual levels (Sink, 2014; Sink & Ockerman, 2016). According to Bailey (2019), MTSS is explicitly documented in 33 states as the comprehensive

framework to be utilized within schools. The benefit of using MTSS as intended is that it looks at needs assessments to drive programs (Lane et al., 2013) and encourages data-supported instruction with evidence-based methodology around instruction and interventions (Lane, Oakes, & Menzies, 2014). The structure of MTSS is broken down into three tiers, similar to Positive Behavioral Intervention Services (PBIS) and Response to Intervention (RTI): Tier 1 (Universal), Tier 2 (Targeted), and Tier 3 (Individualized).

When using interventions in MTSS, all students receive services in Tier 1, additional followup services are available in Tier 2, and a more intensive and specialized Tier 3 support is based on particular student needs (Goodman-Scott et al., 2019). Strategic use of assessments, data, and interventions can help with the effectiveness and efficiency of programs and outcomes. Not only does MTSS allow school systems the ability to collect data to drive interventions, but also to encourage equity and inclusion within the educational system by preventing disproportionality and nondiscriminatory services (Sullivan et al., 2018). Currently, there is little research published around the use of MTSS within residential school settings that exclusively serve gifted and talented students. In order to determine how to best build programming and to allocate resources for student support, it is vital to learn what the exact needs are of this student population. Through a Tier 1 universal screening process, data can be collected to drive decisions around support and interventions for these students on their campuses.

Universal Mental Health Screening

When using the MTSS, Universal Mental Health Screening (UMHS) is considered a Tier 1 intervention, and the goal is to differentiate which students demonstrate an elevated risk for specific mental health or social-emotional characteristics (Dvorsky et al., 2014). By using UMHS, schools can gather specific information about student needs (Glover & Albers, 2007).

Mental health professionals, both inside the school system and within communities, have strongly desired districts to engage in some form of universal screening of student wellness to increase early identification of mental health concerns and to decrease the time between identification and interventions (Harrison et al., 2013).

Screening students for mental health can look different in each school or district based on the intended goals, how often screening will occur, how to screen, and which screening tools are used (Glover & Albers, 2007). Screening tools can measure both internalizing and externalizing behaviors around student concerns, based on school needs, but externalizing behaviors normally bring attention to school staff (Lambert et al., 2014). Screening students for potential internalizing factors is needed because many with issues around depression, anxiety, and suicidal ideation do not show any external indicators (Weist et al., 2007).

How to administer the UMHS tool is key, but best practices dictate that the school or district spend months to prepare and evaluate needs. Once a school determines it wants to move forward with UMHS, a multidisciplinary team is identified and receives approval from community stakeholders (Goodman-Scott et al., 2019). The team members then work together to determine and clarify the goals around the screening process, explore the logistics and resources to map out a plan, and then determine what screening tool will be of the most benefit (Goodman-Scott et al., 2019). Once the screening occurs within the desired population (i.e., grade, school, district), school officials are able to analyze the collected data to determine appropriate Tier 2 and 3 interventions for students and evaluate whether the screening tools used were of the most benefit to the community or alternate screeners were needed in a subsequent screening (Goodman-Scott et al., 2019).

Statement of the Problem

The present proposed study explores some of the unique challenges gifted and talented high school students incur while transitioning to and living on a residential campus for school and the mental health and resiliency levels of these students. Currently, no empirical studies have investigated topics around UMHS with gifted and talented students in a residential setting. Though some research exists regarding the individual topics of UMHS—gifted and talented students, resiliency, and mental health concerns—there is nothing that combines these factors, and there is a gap in knowledge around this special population of students who choose to attend highly accelerative, residential programming.

The lack of information around the mental health and resiliency factors of gifted and talented students attending an accelerative, residential school means that school counselors and support staff members working at these institutions are not likely to identify a majority of at-risk students, and the campus interventions and programming around mental wellness are not data-driven. The last peer-reviewed research on this population of students was over six years ago and looked at student psychological factors. Having a better overall understanding of these students' needs would assist school counselors and administration on how to establish a best practices model for student wellness and academic success.

Purpose of Study

The purpose of this study is to investigate the mental health and resiliency factors of gifted and talented high school students participating in an accelerative, residential-based academic program using two UMHS tools. This study seeks to identify which students are most at-risk for social and emotional difficulties and variables associated with resiliency. This research also examines the differences among these students living in a residential setting by

gender identity, sexual identity, and race to provide information for screening and potential

support service development. Finally, this study explores potential relationships among UMHS

inventory sub-scores to further identify and understand the at-risk student population and what

effect, if any, COVID-19 has had on student mental health.

Research Questions

The following are the research questions for the proposed study:

1. According to the Beck Youth Inventories--2nd edition (BYI-2), what are the prevalent

   mental health concerns, if any, displayed by gifted and talented high school students

   participating in an accelerative, residential-based academic program?

   a. What differences are there, if any, in each BYI-2 subscale score based on the

      gender identity of gifted and talented high school students participating in an

      accelerative, residential-based academic program?

   b. What differences are there, if any, in each BYI-2 subscale score based on the

      sexual identity of gifted and talented high school students participating in an

      accelerative, residential-based academic program?

   c. What are the differences, if any, in each BYI-2 subscale score around the race of

      gifted and talented high school students participating in an accelerative,

      residential-based academic program?

2. According to the Resiliency Scales for Children and Adolescents (RSCA), what are the

   prevalent concerns and identified strengths, if any, around resiliency displayed by gifted

   and talented high school students participating in an accelerative, residential-based

   academic program?

a. What differences are there, if any, in each RSCA subscale score based on the gender identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

b. What differences are there, if any, in each RSCA subscale score based on the sexual identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

c. What are the differences, if any, in each RSCA subscale score based on the race of gifted and talented high school students participating in an accelerative, residential-based academic program?

3. What is the relationship among the subscale scores of the BYI-2 and RSCA for gifted and talented high school students participating in an accelerative, residential-based academic program?

4. From the perception of these gifted and talented students, what effect, if any, has the COVID-19 pandemic had on their mental health and ability to cope?

Significance of Research

This study is significant because it is the first to collect MTSS Tier 1 data around universal mental health screening with gifted and talented students who live in a residential setting. School mental health providers and clinical counselors, specifically those at residential academies, working with gifted students may find the results of this study useful for continued research or development of intervention programming. Those working directly with gifted and talented students in a residential school may find the results helpful to better understand the common social and emotional challenges students may struggle with, and to determine how various backgrounds of students can affect integration.

School counselor educators in teaching and training programs may find the results from this research beneficial to discuss two areas: special populations of students and practical implementation of MTSS in a unique setting, one that is not addressed in previous school counselor education and curriculum. School counselor educators can also educate future school counselors to recognize a potential gifted and talented student, common concerns these students may face, and how to collect and use data to drive development of Tier 2 and Tier 3 interventions with this special population of students.

This study also has many implications for future research. Because it is the first empirical study of its kind, it provides data that can serve as a starting point for continued research around UMHS with specialized populations and program or intervention development to explore effect and effectiveness after administration. The data can also be used to look at specific factors around mental wellness and resiliency that can affect how staff are trained to work and support student wellness or how they can better support students from various backgrounds as they transition to a residential setting.

In Chapter One, I introduced the current social and emotional concerns that youth experience, how these concerns can translate into issues for gifted and talented students, and some information on how to screen gifted students to help identify their current needs. Most importantly, the chapter described the need to gather more data on how to best support gifted and talented students' social and emotional well-being in residential academic settings. Chapter Two consists of an extensive review of literature around the current status of mental health issues with youth, information around gifted and talented students and their challenges, factors around resiliency, information pertaining to residential living for secondary and newer post-secondary students, background information on how school systems can develop and implement systemic

interventions, and then specific information around school-wide interventions and mental health screening. Chapter Three looks at the methodology around this proposed research study, and how I structured and engaged in the process of collecting data to be analyzed.

Definition of Terms

Beck Youth Inventories--2nd edition (BYI-2): Screening tool, not a diagnosis, used to assess for elevated scores related to depression, anxiety, anger, disruptive behaviors, and self-concept (Beck, Beck, Jolly, & Steer, 2005)

Gifted and Talented Students: Students demonstrating outstanding levels of aptitude or competence in one or more domains (NAGC, 2020)

Multi-Tiered System of Supports (MTSS): Umbrella term for a framework that looks at Response to Intervention (RTI) and Positive Behavioral Interventions and Supports (PBIS) in schools to enhance the development and implementation of evidence-based outcomes, as a primary resource (McIntosh & Goodman, 2016).

Resiliency Scales for Children and Adolescents (RSCA): Screening tool, not a diagnosis, used to assess personal strengths and potential resilience of students (Prince-Embury, 2006; 2007)

Universal Mental Health Screening (UMHS): A systematic method to evaluate all students within a district, school, or grade level on behavioral or emotional criteria used to identify students associated with increased risk of having or developing a mental health and wellness concern (Dvorsky et al., 2014; Glover & Albers, 2007).

CHAPTER TWO: LITERATURE REVIEW

In this chapter, I will provide a comprehensive review of the literature to highlight the specific needs of gifted and talented students living in a residential school setting by using UMHS. The first section will review the current status of mental health issues among youth, including history, trends, and current issues around COVID-19 within the United States. The second section will describe characteristics of gifted and talented students and any social, emotional, and learning differences between these students and their non-gifted and talented peers. The third section will discuss research around resiliency factors of gifted and non-gifted students. Next, I review current literature around the challenges of residential living for secondary and post-secondary students. The fifth section will discuss what the MTSS is and how it is implemented within K–12 education. The last section will discuss what UMHS is, what screening tools exist, and what the BYI-2 and the RSCA help to identify. Lastly, I synthesize all of this to present a cohesive rationale for how and why these screening tools could help in understanding gifted and talented students so that school counselors can implement specific and data-driven intervention programming within a residential school community.

Current Status of Mental Health with Youth

Mental health issues have increased among adolescents over the past 27 years (Keyes et al., 2019). Data from Monitoring the Future (MTF), a yearly survey used to gather information from 8th, 10th, and 12th graders in the United States, noted that depressive symptoms in teens have steadily increased over the past seven years, with symptoms in girls peaking in 2018 (Keyes et al., 2019). 10% of all adolescent mental health diagnoses in the past year are mood disorders

(Kessler et al., 2012). Anxiety disorders are the most prevalent mental health disorders, with up to 33.7% of the population affected during their lifetime (Bandelow & Michaelis, 2015). In 2019, there were over 16,000 studies published worldwide about anxiety in teens, the causes, and how to treat it, and the studies found the number of incidents of teens having anxiety disorders was increasing (Price-Mitchell, 2019). Disruptive behavioral problems are the most common issues with school age children and can be identified as anger or temper tantrums, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), or oppositional, defiant (ODD), or conduct disorders (CD; Ogundele, 2018).

The American Psychiatric Association (APA, 2017) published mental health disparities based on the diverse backgrounds of both youth and adults. Per their research (APA, 2017), most racially-diverse marginalized groups have similar or fewer mental disorder diagnoses than whites, with depression rates at 24.6% for Black individuals and 19.6% for Latinx individuals, compared to 34.7% for Caucasians, but the consequences of mental illness with racially marginalized groups can last longer. On top of the longevity differences related to race, Black and Latinx individuals may experience more burden due to the intensity of their mental illness (APA, 2017). Although Caucasians are more likely to die by suicide than other racial and ethnic groups, multiracial individuals are most likely to report mental illness at 24.9%, followed by Native American/Alaskan Natives at 22.7% (APA, 2017).

According to Russell and Fish (2016), by tracing adult subjects back to their origin of adolescent years, data illustrate overwhelming evidence that individuals who identify as lesbian, gay, bisexual, and transgender (LGBT) are at greater risk than peers for poor mental health across all developmental stages. Russell and Fish (2016) also identified the lack of research that

explicitly tests for racial/ethnic differences among LGBT youth mental health, with even less

that simultaneously assess the interaction between sexual identity and racial/ethnic identities.

Mood Disorders and Suicide

Mood disorders can be defined as having one's general emotional state distorted or

inconsistent with life experiences, which may interfere with one's ability to function (Mayo

Clinic, 2020). Mood disorders can range from feelings of extreme sadness or depression to

extreme levels of happiness or mania. The most common mood disorders are major depression

and depressive disorders, dysthymia, bipolar disorder, mood disorders related to another health

condition, and substance-induced mood disorders (Johns Hopkins, 2020).

Although everyone will experience sadness or joy at times, a mood disorder incorporates

a level of intensity over an elongated period time that can impair someone's ability to manage

mood, thoughts, or decision making (Johns Hopkins, 2020). Suicide is unfortunately a common

outcome of a severely depressed mood. Suicide, defined as the act of taking one's own life

voluntarily ("Suicide," 2020), and suicidal ideation, or suicidal thoughts, are strongly associated

with mood disorders (Korczak, 2015). Currently, suicide is the second leading cause of death

among those aged 15 to 24 (NIMH, 2018; Weir, 2019).

<u>Depressive Disorders</u>

According to the Diagnostic Statistical Manual (DSM-5; APA, 2013), depressive

disorders are one of the most common categories of psychiatric disorders, with major depressive

disorder having about a 16% lifetime prevalence rate (McInnis et al., 2014). The common

features among depressive disorders are low moods (e.g., sadness, emptiness, irritability) along

with somatic and cognitive changes that affect one's capacity to function. The differences in

diagnosis center on duration, timing, and presumed etiology (APA, 2015). Major depressive

disorders have varying levels of acuity and severity and can encompass a single episode or be reoccurring.

Statistics support that women have a higher prevalence rate than men, as well as increased attempts at suicide, but men have a higher risk of completion of suicide (McInnis, Riba, & Greden, 2014). Symptoms of depression differ when comparing boys to girls, as girls tend to feel sadness, guilt, worthlessness, and fatigue whereas boys are more irritable, have suicidal thoughts, and a reduction of pleasure (Khesht-Masjedi et al., 2017). By the age of 13 to 15, these symptoms will be twice as likely in girls as in boys (Khesht-Masjedi et al., 2017). LGBTQIA+ youth were more likely to report experiencing major depression than heterosexual youth (Ferguson et al., 1999), and 18% of lesbian and gay youth met criteria for major depression compared to 8.2% for national rates (Kessler et al., 2012)

A more chronic form of depression, dysthymia, can be diagnosed when an adult's mood has been depressed for at least two years or when a child's mood has been depressed for at least one year (APA, 2013). To avoid over-diagnosis of bipolar disorder in youth, the DSM-5 developed new criteria for disruptive mood dysregulation disorder, which refers to children with persistent irritability and frequent episodes of extreme behavioral dyscontrol (APA, 2015). The most critical concern regarding adolescent depressive disorders is the level of suicidality prominent with sadness and distress, which is why clinical assessment and evaluation of suicidal thoughts or plans is of the utmost importance (McInnis et al., 2014).

Bipolar Disorder and Cyclothymia

Bipolar disorder is a mood disorder that alternates between extreme highs (mania) and lows (depression; Miller, 2020). Of those diagnosed with bipolar disorder, it develops in approximately 75% of people by the age of 18 (Perlis et al., 2004). Adolescents with bipolar

disorder struggle with regulating emotional responses, are more likely to have lower grades, more behavioral issues, poor social skills, and fewer friends when compared to peers (Schenkel et al., 2008). When identifying bipolar disorder in adolescents, there is often a more nonepisodic and chronic course with continuous rapid-cycling pattern when compared to adults (Rodgers, Zylstra, et al., 2010).

One of the more challenging components of diagnosing bipolar disorder in adolescents is that there is a considerable overlap of symptoms with Attention Deficit Hyperactivity Disorder (ADHD), which is a developmental disorder (Carlson & Klein, 2014). Although diagnosis of both ADHD and bipolar disorder is possible, the overlap is about 11% (Kutcher et al., 1998). The most concerning risk factors with early onset bipolar disorder are a 32% risk of suicide attempts in adolescents and, for those who attempt suicide unsuccessfully, experience of more severe features of the disease (Goldstein et al., 2005). The fear of most clinicians and families is a suicide attempt will be completed, which is 20 times more likely with an attempt by someone diagnosed with bipolar disorder compared to those without a diagnosis of bipolar disorder (Baldessarini & Tondo, 2003).

Bipolar disorder is a cycling between extreme highs and lows, whereas cyclothymia is a subtype that consists of a chronic presentation of low-grade depression (dysthymia) and hypomanic symptoms (Van Meter, et al, 2012). According to Van Meter et al. (2012), cyclothymia research is neglected, in spite of some evidence that it may be more prevalent than bipolar disorder. This neglect has led to confusion about the disorder and how to reliably distinguish between forms of bipolar and other childhood disorders (Van Meter & Youngstrom, 2012). With both bipolar disorder and cyclothymia, it is rare for individuals to seek out treatment (Youngstrom et al., 2010), or they may lack the insight to understand the dysfunction, especially

during elevated moods (Smith & Ghaemi, 2006). When most seek treatment, it is normally during a depressive state, because of the pleasant feelings around elevated mood (Youngstrom, 2009), so it is important for clinicians to fully assess depressed mood to avoid a misdiagnosis of a depressive disorder alone (Klein et al., 1986).

Suicide

Suicide is now the second leading cause of death for people ages 10 to 34 in the United States (NIMH, 2018; Weir, 2019). As noted in the previous sections, depressive symptoms and mood cycling in teens can lead to increased suicidal ideation, planning, and attempts. Data from the Center for Disease Control's (CDC) national survey on Youth Risk Behavior (YRBS), which tracks information on risky behaviors, safety, and wellness of 9th through 12th graders every two years, is as follows: in 2017, 17.2% of students surveyed state seriously considering attempting suicide over the past year, 13.6% made a plan in the past year, 7.4% attempted suicide one or more times in the past year, and 2.4% attempted suicide and needed to be treated by a medical professional (doctor or nurse; CDC, 2018). These numbers are a minor decrease from the 2015 data, but the worry is that suicide in the United States overall is on the rise, with a 33% increase from 1999 to 2017, most of which has occurred since 2006 (Hedegaard et al., 2018).

Suicide is of particular concern for marginalized groups. LGBTQIA+ youth who stated they'd engaged in suicidal behavior at some point in their lives comprised 31% of a sample study, compared to 4.1% as the national rate (Kessler et al., 2012). Both Black and Latinx youth who identify as having same-sex attraction had higher rates of suicidal thoughts and lower levels of self-esteem when compared, respectively, to their Black and Latinx heterosexual peers (Consolacion et al., 2004). LGBTQIA+ Latinx males reported more suicidal ideation when

compared to LGBTQIA+ white males, but LGBTQIA+ white females had higher rates than LGBTQIA+ Latinx females (Ryan et al., 2009).

Anxiety

Anxiety disorders are among the most commonly diagnosed disorders in adolescents (Kendall et al., 2010). According to interview data from the National Comorbidity Survey (NCS-A), 31.9% of adolescents had an anxiety disorder, with 8.3% having a severe impairment, and higher rates for females (38%) over males (26.1%; NIMH, 2020). The Center for Disease Control documents that 7.1% of children aged 3–17 (about 4.4 million) have diagnosed anxiety, with about 8% rating their anxiety as severely affecting them and about 45% rating is mild to moderate (Ghandour et al., 2019). Anxiety disorders often have comorbidity with other anxiety disorders or depressive disorders (Suveg et al., 2008). A key component to the comorbidity between most anxiety disorders with other anxiety disorders or depressive disorders is a general internalizing of issues (Seeley et al., 2011; Watson, 2005). Anxious youth also show some type of sleep-related problem, which can range from difficulty falling asleep to nightmares (Alfano et al., 2007). This is problematic, as quality sleep in childhood is vital for optimal cognitive functioning, academic performance, and overall physical and emotional wellness (Weiner et al., 2015).

Similar to depressive disorders, anxiety is a treatable issue. Unfortunately, 80% of adolescents with a diagnosable anxiety disorder are not getting treatment (Child Mind Institute, 2015). Untreated anxiety disorders can predict adult anxiety disorders and depression, along with other childhood issues around substance use, suicide attempts, and hospitalization (Kendall et al., 2010). The most commonly diagnosed anxiety disorders with adolescents are a specific phobia, separation anxiety, and social anxiety disorder (Siegel & Dickstein, 2012).

Specific Phobia

Healthy levels of fear and anxiety are common for adolescents to experience. Lingering fears experienced with a high level of intensity around a specific idea or concept for six months or more may signal a phobia (APA, 2013). According to the DSM-5 (2013), a phobic object or situation almost always provokes immediate fear or anxiety and the intensity experienced is not proportional to the actual danger posed. Bener et al. (2011) suggest that individuals with phobic disorders experience excessive distress, and phobias can lead to disrupted relationships, severe anxiety, and depressed mood. Test anxiety, a form of a phobic disorder, is widespread in the general population, especially among women (Talbot, 2016). Ollendick et al. (2002) state that a phobic disorder is the most prevalent anxiety disorder in adolescents, and that phobic disorders, unlike other anxiety disorders, do not have significant comorbidity with other internalizing (e.g., depressive disorder) or externalizing (e.g., conduct disorder, attention deficit hyperactivity disorder) disorders.

Separation Anxiety

Separation anxiety disorder is an inappropriate and excessive fear or anxiety around a personal attachment that can include some of the following behaviors: recurrent distress when anticipating or experiencing separation, worry about harm occurring to major attachment figures (e.g., illness, injury, death), worry about experiencing an untoward event (e.g., getting lost, being kidnapped, becoming ill), or fear and refusal to go outside, away from home, school, or being along without major attachment figures (APA, 2013). There have been minimal studies conducted that look at the long-term potential for adolescents experiencing separation anxiety disorder with future disorders, but it is estimated that 33%–40% of children diagnosed with separation anxiety disorder develop at least one adult psychiatric disorder (Berg & Jackson,

1985; Flakierska et al., 1988) and were most vulnerable for panic disorder and depression (Lewinsohn et al., 2008).

Social Anxiety Disorder

There are commonalities among phobic disorders, separation anxiety disorders, and social anxiety disorder. The main factor is that these anxiety disorders are fear-based disorders, which are different than generalized anxiety disorder (GAD), a distress-based disorder (Clark & Watson, 2006; Waters et al., 2014). The primary feature of social anxiety disorder, similar to a phobia, is an intense fear of embarrassment in social or performance situations, which can include initiating conversations, answering or asking questions in class, attending social events, being assertive, and performing in front of others (Fisher et al., 2004; Hofmann et al., 1999). Onset for social anxiety disorder is typically early in the teen years (Herbert et al., 2009) and there is a high correlation with school refusal and increased comorbidity with depressive, anxiety, somatoform, and substance use disorders (Essau et al., 1999). Youth with social anxiety disorder have few friends, underachieve in or refuse to attend school, and have limited extracurricular activities (Khalid-Khan et al., 2007). If social anxiety disorder persists into adulthood, 70% of adults will develop a comorbid psychiatric disorder (e.g., depression, substance abuse) and are at an increased risk for a suicide attempt (Clauss & Urbano Blackford, 2012).

Behavioral Disorders

Behavioral disorders are defined as having a pattern of disruptive behaviors (i.e., inattention, impulsivity, drug use, hyperactivity, defiance) that lasts for at least six months in children or adolescents and causes problems in school, home life, and social situations (APA, 2013). According to the CDC (2020), 7.4% of children aged 3–17 have a diagnosed behavioral

problem, with the three most common diagnoses being Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), or Oppositional, Defiant, or Conduct Disorders (Ogundele, 2018). Comorbidity is high with children who have behavioral problems and other mental health issues, with 36.6% having anxiety and 20.3% experiencing depression (CDC, 2020).

Attention Deficit Hyperactivity Disorder

ADHD is a disorder that can affect children or adults. The DSM-5 (APA, 2013) states that ADHD is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. ADHD is characterized by inattention and/or hyperactivity-impulsivity. According to the CDC (2019), 13.6 million physician visits in 2016's medical care survey listed ADHD as the primary diagnosis. The CDC (2019) found about 10.8% of all children aged 5–17 diagnosed with ADHD, with 14.8% boys and 6.7% girls. Shaw et al. (2012) conducted a systematic review of the long-term outcomes of those diagnosed with ADHD and found the following outcomes: (a) without treatment, people with ADHD had poorer long-term outcomes in academic, antisocial behavior, driving, non-medicinal drug use/addictive behavior, obesity, occupation, services use, self-esteem, and social function outcomes when compared to people without ADHD; and (b)treatment for ADHD improved long-term outcomes compared with untreated ADHD, although, not to the same levels as those without an ADHD diagnosis.

Inattentive symptoms. Six or more of the following symptoms (at least five for ages 17 or older) must have persisted for at least six months to a degree that is inconsistent with developmental level and has negatively impacted social and academic activities: (a) often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities, (b) often has difficulty sustaining attention in tasks or play activities, (c) often does not

seem to listen when spoken to directly, (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace, (e) often has difficulty organizing tasks and activities, (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort, (g) often loses things necessary for tasks or activities, (h) is often easily distracted by extraneous stimuli, and/or (i) is often forgetful in daily activities (APA, 2013)

Hyperactivity and impulsivity symptoms. Six or more of the following symptoms (at least five for ages 17 or older) must have persisted for at least six months to a degree that is inconsistent with developmental level and has negatively impacted social and academic activities: (a) often fidgets with or taps hands or feet or squirms in seat, (b) often leaves seat in situations when remaining seated is expected, (c) often runs about or climbs in situations where it is inappropriate, (d) is often unable to play or engage in leisure activities quietly, (e) is often "on the go," acting as if "driven by a motor," (f) often talks excessively, (g) often blurts out an answer before a question has been completed, (h) often has difficulty waiting his or her turn, and/or (i) often interrupts or intrudes on others (APA, 2013)

Additional factors. The following factors are all required in addition to the inattentive and/or hyperactivity and impulsivity symptoms in order to meet criteria for ADHD: (a) several inattentive or hyperactive-impulsive symptoms were present before age 12, (b) several inattentive or hyperactive-impulsive symptoms are present in a two-or-more setting (e.g., at home, school, work; with friends or relatives; in other activities), (c) there is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning, and (d) the symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (APA, 2013)

<u>Autism Spectrum Disorder</u>

Autism Spectrum Disorder (ASD) is a brain development condition that can have a range of effects on how a person socializes and interprets information, usually creating challenges with social interactions and communication (Mayo Clinic, 2020). Approximately 1 in 54 children has been identified with autism spectrum disorder (ASD) according to estimates from the CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network (Maenner et al., 2020). Prior to the DSM-5, patients could be diagnosed with four separate autism symptoms, but the current model uses an umbrella approach to maintain diagnostic sensitivity and continue to improve diagnostic specificity (Wiggins et al., 2019). Currently, ASD is 4.3 times more prevalent among boys than girls and has a lower rate among Latinx students when compared to other racial and ethnic groups (Maenner et al., 2020). Symptoms are normally seen by the age of 2 years, but due to the unique symptoms in each child, the level of severity can be difficult to determine (Mayo Clinic, 2020). Autism cannot be prevented, but timely evaluation and identification of ASD can translate into early interventions and treatments (Johnson & Myers, 2007), which have links to improved outcomes (Reichow et al., 2018).

<u>Oppositional, Defiant, or Conduct Disorders</u>

This realm of disorders consists of Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD). ODD and CD are complex disorders and their origins are difficult to understand, but ODD is generally a milder version of CD (Woodard et al., 2019). These two disorders share several features, like aggression, defiant behaviors, and anger outbursts or temper tantrums, but what separates the two is the intensity of additional behaviors (APA, 2013). The behaviors of adolescents diagnosed with ODD are developmentally inappropriate, involve hostility and defiance toward parents, teachers, and peers, and aggression (Hamilton & Armando, 2008). CD

normally includes destruction of property, aggressive behavior toward people or animals, and violating the rights of others (Woodard et al., 2019). ODD and CD are normally diagnosed more in boys than in girls, but girls who are diagnosed normally display aggression verbally over physically (Hamilton & Armando, 2008; Woodard, Ume, & Davis, 2019). According to Woodard et al. (2019), if ODD is not managed properly, it can progress to CD, which can then transition to antisocial personality disorder.

COVID-19

As this research is compiled, the world is facing a pandemic known as COVID-19. Part of this study will include relevant published information about how the mental health of young people is changing due to this virus. According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), in April of 2020, 188 countries in the world had suspended in-person schooling and over 90% of enrolled learners worldwide were out of education (Lee, 2020). Because of these closures, Lee (2020) stated that many children and adolescents with mental health needs lack the access they normally would have via their school. A 2014 analysis by the National Survey of Drug Use and Health (NSDUH) found that 13.2% of adolescents had received some sort of mental health services from a school setting in the previous 12 months, and that from 2012 to 2015, of all adolescents who used any mental health service during the year, 57% received some form of school-based services (Golberstein et al., 2020).

Gao and colleagues (2020) identified that, similar to previous public health emergencies in China, youth under 18 were found to have a much higher prevalence of depression, anxiety, and a combination of both factors (CDA) than the national sample prior to emergencies. Some of the more vulnerable populations include youth who are LGBTQIA+, homeless, maltreated, and

struggling with substance misuse, as they are more likely to experience symptoms of depression, suicidal ideation, suicide, self-harm, and substance use (Silliman Cohen & Adlin Bosk, 2020).

More research pertaining to the overall effect of the COVID-19 pandemic on youth mental health will continue to emerge over the next few months, but the current research supports the finding that many youth are experiencing greater numbers of symptoms now versus before the pandemic. As students continue to struggle with the unknowns of the future, it is important that mental health providers within schools engage in additional screening and support for students to verify their overall safety and wellness. Student mental health concerns may continue to increase, and it is important for school districts to develop and implement programming that helps facilitate the development of healthier skills and outlets, be it in-person or virtual. School districts can continue to monitor the national trends around data, but it is most helpful when schools are familiar with the challenges and needs of their own population, especially regarding marginalized populations (e.g., Black, Latinx, LGBTQIA+). One particular population of students whose social-emotional concerns tend to go unnoticed are those with high intellectual talents and abilities.

Gifted and Talented Students

Just like any other aspect of student diversity, those who are gifted and talented make up one of many groups that counselors need to consider when providing student support (Kennedy & Farley, 2018). Gifted and talented students present unique social and emotional challenges for counselors (Elijah, 2011), not because gifted students experience mental health circumstances at a higher rate than their peers but because of the type of support they need (Peterson, 2007).

Evaluating gifted and talented individuals varies based on how giftedness is defined. The National Association for Gifted Children (NAGC) provides guidelines stating that gifted and

talented is not something that can be determined through gender, religion, race, disability status, socio-economic status, or geographic location (2020). The NAGC identifies gifted and talented individuals as those who demonstrate outstanding levels of aptitude or competence in one or more domains, having asynchronous development within domains (2010, 2020). McClain and Pfeiffer (2012) provided a broader definition, which states that gifted and talented individuals have outstanding intellectual ability, talent, or promise and have the ability to accomplish extraordinary tasks. Peterson (2015) looked outside of academic work, where giftedness is considered high ability, regardless of academic performance. Currently, there is no formal process with specific criteria to identify someone who is gifted and talented (Fisher & Kennedy, 2016), but more traditional measures use Intelligence Quotient (IQ) scores with a cutoff score in the upper percentile (McClain & Pfeiffer, 2012). The challenges around using IQ scores alone are that students who excel in artistic, athletic, or leadership skills may be missed, as well as under-identifying students with economic, cultural, or other disadvantages (Peterson, 2015).

Gifted and talented students do not experience different social or emotional issues (e.g., loss, anxiety, sadness, depression) when compared to their peers (Bakar & Ishak, 2014; Kennedy & Farley, 2018). However, research suggests that certain characteristics associated with being gifted and talented, such as intensity, overexcitabilities, and sensitivities, can also be misidentified by helping professionals as pathology (Peterson, 2009). One factor related to gifted and talented students that has been examined is resilience and how it affects student adjustment.

Common Social and Emotional Issues

It is difficult to determine to what degree gifted and talented students may experience social and emotional challenges. In general, research indicates a strong reciprocal effect between social-emotional wellbeing and school outcomes (Blaas, 2014). According to Peterson (2009), it

is common for giftedness to co-occur with one or more learning disabilities and the degree of giftedness may affect the characteristics each student experiences. Peterson (2009) stated that it is common for profoundly gifted students to have no interest in peers at school or in the community, and moderately gifted students may have poor initial social interactions at school with increasing emotional discomfort during the school years. Gifted and talented students are at particular risk for underachieving due to characteristics associated with their giftedness, like sensitivity, perfectionistic tendencies, and social isolation (Blaas, 2014; Reis & Renzulli, 2009). Reis and Renzulli (2009) stated that part of assisting students is identifying whether their challenges are due to social and emotional functioning or because of lack of challenge, support, motivation, or engagement. Where the common areas of social and emotional support for gifted students differ from their peers is around three areas: perfectionism, academic anxiety, and asynchronous development (Fisher & Kennedy, 2016).

Perfectionism

Refusal to accept anything less than perfect is a description of the perfectionist perspective. According to Curran and Hill (2019), perfectionism is an irrational desire to achieve, including being overly critical of self and others. This perspective presents perfectionism in a negative light, but they expand on their definition to encourage a multidimensional approach to perfectionism, one with varied outcomes, both positive and negative (Stoeber & Otto, 2006). The challenge in looking at perfectionism from a multidimensional approach is that it does not account for how perfectionism operates within individual capacities of one's life and the potential correlation to outcomes (Stairs, 2009). Curran and Hill (2019) confirmed that research around multiple models to study perfectionism (Frost et al., 1993; Mackinnon & Sherry, 2012) provided the most beneficial perspective, one that is multidimensional.

Stairs (2009) connected various articles around increased levels of perfectionism found in the following disorders: anorexia nervosa, bulimia nervosa, social phobia, panic disorder, anxiety, depression, chronic insomnia, suicidal ideation, and obsessive-compulsive disorder, with suggested prediction around eating disorders. Mills and Blankstein (2000) identified these maladaptive traits as socially prescribed perfectionism, whereas their information on positive outcomes of perfectionism discusses self-orientated perfectionism. The variables around these factors are driven by the type of motivation a person has. Aside from socially prescribed and self-orientated, there is an additional form of perfectionism, other-oriented, which differs from the extrinsic or intrinsic (Stoeber, 2014). The measures of these forms of perfectionism, known as the Multidimensional Perfectionism Scale, were developed by Hewitt and Flett (1991) and are valid and reliable instruments from normative data obtained through both community and clinical populations (Curran & Hill, 2019).

Gifted and talented students contend with issues around perfection, just like their non-gifted peers (Fletcher & Speirs-Neumeister, 2012). The speculation about their differences is that gifted children were able to achieve their perfection more readily, which can potentially influence a thought process about being perfect, and potential failure can create more negative tendencies (Speirs-Neumeister et al., 2009).

Self-orientated perfectionism. Hewitt and Flett (1991) describe self-orientated perfectionism as setting and meeting high standards for self, an internally driven form. Curran and Hill (2019) describe this form of perfectionism as the most complex and often associated with achievement-related behaviors. The complexity is that the individual develops a connection between self-worth and their achievements and accomplishments. Curran and Hill (2009) found tying one's worth with achievement creates discord in experiencing a lasting sense of satisfaction

with any accomplishments. Research around younger people have found that there is a positive association with self-orientated perfectionism and clinical depression, anorexia nervosa (Enns & Cox, 2005; Fry & Debats, 2009), and lack of wellbeing in response to stress and failure (Besser et al., 2004; Besser et al., 2008).

Socially prescribed perfectionism. Hewitt and Fleck (1991) describe socially prescribed perfectionism as beliefs that those around the individual have extensive goals that must be achieved. This is the most debilitating of the three dimensions of perfectionism (Curran & Hill, 2019) because having failure-based experiences and negative emotional states are common (Hewitt & Fleck, 1991). Similar to self-orientation perfectionism, socially prescribed perfectionists are susceptible to positive correlations with depression, anxiety, and suicidal ideation (Sherry et al., 2003) but to a much greater degree than self-orientation perfectionism (Smith et al., 2016).

Other-oriented perfectionism. Hewitt and Fleck (1991) stated that other-oriented perfectionism occurs when individuals develop rigid concepts and expectations for those around them. This is the least researched form of perfectionism, but it is distinct because it is noticeable in interpersonal behaviors (Curran & Hill, 2019). Hewitt and colleagues (2017) note that if their expectations of others are not met, the other-oriented perfectionist will become hostile and blame or criticize. This is supported by research showing an increased level of vindictiveness (Hewitt & Fleck, 1991) that mimics a narcissistic desire for the admiration of others (Nealis et al., 2015).

Academic/Test Anxiety

According to Tennant (2005), stress is a normal, motivating factor for individuals, but if stressors are perceived as negative and uncontrollable, those individuals are at a greater risk for long-term stress, which can lead to mental and physical health issues. One of the more common

forms of academic stress is test anxiety. Test anxiety, a form of a phobia (McDonald, 2001), has positive correlations with types of perfectionism and can develop into worrying, lack of confidence, and total anxiety (Stoeber et al., 2009). Test anxiety can prohibit students from performing at their highest capacity (Ergene, 2003), and is more likely to occur in women, marginalized individuals, or those with disabilities (Embse et al., 2013). Talbot (2016) suggested that there are two root causes for test anxiety: increasing academic demands to achieve placed on a student by self or others, and various personality traits and underlying psychological concerns.

Extensive research exists around test anxiety and its association with mental illness (e.g., depression, academic achievement; Chong et al., 2009). Garcia and Dominguez (1998) explored the systems approach to understanding how culture and academic performance interact, in order to better understand the variables that impact the development of students' concept of achievement. Part of this culture can be parenting style driven (Miller et al., 2012), caring school environment driven (Conner et al., 2014), or internally driven (Steinmayr et al., 2019). After evaluating students with similar abilities (i.e., intelligence scores, prior achievement, values, goals), there was strong evidence that students who have a higher domain-specific ability around self-concept and competency will achieve better grades (Steinmayr et al., 2019).

McDonald (2001) identified components of test anxiety as experiencing anxious states and negative emotions that are usually connected with neuroticism. Neuroticism is one of the five personality traits associated with anxiety, worry, fear, anger, frustration, depressed mood, and loneliness (Widiger, 2009). People with elevated levels of neuroticism respond poorly to environmental stressors and can perceive minor frustrations as being hopelessly overwhelming (Widiger & Ottmanns, 2017). Neuroticism is associated with a diminished quality of life, including feelings of ill-will and excessive worry (Ozer & Benet-Martinez, 2006) and can

contribute to poor work performance due to emotional preoccupation, exhaustion, and distraction (Widiger & Ottmanns, 2017).

Asynchronous Development

Asynchrony is the term used to describe the mismatch between cognitive, emotional, and physical development in gifted individuals (Morelock, 1996). According to the works of Hollingworth, Terrassier, and Dabrowski, asynchronous development is an unevenness in development (Silverman, 1997) that can result in advanced awareness with a lack of emotional maturity (Hollingsworth, 1926), dyssynchrony (Terrassier, 1985), and overexcitabilities (Dabrowski, 1972).

Hollingworth. Hollingworth's research emphasis was understanding how to best provide for the social, emotional, and educational needs of gifted students (Morelock, 1996). Hollingworth identified that gifted children had an unevenness in development when compared to their non-gifted peers, with the profoundly gifted having more noticeable developmental issues than the mildly gifted (Silverman, 2013). Hollingworth (1931) discussed the IQ differences between gifted children and stated that even if two children had the same IQ, if there was a difference in age, there would be significant issues with physical and emotional development in the younger child. Some of the challenges that gifted children can experience because of these developmental deficiencies can range from habits around solitary play, minimal social interactions with peers, having atypical interests when compared to peers, spreading oneself too thinly due to multiple interests, inability to follow-through with the completion of projects, and developing high standards and attaining perfection in activities (Hollingworth, 1942).

Terrassier. Terrassier's (1985) theory of dyssynchrony includes both internal and external aspects of development. Internal development involves disparate rates of development among the various capacities of the child, whereas the social, or external aspect, is a gifted child's resultant relationship with environmental factors (Morelock, 1996). Terrassier (1985) refers to external dyssynchrony as a lack of natural fit between the gifted child and a school curriculum geared to average children of the same chronological age. Typically, external dyssynchrony creates challenges with gifted children and developing peer relationships. When gifted children find other children who have similar intellectual abilities and interests, their new friends are likely to be older and more mature, which creates a disparity in the relationship due to the older individual having more lived experiences (Terrassier, 1985).

Dabrowski. Dabrowski (1972) outlined five dimensions called the "forms of psychic overexcitability." Dabrowski (1972) explored both the artistically gifted, as well as the intellectual, to learn more about the emotional intensity and sensitivity in various capacities and outlined the five dimensions as: Psychomotor, Sensual, Intellectual, Imaginational, and Emotional. Harrison and Van Haneghan (2011) concluded that gifted students can have excessive stimulation in one or more areas of Dabrowski's excitabilities, which can have varied outcomes. Gifted students higher on the overexcitability scale for psychomotor, for example, are in need of constant stimulation, and will want to engage in new tasks frequently, whereas those in the intellectual realm are seeking a deeper meaning around life or an understanding as to why we exist (Lamont, 2012). The ultimate finding by Harrison and Van Haneghan (2011) was these overexcitabilities make gifted students more prone to anxiety, fear, and insomnia when compared to their non-gifted peers.

Many of the factors that highly intellectual students are challenged with revolve around socializing with peers and internalizing feelings. Gifted and talented students develop a sense of self-concept differently than their nongifted peers, in that most children's sense of self grows strong with age (Shi, Li, & Zhang, 2008). Because concepts around self-identity and resiliency or coping are critical protective factors in youth, early identification of risk factors, specifically with gifted students, can increase motivation, positive academic outcomes, and overall well-being (Kim, 2015).

Factors of Resilience and Self-Concept

Resilience can be defined as one's ability to effectively cope with painful and unpleasant emotional events (Blum, 1998). Positively coping with stressful situations (Smokowski et al., 1999) may be the bridge for those more risk for negative life outcomes or who struggle with mental wellness (Hu et al., 2015). Self-concept refers to the attitudes, feelings, and knowledge pertaining to skills, abilities, socialization, and appearance (Byrne, 1984). Harter (1989) stated that children are able to make more judgments around self-worth as they gain more life experiences. Research of social self-concept between gifted and non-gifted students is mixed, as some studies state that social self-concept is higher in gifted students, but others state that social self-concept is higher in non-gifted (Kelly & Colangelo, 1984). Dixon et al. (2001) suggested that it is important to not generalize gifted and talented students with others, as they all have their own unique subsets and qualities.

A synthesis by Levine (2003) of resilience and self-concept-based factors provided an outline of personal attributes that are positive for resilience development, risk factors that can deter resilience development, and positive emotional factors that can enhance resilience.

Positive Personal Attributes

Levine (2003) noted the following personal attributes were positive for resilience: secure early attachments, temperament, intelligence, health (physical and emotional), appearance, social skills, self-awareness, optimism, sense of humor, organization, productivity, compartmentalization, recreation (i.e., relaxing, leisure), and being approachable.

Risk Factors

Levine (2003) identified early risk factors that, in most data analyses, correlate strongly with later-life psychosocial problems: poor care of mother and child (pre, peri, and post-natal), abject poverty, abuse/neglect/molestation, family dysfunction/discord, parental psychopathology, inadequate/poor schools, loss of significant nurturing adults, absence of mentors/role models, war/violence/chaos, and natural disasters.

Positive Emotional Factors

Levine (2003) explained there are ideal circumstances that contribute to increasing resilience potential and reaching ultimate self-realization: a primary attachment, love, limits/rules, stimulation of senses, relationships with peers, models and mentors, space (physical and emotional privacy), respect, consistency, responsibilities, safety, opportunities, traditions, altruism, and values.

Tetrad of Bs

Levine (2003) explored four particular "Bs" that, based on research with youth through the elderly, consistently manifest when evaluating self-perceived satisfaction and value of life: being, belonging, believing, and benevolence. Personal being refers to self-image and accommodation to sense of identity, which includes an appreciation of strengths, as well as an awareness of one's limitations, and presents as being comfortable with who you are (Levine,

2003). Social belonging is a sense of being a valued part of a community and encompasses the

sharing of important personal experiences, mutual empathy, common goals, and an overall sense

of feeling connected with others (Levine, 2003). Ideological believing is the personal sense of a

system of values and principles of life, which goes beyond the mundane, and is a driving factor

in developing a moral compass or a spiritual guide to living (Levine, 2003). Altruistic

benevolence is related to and depends on the existence of other Bs. Altruism, according to

Levine (2003), encompasses the degree to which an individual is authentically generous and

generative, and drive the personal evaluation of self-image, caring for others, being nurturing and

supportive, giving of self for the benefit of family, friends, and the less fortunate (Levine, 2003).

Cultural Considerations

A meta-analysis of articles on Iranian mental health and resilience concluded that a

positive correlation exists between one's mental health and resilience, but the correlation was

lower among school and university students when compared to other groups (Ghanei Gheshlagh

et al., 2017). This conclusion would make sense, as school years can be the most difficult and

stressful for people. Hu, Zhang, and Wang (2015) looked at empirical studies and concluded that

resilience is negatively correlated with indicators of mental illness (e.g., depression, anxiety) and

positively correlated with positive indicators of mental health (e.g., life satisfaction, well-being).

When looking at the Big Five Personality Traits, resilience was negatively correlated with

neuroticism (Zhang, 2011) and positively correlated with extraversion, openness, agreeableness,

and conscientiousness (Oshio et al., 2018).

Jaureguizar et al. (2018) studied students aged 7–10 living in the Basque region of Spain

in relationship to resilience, self-concept, and mental wellness. Their research suggested there

was a positive correlation between depression and school stress, a negative correlation between

depression and intellectual self-concept, sense of control, social skills, and several variables that make up resilience. This research is of benefit as it provides some beginning insight into cultural implications and potential correlations that could exist in additional research.

Ultimately, according to current research, gifted and talented students are at higher risk for common factors associated with resiliency and coping, which puts them at an increased risk for wellness concerns. As some of these students explore their academic options, some will choose opportunities connected with accelerated learning environments. Those who choose these residential-based options have to plan for several different wellness-related issues that are different from their peers who live at home while attending school.

Common Wellness Concerns at Public Residential Schools for Gifted and Talented

According to Roberts (2015), 15 U.S. states have publicly-funded, residential-based secondary schools devoted to science, technology, engineering, and mathematics (STEM) disciplines, with the most recent opening in 2015. There is no evidence that these residential schools, and the experiences of the students who attend them, are harmful to student psychological development (Rollins & Cross, 2014). Currently, each of these schools employ both personal and academic counselors to address the more advanced social-emotional needs for these students (Jones, 2009). Jones (2009) noted that even though counseling services are confidential in nature, the handbook from one of the schools states that referrals for counseling are usually for anxiety, depression, homesickness, stress, low self-esteem, inability to concentrate, and potential self-destructive behaviors (e.g., drug/alcohol use, bingeing, purging, self-injury).

Gifted and talented students who choose alternate educational settings need to evaluate the positive and negative ramifications of changing their education system from known to

unknown (Dixon et al., 2001). As residential communities for gifted students are becoming more

of an option for secondary setting, addressing the individual and unique needs of these students

is vital (Dixon et al., 2001). Although there is not extensive research regarding the mental

wellness concerns of gifted and talented students living at academically rigorous residential

academies, the field is not fully devoid of information.

Gifted students in residential settings have different experiences than their peers who

have a more traditional learning experience. According to Cross and Frazier (2010), students

identified common experiences that affect the psychosocial development of all students and then

experiences that vary across students and classes. Some of the common factors that all students

experienced is they all have to leave their homes and live at the school, very few of the students

have met before being on campus, all courses must be completed in the same timeframe as other

incoming students, the residential school is more diverse than their previous school, and students

must rely on non-parental adults who live and/or work on campus (Cross & Frazier, 2010). Some

of the characteristics that vary across students are the level of experience with attending

residential programs, the level of stress experienced at the academy, the amount of study time

required, family structure and stability at home, level of religious belief systems, range of

intellectual ability, and educational opportunities experienced before attending (Cross & Frazier,

2010).

Due to these various experiences, gifted and talented adolescents who attend a residential

STEM school will likely grow or struggle to manage perfectionism and excessively criticize self

(Cross & Frazier, 2010). Factors around what will or will not help them to be successful is not

documented in any literature. Content scales around the Minnesota Multiphasic Personality

Inventory for Adolescents (MMPI-A) given to these residential students show minor changes

over the course of two years around the A-Anxiety scale, which suggests difficulties in thinking,

concentrating, and tension—characteristics of those experiencing feelings of depression (Cross et

al., 2004). Cross et al. (2004) also noted higher scales around A-Cynicism, A-School Problems,

and A-Conduct Problem scales, as students may be more inclined to be distrustful of others,

resistant to authority, and have a negative attitude toward school.

There is a fair amount of information on the social and emotional needs of gifted and

talented students, but the research around those who live independently for their secondary

experience is minimal. Van Hoof and Hansen (1999) interviewed the directors of mental health

services from 19 boarding schools in the northeastern United States. They found services were

generally needed due to mental health and substance use concerns and stated that having

appropriately trained screeners may assist in prioritizing and monitoring the students who need

help.

The most closely related research on prevalent mental health concerns for talented young

adults is related to Honors Colleges at a university setting, but this area also lacks extensive

literature. Students may not be considered gifted and talented in the Honors College, but students

in these programs likely face a larger workload, greater rigor and competition, and increased

stressors (Singell & Tang, 2012). Bieschke and Kirsch (2017) stated that honors students do not

have significantly different mental health concerns (occurrences and intensity) compared to their

non-honors peers. That said, Rinn (2005) found that honors students, similar to gifted and

talented students, are more likely to struggle with perfectionism and have greater expectations

around careers when compared to non-honors students. Clark et al. (2018) found that students

enrolled in an Honors College had high GPAs after the first semester in college when compared

to their non-honors peers, but that factors around self-confidence and influences were

statistically different. Honors College students expressed lower self-confidence and placed greater importance on external factors (e.g., parents and family, high school counselors) than their non-honors college peers (Clark et al., 2018). Based on this information, honors students struggling with socially prescribed perfectionism, high identity around academic ability and low coping skills could experience increased risk of mental health concerns.

Currently, there is no peer reviewed research available that discusses accelerated, residential learning environments with gifted and talented students and the use of any systemic or data driven screening around student wellness. Because of this gap in research, looking at residential schools with this special population of students and the outcomes of a Tier 1 screening tool would be beneficial to explore.

Positive Behavioral Interventions and Supports, Response to Intervention, and Multi-Tiered Systems of Support

To create a positive school climate, Positive Behavioral Interventions and Supports (PBIS) was included in the 1997 amended language of the Individuals with Disabilities Education Act (IDEA; PBIS, 2019). PBIS is an evidence-based, three-tiered approach to how schools can employ interventions that focus on prevention and instruction to benefit students within a community (Simonsen et al., 2012). In 2004, Response to Intervention (RTI) emerged from the reauthorization of the IDEA (Preston et al., 2016). RTI was built on the concepts of behavioral consultation (Bergan, 1977), data-based program modification (Deno & Mirkin, 1977), and learning disabilities (Preston et al., 2016). MTSS was implemented in 2015 when it was signed into law with the Elementary and Secondary Education/Every Student Succeeds Act (ESEA/ESSA; Yell, 2018). MTSS serves as a framework that combines PBIS and RTI, with a tiered infrastructure using data to drive assessments and instructions to meet the academic,

social-emotional, and behavioral needs of students (Stoiber & Gettinger, 2016; Utley & Obiakor,

2015). MTSS is generally considered an umbrella that houses the concepts of PBIS and RTI

(Sugai et al., 2019).

Positive Behavioral Interventions and Supports

The PBIS model is not a specific intervention program that is implemented by a school

district; it is more of a specific, guided approach to assessing and implementing evidence-based

practices for academic and behavioral circumstances with students in a unique community

(Poulus et al., 2011). The purpose of PBIS is to use research and data to drive decisions that

improve school climate and create safer, more effective schools. (Nocera et al., 2014). PBIS

emphasizes reducing problematic behaviors, in order to have a safe, orderly, and productive

learning environment by teaching students observable behavioral expectations (McIntosh et al.,

2014). Because PBIS is a community-based program, all school members need to be actively

involved in teaching and reinforcing positive and modified behaviors (Irvin et al., 2004).

The premise of PBIS is the integration of systems, data, and practices to evaluate

outcomes (PBIS, 2019). The school system operates based on a functional team or system with

leadership and expectations, the data are collected by the school to monitor and evaluate

outcomes, and the practices are research-supported programs that are implemented based on

community needs (U.S. Department of Education, 2009). Best practices for implementation of

the data-supported programming is for staff to support the intervention, maintaining a student-

focused support stance that improves social competence, academic achievement, and positive

decision-making skills (PBIS, 2019).

The PBIS model is multitiered in nature, and each tier is connected to a different type of

student support need (PBIS, 2019). The PBIS website (PBIS, 2019) breaks intervention and

support into three tiers: Tier 1 (Universal for all), Tier 2 (Targeted for some), and Tier 3 (Intensive, Individualized for a few).

Tier 1: Universal Interventions

PBIS (2019) Tier 1 incorporates the systems, data, and practices that impact everyone across all settings and establishes a regularly delivered intervention that aims to prevent unwanted behaviors across the community. Per the PBIS website (2019):

Tier 1 foundational systems include

- An established leadership team

- Regular meetings

- A commitment statement for establishing a positive school-wide social culture

- On-going use of data for decision making

- Professional development plan

- Personnel evaluation plan

Tier 1 practices include

- School-wide positive expectations and behaviors are taught

- Established classroom expectations are aligned with school-wide expectations

- A continuum of procedures for encouraging expected behavior

- A continuum of procedures for discouraging problem behavior

- Procedures for encouraging school–family partnership

Tier 2: Targeted Interventions

PBIS (2019) Tier 2 targets support for students who were not successful with the Tier 1 supports and are at risk for continued problems with no additional intervention. Tier 2 interventions are normally group-based interventions and the PBIS website (2019) states:

Tier 2 foundational systems include

- An intervention team with a coordinator

- Behavioral expertise

- Collection of fidelity and outcome data

- A screening process to identify students needing Tier 2 support

- Access to training and technical assistance

Tier 2 practices include

- Increased instruction and practice with self-regulation and social skills

- Increased adult supervision

- Increased opportunities for positive reinforcement

- Increased pre-corrections

- Increased focus on possible function of problem behaviors

- Increased access to academic supports

Tier 3: Intensive, Individualized Interventions

PBIS (2019) Tier 3 interventions are specialized for students who have been unsuccessful with Tier 1 and 2 support. Students do not need to have a mental health, behavioral, or learning disability diagnosis to qualify for Tier 3 interventions. Per the PBIS website (2019):

Tier 3 foundational systems include

- A multidisciplinary team

- Behavior support expertise

- Collection of formal fidelity and outcome data

Tier 3 practices include

- Function-based assessments

- Wraparound supports

- Cultural and contextual fit

Response to Intervention

RTI is a framework that provides instruction and intervention for students that targets the individual needs and monitors the changes in progress to drive effective services (Batsche et al., 2005). Fletcher and Vaughn (2009) stated that the primary goal of the RTI model is to prevent and remediate academic and behavioral difficulties through classroom instruction and increasingly intense interventions, with a secondary goal of providing useful data to assist with referring and making decisions about students with learning disorders. Similar to the PBIS structure, RTI is a research-supported, multitiered method to identify and support students with learning and behavioral needs in the classroom (Fletcher & Vaughn, 2009). Vaughn and Fuchs (2003) identified the RTI models as having three functions: screening all children for academic and behavioral concerns, monitoring the progress around at-risk students, and providing appropriate interventions to each student, with increasing intensity, based on changes in progress.

The RTI model, similar to PBIS, is multitiered in nature, with the intensity level of each tier increasing to serve a smaller portion of the student population (Mellard et al., 2010). Mellard et al. (2010) divided RTI intervention and support into three tiers: Tier 1 (Class-wide instruction for most), Tier 2 (Specialized group instruction for at risk), and Tier 3 (Individualized instruction for intense needs). The main purpose of RTI is to focus on the direct services, supports, and interventions for students at risk (Fletcher & Vaughn, 2009).

Multi-Tiered Systems of Support

As schools become more diverse and contend with problematic social issues, a high level of competency and readiness is expected of staff members involved (Sugai et al., 2019). Schools are utilizing MTSS, a prevention-based framework that enhances the development and implementation of evidence-based outcomes, as a primary resource to effectively and efficiently deliver support to students around social, emotional, academic, and behavioral challenges (McIntosh & Goodman, 2016). The goal of MTSS is to maximize the effectiveness of social, emotional, and academic outcomes for students (Goodman-Scott et al., 2015) by engaging all community members in a three-tiered system that screens, monitors, implements, and evaluates programming (Sugai et al., 2019).

Because MTSS utilizes all entities of the school communities, it is vital for community members (i.e., teachers, administrators, staff members) to have training or understanding around the framework. According to Weisenburgh-Synder et al. (2015), there are several variables that significantly impact the effectiveness of MTSS systems, such as the: (a) extent to which sensitive instructional placement procedures are employed, (b) degree to which high quality methodologies are used, (c) depth and breadth of training and support initiatives, and (d) adequacy of student assessment systems and procedures in producing improved outcomes.

To become more adept at matching educational support systems to meet the student needs, the MTSS framework moves away from forcing all students to receive the same mechanisms at all times and calls for more individualized strategies around student circumstances (Goodman & Bohanon, 2018). The framework builds from its core components and then has critical features to implement the protocol. MTSS incorporates four core components as its main framework: (a) high-quality, differentiated classroom instruction for all

students; (b) systemic and sustainable change; (c) integrated data system; and (d) positive

behavioral support (Goodman & Bohanon, 2018).

Castillo et al. (2016) developed a blueprint on how to successfully facilitate systemic

change within the complexity of the educational system. They recommend implementation in

three stages: consensus, infrastructure, and implementation. Consensus involves district or

school stakeholders (e.g., superintendent, principal, teachers, support staff, student services)

determining the importance of utilizing a system-based intervention and then developing a

consensus around teaching modality and service integration (Castillo et al., 2016). Once the

larger ideas are in place, the stakeholders must discuss the foundation of the plan by putting

together the framework—goals, policies, resources, and responsibilities of community members

(Castillo et al., 2016). After the modifications have been made by the district employees and the

tiered assessments and intervention practices are identified, the MTSS framework is then

implemented by all team members, and continued data collection and measure evaluation occurs

to monitor the effects on student outcomes (Castillo et al., 2016). If constructed, implemented,

and maintained properly, the MTSS model will create educational systems that are successful in

supporting the needs of both students and staff members (Clark & Dockweiler, 2019).

To target MTSS and its potential effectiveness within residential schools for gifted and

talented students, it would be valuable to look at Tier 1, early interventions that can assist staff

members in determining the needs of each student cohort. One specific method that schools can

use to reduce the number of students who are not identified for mental wellness issues is to

screen all students. This screening process will allow school staff to develop a variety of

interventions, including both community-wide and individual-based programming.

Early Intervention through Universal Mental Health Screening

School systems are ideal avenues for promoting prevention and early intervention programming for mental health and wellness issues, especially around anxiety and a range of emotional disturbances (Masia-Warner et al., 2006). Early intervention and prevention programs have been linked to positive school outcomes (Makover et al., 2019), and positive outcomes can mean graduation from high school, but these outcomes can also look at improved well-being, school readiness, targeted level of education, and attendance (Reynolds et al., 2011). Barrett and Pahl (2006) stated that school-based programming, usually delivered as part of the curriculum, can reduce many of the common issues around avoiding treatment, like stigma, location, cost, and transportation. Resilience-focused interventions had varied effects on student mental health concerns, but positive effects were shown in short-term reduction of depressive and anxiety symptoms (Dray et al., 2017). Overall, school-based prevention programs can have small beneficial effects on student anxiety (Hugh-Jones et al., 2020) and have potential to reduce mental health burden (Hugh-Jones et al., 2020; Werner-Seidler et al., 2017).

Universal Mental Health Screening

To determine the appropriate interventions pertaining to the mental health and wellness needs of students in a community, school communities must run a needs assessment to determine what prevalent concerns have to be addressed and which prevention programs will be most beneficial (Dowdy et al., 2010; SAMHSA, 2019). Using the MTSS, a Tier 1 intervention of Universal Mental Health Screening (UMHS) can be administered to all students. UMHS is a systematic method to evaluate all students within a district, school, or grade level on behavioral or emotional criteria (Glover & Albers, 2007). The goal of the UMHS is to identify students associated with increased risk of having or developing a mental health and wellness concern

(Dvorsky et al., 2014). The benefits of UMHS are twofold: as data are collected around each individual student's mental health for follow-up, the mental health of fewer student is overlooked; and comprehensive information on school functioning is obtained to assist with data-driven program implementation (Humphrey & Wigelsworth, 2016).

Benefits of Universal Mental Health Screening

Engaging in UMHS in the school is beneficial for identifying potential large-scale community concerns, as well as useful for identifying a smaller percentage of students who are considered at-risk for wellness issues (Moore et al., 2018). Moore and colleagues (2018) noted that this benefits some students, but only focusing on the wellness issues identifies problems and not the strengths of the students in the community. Because UMHS does not limit use to only one scale or attention to one factor, a benefit for school communities is that they can select a tool that best serves the entire population and enhance the assets that students currently possess (Humphrey & Wigelsworth, 2016). Humphrey and Wigelsworth (2016) believed schools can provide a truly comprehensive and effective screening component that is valid, reliable, addresses issues around diversity, and provides long-term cost savings.

Developing a strengths-based model of UMHS allows educators and mental health professionals within the school community to become proactive around the wellness of students (Moore et al., 2018). A screening tool can gather information about a student's relationships, resiliency factors, communication skills, and family dynamics (Furlong et al., 2014). The more information a school's mental health professionals can obtain from students, the more specific the programming created can be, which in turn will help students and develop an overall healthy and positive school culture among staff, students, and community members (Huebner et al., 2009).

<u>Challenges of Universal Mental Health Screening</u>

Despite the benefits of UMHS as a method to increase the identified number of students with emotional or behavioral concerns, less than 15% of schools have procedures to systematically evaluate mental health needs (Bruhn et al., 2014). There are several challenges associated with UMHS that may prevent schools from engaging in the screening process, most of which revolve around the resources available to properly assess and monitor students (Dowdy et al., 2010). Siceloff et al. (2017) identified limited properly trained school personnel as a deterrent to UMHS, and Glover & Albers (2007) found that many schools lack the data infrastructure to collect and store data for evaluation. The publicly-funded residential schools, similar to the one in this study, typically do not have researchers trained in any formal evaluation techniques. Lastly, budget was cited as a large restrictor, as the cost of screening tools, data collection, and management systems are an expensive investment (Siceloff et al., 2017).

Aside from budget and staffing related concerns, obtaining buy-in from community stakeholders can be a challenge (Humphrey & Wigelsworth, 2016). Community members may have a belief that UMHS creates a stigma for students who are identified in the screening process (Williams, 2013), and stakeholders may not see the value in screening or may feel the school is overreaching and violating the privacy of families (Siceloff et al., 2017). In addition, training is likely needed for staff members (e.g., administrators, teachers), which may be viewed as a burden, requiring additional time and effort of those who are already stretched for time (Siceloff et al., 2017).

Types of Screening Tools

Once a school determines that UMHS is an option that they would like to pursue, it is imperative that an appropriate screening tool is selected. Because no two schools are alike, it is

necessary for a school to consider its needs, culture, and resources (Goodman-Scott et al., 2015). When selecting a screening measure, Goodman-Scott et al. (2015) recommended asking the following questions: (a) is the tool reliable, valid, and evidence-based?; (b) is the tool free, or can it be purchased for a reasonable cost?; (c) how long will it take to administer and score the screening tool?; (d) does the tool come with access to training and technology support for staff, and are there basic educational requirements or expertise needed to administer?; (e) does the tool screen for what the school or district wants to know, and does it align with the goals and purpose?; (f) is the screening tool age appropriate; and (g) is it only to be given to students or will teachers and parents play a role?

As school districts begin exploration of questions pertaining to their screening tool needs, they can also explore what options are available to select. Depending upon the initial identified needs of the community and the resources available, the screening leadership team can isolate a tool of interest. The following screening tools are potential options, based on the needs identified: Systematic Screening for Behavioral Disorders (SSBD), Student Risk Screening Scale (SRSS), Strengths and Difficulties Questionnaire (SDQ), The Behavioral Assessment Scale for Children Two (BASC-2), and Behavioral and Emotional Screening Scale (BESS; Donohue et al., 2016; Hoff et al., 2015). When exploring the questions from the previous paragraph and looking at the screening options, it was determined that some of the aforementioned choices either lacked the depth of information around mental health topics that the school wanted pertaining to students (i.e., the screeners were not as long as desired and questions lacked depth), that some of the screeners did not have any strength-based factors included, and others did not target the identified perceived needs of the student population (i.e., only looked at behavioral factors).

When selecting screening tools to use with gifted and talented students, based on the research gathered in this study, using a tool that helps to identify depression, anxiety, behavioral issues, and self-concept are relevant. The Beck Youth Inventories--2nd edition (BYI-2) is a screening tool that incorporates exploration of these topics, but it is not identified as a strengths-based screener. Because of this, looking at positive factors around resiliency and relationship-building skills is a good complement to the BYI-2 to understand how gifted and talented students perceive relationships and coping ability. A second screening tool, the Resiliency Scales for Children and Adolescents (RSCA), was also administered to gather data around students' concept of resiliency-based factors and emotional reactivity.

School-based mental health providers can advocate for students in their school community by pushing school and district administrations to learn about the social, emotional, academic, and financial benefits of UMHS. Promoting student wellness and prevention of mental health issues within the school community is a valuable asset, but it is critical that the UMHS used is based in scientific data. It is also crucial that all community members participate in the process in order for these community-based interventions to thrive.

CHAPTER THREE: METHODOLOGY

Little is known about the emotional needs of high-ability students attending an accelerated, residential school. A vital part of supporting these gifted and talented students who live away from home is assessing their social and emotional needs to develop programming and interventions. Therefore, the purpose of this study was to use UMHS to investigate both the mental health symptoms and resiliency factors of gifted and talented high school students participating in an accelerative, residential-based academic program. To do this, I administered two UMHS tools to look for any relationships among inventory subscores. I also identified participants at risk for social and emotional difficulties and their resiliency scores. Finally, I investigated whether there were differences among the participants by gender identity, sexual identity, and race for information pertaining to screening and potential support service development.

Research Questions

This study examined the following research questions:

1. According to the Beck Youth Inventories--2nd edition (BYI-2), what are the prevalent mental health concerns, if any, displayed by gifted and talented high school students participating in an accelerative, residential-based academic program?

   a. What differences are there, if any, in each BYI-2 subscale score based on the gender identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

b. What differences are there, if any, in each BYI-2 subscale score based on the sexual identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

c. What are the differences, if any, in each BYI-2 subscale score based on the race of gifted and talented high school students participating in an accelerative, residential-based academic program?

2. According to the Resiliency Scales for Children and Adolescents (RSCA), what are the prevalent concerns and identified strengths, if any, around resiliency displayed by gifted and talented high school students participating in an accelerative, residential-based academic program?

a. What differences are there, if any, in each RSCA subscale score based on the gender identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

b. What differences are there, if any, in each RSCA subscale score based on the sexual identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

c. What are the differences, if any, in each RSCA subscale score based on the race of gifted and talented high school students participating in an accelerative, residential-based academic program?

3. What is the relationship among the subscale scores of the BYI-2 and RSCA for gifted and talented high school students participating in an accelerative, residential-based academic program?

4. From the perception of these gifted and talented students, what effect, if any, has the COVID-19 pandemic had on their mental health and ability to cope?

Design

The previous chapters presented a comprehensive review of the professional literature focusing on several variables that might influence the mental health and wellness of gifted and talented students attending a residential school. Specifically, it addressed the literature on current mental health and wellness concerns of youth, the mental health and wellness needs of gifted and talented students, factors around resiliency and wellness, wellness concerns around residential living for youth, the systemic models that schools can implement within a district or community, and the benefits of using mental health screening to drive student supports and interventions. Based on the evidence found in the professional literature on mental health and wellness variables with gifted and talented students, two mental health screening tools were selected to administer in the study, the Beck Youth Inventories--2nd edition (BYI-2) and Resiliency Scales for Children and Adolescents (RSCA). Additional details about the screening tools and their outcomes are presented in the instrumentation section of this chapter.

This study applied a quantitative, exploratory, descriptive, and correlational methodology to investigate the research questions posed (Creswell & Creswell, 2018), which consisted of sending out a survey of screening tools to gifted and talented students attending a residential high school. The students were aged 14 to 18, lived in a Midwestern state, lived in all types of areas (e.g., rural and urban), and came from a variety of backgrounds (e.g., racial, socio-economical, religious). Using a quantitative methodology allowed for numerical data to be analyzed for the relationship of predetermined variables (Haneef, 2013), and allowed for the sample size, if robust enough, to generalize and formulate some predictions for application to a larger population of

similar subjects (MacCarthy et al., 2013). A quantitative methodology is deemed the most appropriate method for this study to apply various statistical analyses of the sample and variables.

Context and Participants

The Midwestern school in this study is a public, residential high school housing 10th–12th graders from across a single state. The school is classified as a science, technology, engineering, and mathematics (STEM) academy for gifted and talented students. It houses 652 students at the beginning of each school year, and they are admitted into the school in a fashion similar to a university setting. Students are welcome to apply to this school during or before 9th grade for entry as a 10th grader. Any state resident is welcome to apply, and the application process consists of submission of transcripts, SAT scores, teacher and counselor recommendations, writing samples, and extracurricular activities. All completed applications, with test scores removed, are initially evaluated by current staff, alumni, and community members familiar with gifted and talented students. Student applications then go through a second round of evaluation among faculty, administrators, and heads of campus programming to finalize a list of students who will be offered enrollment. Enrollment is based on the number of open beds going into each year, so acceptance numbers vary.

Once a student has been notified of acceptance into the school, the student and their family must notify the school of accepting or declining the offer by a deadline date. After accepting the invitation to enroll, families go through an orientation process, similar to a collegiate experience, where they meet the staff, future roommates, and other peers. Currently, after acceptance, families are encouraged to fill out a form to notify the school of any medical concerns, which can include history of mood disorders, anxiety, self-injury, Autism Spectrum

Disorder, ADHD, family turmoil, or any other medical concerns. After a family submits this form to staff, various members of the Student Affairs staff meet with the student and family during the orientation process. The purpose of these meetings is to determine how to best support students as they transition to the school. Most of these students require assistance from non-faculty members (e.g., school counselor, school nurse, academic support, learning strategies). Once the school year begins, referrals around student wellness issues can come from any source, with the most common being residential counselors (adults who live on campus), faculty, and peers.

Instrumentation

I administered three instruments in this study, the BYI-2, RSCA, and a demographics survey, which included three additional questions about COVID-19.

Beck Youth Inventories--2nd edition (BYI-2)

The BYI-2 was developed as a self-report-based instrument for identifying potential maladaptive cognitions and behaviors for youth (Bose-Deakins & Floyd, 2004). The instrument was published by Beck et al. (2001) and the purpose was to aid mental health professionals in screening youth in five areas of functioning. The five subscales of the inventory are used to measure anxiety, depression, anger, disruptive behaviors, and self-concept. These five inventories each contain 20 questions about thoughts, feelings, and behaviors associated with emotional and social impairment in youth. Children and adolescents describe how frequently the statement has been true for them during the past two weeks, including the date the BYI-2 is completed. The BYI-2 is currently available in various languages, including English, Danish, French, and Polish.

The BYI-2 is designed to be completed by children and young adults aged 7–18 years old and can be administered via paper and pencil or through an online format. As stated, the BYI-2 has five inventories, each with 20 questions, and each inventory has its own scale: the Beck Depression Inventory for Youth (BDI-Y), the Beck Anxiety Inventory for Youth (BAI-Y), the Beck Anger Inventory for Youth (BANI-Y), the Beck Disruptive Behavior Inventory for Youth (BDBI-Y), and the Beck Self-Concept Inventory for Youth (BSCI-Y; Beck et al., 2005). Using the measure profile (Beck et al., 2005), raw scores are compiled from the 20 questions asked in each section, and then the administrator can use the manual to convert the raw scores into T-scores based on age and sex. The sexes are male and female, and the age ranges are 7–10, 11–14, and 15–18. T-scores for the BYI-2 are as follows: 55 or less is average, 55–59 is mildly elevated, 60–69 is moderately elevated, and 70+ is extremely elevated (Beck et al., 2005).

The BYI-2 is able to provide both a valid psychometric evaluation of students as well as normative data (Bose-Deakins & Floyd, 2004; Deighton et al., 2014). Reliability was tested using the test-retest method and Cronbach's alpha, and research reports that alpha is always greater than .84 for all age groups on all scales (Basker et al., 2007; Beck et al., 2005). Coefficient alphas for all the inventories are very good, with values ranging from .86–.96, and the BDI-Y having the highest value for internal consistency (.90–.95; Burgos, 2017). Test-retest reliability after 7–8 days ranged from .74–.93, indicating acceptable reliability of scores after the 7– to 8-day period; test-retest scores were slightly lower among girls (Burgos, 2017).

Though both valid and reliable, the BYI-2 may not qualify as the top choice for regular screening because of its length, 100 questions that may take up to 30 minutes (Deighton et al., 2014). The BYI-2 may be best used as a once-a-year, low-level evaluation-based screening tool for students. Additional potential limitations of the BYI-2 include the lack of a lie scale, lack of

item analysis detecting cultural bias, potential strong relationships around inventory constructs, and the inability to discriminate between children with emotional and behavioral problems and those without, or between children with different types of emotional or behavioral problems (Bose-Deakins & Floyd, 2004). Due to these potential limitations, the RSCA will be used to rationalize and support the use of the BYI-2. A brief description of the five BYI-2 subscales is provided below.

Depressive Inventory

The BDI-Y is a 20 question, self-reported survey that allows for early identification of symptoms of depression in youth over 7 years old (Stapleton, Sander, & Stark, 2007). It can be administered individually or as part of the larger inventory, and it includes items that are measured on a four-point Likert scale (i.e., 0=never, 1=sometimes, 2=often, and 3=always; Beck, Beck, & Jolly, 2001). The items asked are related to a child's or adolescent's negative thoughts about self, life and the future, feelings of sadness and guilt, and sleep disturbance, with higher scores indicating more depressive symptomology (Beck, Beck, & Jolly, 2001).

Anxiety Inventory

The BAI-Y is a 20 question, self-reported survey that allows for early identification of symptoms of anxiety in youth over 7 years old (Beck, Beck, & Jolly, 2001). It can be administered individually or as part of the inventory, and it includes items that are measured on a four-point Likert scale (i.e., 0=never, 1=sometimes, 2=often, and 3=always; Beck et al., 2001). The items asked are related to a child's or adolescent's specific worries about school performance, the future, negative reactions of others, fears including loss of control, and physiological symptoms associated with anxiety, with higher scores indicating more anxious symptomology (Beck et al., 2001).

<u>Anger Inventory</u>

The BANI-Y is a 20 question, self-reported survey that allows for early identification of symptoms of anger or hostility in youth over 7 years old (Beck et al., 2001). It can be administered individually or as part of the inventory, and it includes items that are measured on a four-point Likert scale (i.e., 0=never, 1=sometimes, 2=often, and 3=always; Beck et al., 2001). The items asked are related to a child's or adolescent's thoughts of being treated unfairly by others, feelings of anger and hatred, with higher scores indicating more anger-based symptomology (Beck et al., 2001).

Disruptive Behavior Inventory. The BDBI-Y is a 20 question, self-reported survey that allows for early identification of symptoms of external behavioral concerns in youth over 7 years old (Beck et al., 2001).). It can be administered individually or as part of the inventory, and it includes items that are measured on a four-point Likert scale (i.e., 0=never, 1=sometimes, 2=often, and 3=always; Beck et al., 2001). The items asked are related to a child's or adolescent's thoughts and behaviors associated with conduct disorder and oppositional-defiant behavior, with higher scores indicating more oppositional behaviors (Beck et al., 2001).

Self-Concept Inventory. The BSCI-Y is a 20 question, self-reported survey that allows for early identification of the strength of one's self-identity in youth over 7 years old (Beck, Beck, & Jolly, 2001). It can be administered individually or as part of the inventory, and it includes items that are measured on a four-point Likert scale (i.e., 0=never, 1=sometimes, 2=often, and 3=always; Beck et al., 2001). The items asked are related to a child's or adolescent's cognitions of competence, potency, and positive self-worth, with higher scores indicating a lower sense of one's confidence in own ability or value (Beck et al., 2001).

Resiliency Scales for Children and Adolescents (RSCA)

The RSCA measures the personal attributes of the child that are critical for resiliency. Resilience factors can correlate with many disorders, and the RSCA scales focus on strengths as well as symptoms and vulnerabilities. The RSCA, published by Prince-Embury (2006; 2007), was designed to quantify personal qualities of resiliency in youth and consists of three global scales: Sense of Mastery (MAS), Sense of Relatedness (REL), and Emotional Reactivity (REA). The instrument is a 64 item, self-report questionnaire and each question is assessed using a 5-point Likert-type scale ranging from 0 (never) to 4 (almost always; Prince-Embury, 2006; 2007). The breakdown of questions in each global scale is 20 in MAS, 24 in REL, and 20 in REA.

Each of the global scales has related subscales around the major concept: MAS looks at optimism, self-efficacy, and adaptability; REL looks at comfort, trust, perceived support, and tolerance of differences with others; and REA looks at sensitivity, recovery, and impairment in emotional reactivity (Prince-Embury, 2006; 2007). The MAS and REL scales are considered protective personal characteristics, and the REA scale is vulnerability-based, or characteristics that put individuals at risk when confronted with adversity (Prince-Embury, 2008).

Using the measure profile (Prince-Embury, 2006; 2007), raw scores are compiled from the questions asked in each section, and then the administrator can use the manual to convert the raw scores into T-scores based on age and sex. According to Prince-Embury (2006, 2007), the sexes are male and female, and the age ranges are 9–11, 12–14, and 15–18. T-scores for the RSCA are as follows: 40 or below is low, 41–45 is below average, 46–55 is average, 56–59 is above average, and 60+ is high (Prince-Embury, 2005, 2006).

Prince-Embury (2010) has analyzed the RSCA around its factor and subscale structure with the conclusion that the scales provide good factor structure. Her analysis concluded that

each factor properly correlated with the expected factor (e.g., MAS and REL have a positive correlation, MAS and REA have a negative correlation). Previous studies have reported a Cronbach's alpha for the three global scales ranging from .90 to .94 for American students between the ages of 15 and 18, and a confirmatory factor analysis has shown that the scale fits the three-factor model in three youth samples between the ages of 8 and 18 (Prince-Embury & Courville, 2008). The following paragraphs will provide in-depth details around the three RSCA subscales.

Sense of Mastery Scale

The MAS is a 20 question, self-reported survey that allows for identification of one's strengths in optimism, self-efficacy, and ability to learn from mistakes (Prince-Embury, 2006; 2007). It includes items that are measured on a five-point Likert scale (i.e., 0=never, 1=rarely, 2=sometimes, 3=often, 4=almost always; Prince-Embury et al., 2017). The items asked are related to a child's or adolescent's level of self-efficacy, which positively correlates with future prediction around achievement and school success and negatively correlates with anxiety levels and pathological symptoms (Prince-Embury, 2015). According to Prince-Embury (2006; 2007), higher scores in MAS mean a higher level of self-efficacy and a lower chance of developing issues around anxiety and pathology.

Sense of Relatedness Scale

The REL is a 24 question, self-reported survey that allows for identification of one's comfort around others, trust in others, and perceived access of support from others (Prince-Embury, 2006; 2007). It includes items that are measured on a five-point Likert scale (i.e., 0=never, 1=rarely, 2=sometimes, 3=often, 4=almost always; Prince-Embury, Saklofske, & Nordstokke, 2017). The items asked are related to a child's or adolescent's level of ability to

develop relationships and seek support from non-parental adults, which resilient youth do more frequently than non-resilient youth (Prince-Embury, 2015). Prince-Embury (2015) found that children with a higher sense of relatedness will be more resilient and less vulnerable to negative outcomes when facing adversities. According to Prince-Embury (2006; 2007), higher scores in REL mean an increased ability to develop relationships and seek support from adults and a lower chance to have negative outcomes during challenging life circumstances.

Emotional Reactivity Scale

The REA is a 20 question, self-reported survey that allows for identification of one's sensitivity for reaction and intensity of reaction, time needed to recover from emotional upset, and impairment when upset (Prince-Embury, 2006; 2007). It includes items that are measured on a five-point Likert scale (i.e., 0=never, 1=rarely, 2=sometimes, 3=often, 4=almost always; Prince-Embury, Saklofske, & Nordstokke, 2017). The items asked are related to a child's or adolescent's level of emotional reaction and regulation of emotional ability (Prince-Embury, 2015). Prince-Embury (2015) found there is a link between high emotional reactivity and difficulty with regulation, with behavioral maladjustment, and vulnerability to pathology. According to Prince-Embury (2006; 2007), higher scores in REA mean a higher level of emotional reactivity, which can mean difficulty with adjustment and increased vulnerability to pathology, whereas lower scores mean increased ability to regulate emotional reactions.

Resource Index and Personal Vulnerability Index

Upon answering all 64 questions, the scores are summed within each subscale, standardized, and MAS and REL are summed to create a Resource Index (Prince-Embury, Saklofske, & Nordstokke, 2017). After the Resource Index is summed, the difference is found between it and emotional reactivity to determine the Vulnerability Index (Prince-Embury, 2006;

2007). According to research on resiliency theory, youth with higher Resource Index scores tend to be more resilient and are less likely to develop psychopathology, whereas lower scores may signal a need for preventative interventions to help increase personal resources to cope (Prince-Embury, 2015). The Vulnerability Index looks at an individual's vulnerability based on the difference between self-perceived resources and fragility from emotional reactivity (Prince-Embury, 2007). Price-Embury (2015) calculated that students who score 60 to 64 on the Vulnerability Index may be referred to Tier 2 interventions and students who score 65 or above may be referred to Tier 3 interventions.

Demographics Survey

To answer one of the research questions in this study about any differences that may exist based on student demographics, a brief survey was constructed to upload to Qualtrics. This survey will ask students to respond to statements about the following demographics: age, year in school, gender identity, sexual identity, and race. Data collected from the demographic items will be used to conduct future analyses and correlations between participant demographics on the subscales of the BYI-2 and RSCA.

To answer another of the research question in this study about potential effects of COVID-19 on student mental health and coping, three questions were created. These questions were developed by the researcher using language from the DSM-5 to describe symptoms of depressed mood, anxiety, and attention issues. These are the three most common mental health issues experienced by youth, which were discussed earlier in this research study. The five-point Likert scale is a similar scale structure to the screening tools, and similar language was used to allow students to describe any change, or no change, in their perceived experiences during COVID-19. Data collected from these questions showed whether there was any change in these

factors from the students' perspective to consider additional research and whether the potential

data from these questions could have an effect on the overall data collected from the screening

tools administered.

Procedures

I obtained Internal Review Board (IRB) approval from the subjects' school, along with a

revision to amend the proposal to add surveys and changes to the consent form to add incentives.

I submitted documents from Northern Illinois University for IRB approval in September of 2020

(see Appendix A). I purchased licensed screening tools, the BYI-2 and the RSCA, through

Pearson Assessments and received approval to utilize these screening tools for research

purposes. Due to copyright laws, these screening tools are unable to be published within this

document. Paper copies of the screening tools were received by the author, along with the

scoring and norming manuals, and the Office of Institutional Research (OIR) at the subjects'

school uploaded screening tool questions, along with an additional demographic survey (e.g.,

current year in school, age, race, gender identity, and sexual identity) to an online data base,

Qualtrics, for eventual data collection. The OIR is a service-oriented team of researchers whose

job is to drive and support the mission of advancing investigations throughout the organization

using data-informed information decision making. Qualtrics is an online survey tool that allows

researchers to build, distribute, and analyze response data collected from surveys. All surveys

developed or uploaded into Qualtrics, as well as data collected and stored, is password-protected

and only accessible by authorized users.

A passive informed-consent form, which included information about the purpose of the

study, the risks and benefits, and how to withdraw a student from participating in the study, was

created for parents and guardians to review. This consent form was e-mailed to parents,

guardians, and students in 11th and 12th grade on September 10, 2020. Parents and guardians had until September 14, 2020 to return the consent form if they would like to remove their child from participating in the study. Between September 8 and September 16, 2020, OIR and I compiled an e-mail list of all students eligible to participate in the study, which was uploaded into Qualtrics by OIR. On September 17, 2020, 11th and 12th graders arrived to a mandatory meeting via Zoom. OIR sent a link via e-mail addresses to all eligible 11th and 12th grade students, which expired one hour after the e-mail was sent. The e-mail instructed students to click the link to Qualtrics, where they respond to the screening tool questions and statements. Students were prompted to go into their e-mail account, click on the provided link, and follow instructions. Students did not provide their names, dates of birth, or any other personally identifiable information. There were no open-ended questions requiring students to type answers. The survey took approximately one hour, which was allocated for students during the school day. If any participant provides identifiable factors after submission (e.g., name, date of birth, home address, IP address), this information was deleted by OIR. All data were then put into a spreadsheet by OIR, which was utilized for cleaning data of identifying information. Upon de-identifying all information from responses, OIR provide the data to me for analysis.

Risk and Protection of Participants

There were no known physical or emotional risks associated with participation in this study. As with all research, there was a potential for unforeseen risks. Participants in this study were asked about their mental health and wellness over the past several weeks, in which case, some participants might experience a negative reaction based on their level of wellness, viewing it as harmful to their functioning. To ensure participants' safety from the possible risk that their peers, family, or staff members might find out this information, I did not ask for specific names

or other personally identifiable information. Participants may have worried that by participating in this study they could be identified or targeted by staff or that it may negatively affect their academics or grades. However, participants were assured that requested background information collected (e.g., grade in school, age, gender identity, sexual identity, and race) was for research purposes only. If any information, like an IP address, was captured, the institution's Office of Institutional Research (OIR) deleted any identifiable information before disseminating the data for analysis. Participants' responses received an ID number from OIR that was not connected with any identifiable information.

Confidentiality of the Data

I took several steps to ensure the confidentiality of the data. The first step was to use an online database, Qualtrics, to collect and securely protect the data on their server. This data can only be accessed by the OIR at the institution, and all information is password-protected. Once any identifiable information was removed by OIR, I received access to the data. The second step involved using the data files stored in Qualtrics and downloading this information to a jump drive to eventually upload to SPSS. Any files on the jump drive were password-protected, and the drive was kept in a locked file cabinet in my home when not being used. Because OIR removed any potential identifiable information from data and gave each response set an ID number that was not traceable to participants, there was minimal risk that data collected could be connected to any participant.

Data Analysis Techniques

The information below is a restatement of the three research questions. After each question, there was a description of the analysis that was used to interpret the data. When collecting the data for this study, both Qualtrics and spreadsheets were used to store the data, and

the Statistical Package for Social Sciences (SPSS) were used to analyze the data. Data were cleaned by me to determine duplicate responses from a single user, missing values or partial responses, outliers, or any responses that are invalidated based on scoring manual. Any manipulation of data (reverse coded) was part of the process described by the manual provided on how to score each screening tool.

Research Question 1

According to the Beck Youth Inventories--2nd edition (BYI-2), what are the prevalent mental health concerns, if any, displayed by gifted and talented high school students participating in an accelerative, residential-based academic program?

a. What differences are there, if any, in each BYI-2 subscale score based on the gender identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

b. What differences are there, if any, in each BYI-2 subscale score based on the sexual identity of gifted and talented high school students participating in an accelerative, residential-based academic program?

c. What are the differences, if any, in each BYI-2 subscale scores based on the race of gifted and talented high school students participating in an accelerative, residential-based academic program?

<u>Method of Analysis</u>

Because I wanted to determine what mental health concerns existed, if any, and whether there were differences between subscale scores and the students' gender identity, sexual identity, and race, I executed a multiple analysis of variances (MANOVA) using SPSS. A MANOVA is an analysis design that evaluates multiple dependent variables in a study (Rencher &

Christensen, 2012). According to Rencher and Christensen (2012), the standards of a

MANOVA's dependent variables should represent continuous measures and be moderately

correlated.

Gender identity, sexual identity, and race were the independent variables, and the five

subscale scores of the BYI-2 were the dependent variables. Using a MANOVA allowed me to

examine the main effects so I could determine whether there were any significant differences

between independent variables (gender identity, sexual identity, and race) on the dependent

variables (the five BYI-2 subscale scores) while controlling for the effects of the other

independent variables on the dependent variables (Grice & Iwasaki, 2007). By using a

MANOVA for analysis, I tested for statistical interactions, which was an additional benefit, and

Grice and Iwasaki (2007) recommended performing a stepdown analysis to follow up MANOVA

testing, to evaluate the dependent variables in terms of their overlap with the independent

variables.

During the process of data analysis, using MANOVA, it was important to check the

typical assumptions. The following information was taken from Rencher and Christensen (2012)

on looking at assumptions around data analysis. When looking at a MANOVA, additional

assumptions were checked regarding absence of multivariate outliers, linearity, absence of

multicollinearity, and equality of covariance matrices. To assess the absence of multivariate

outliers, I ran a multiple linear regression in SPSS with all of the dependent variables as the

independent variables. The dependent variables became an ID variable. During this regression,

Mahalanobis Distances were saved and then sorted from greatest to least. Using the critical chi-

squared value, participants with a value greater than the critical value was removed. To assess

linearity, I created a scatterplot matrix between the dependent variables, and then look at each

group in the MANOVA separately. The absence of multicollinearity was checked by conducting

correlations among the dependent variables, with any correlation over .80 as a concern. Lastly, I

ran a Box's M test to check the assumption of the equality of covariance matrices. As long as the

p value is above .001, the assumption were met.

Because this research was in an educational setting, it was appropriate for me to analyze

the data based on an alpha of .05 (Funk et al., 2003). Alpha is a threshold value used to judge

whether a test statistic is statistically significant or not (Noymer, 2008). The alpha level

represents what is an acceptable probability of Type 1 error, which is known as a false positive

(Kim, 2015).

Research Question 2

According to the Resiliency Scales for Children and Adolescents (RSCA), what are the

prevalent concerns and identified strengths, if any, around resiliency displayed by gifted

and talented high school students participating in an accelerative, residential-based

academic program?

a. What differences are there, if any, in each RSCA subscale score based on the

gender identity of gifted and talented high school students participating in an

accelerative, residential-based academic program?

b. What differences are there, if any, in each RSCA subscale score based on the

sexual identity of gifted and talented high school students participating in an

accelerative, residential-based academic program?

c. What are the differences, if any, in each RSCA subscale score based on the race

of gifted and talented high school students participating in an accelerative,

residential-based academic program?

Method of Analysis

Similar to research question one, I wanted to determine the strength of resiliency factors that may exist with the study's participants and whether there were differences between subscale scores and the students' gender identity, sexual identity, and race. Again, I executed a multiple analysis of variances (MANOVA) using SPSS. Gender identity, sexual identity, and race were the independent variables and the three subscale scores of the RSCA were the dependent variables. Using a MANOVA allowed me to examine the main effects in order to determine whether there were any significant differences between independent variables (gender identity, sexual identity, and race) and the dependent variables (the three RSCA subscale scores) while controlling for the effects of the other independent variables on the dependent variables (Grice & Iwasaki, 2007). The same benefits existed by performing a MANOVA for question two as for question one, as well as the recommend stepdown process (Grice & Iwasaki, 2007). I performed the same check on assumptions for MANOVA as explained in the method analysis section of research question one.

Research Question 3

What is the relationship among the subscale scores of the BYI-2 and RSCA for gifted and talented high school students participating in an accelerative, residential-based academic program?

Method of Analysis

Because I wanted to determine what relationships, if any, existed between the subscale scores of the BYI-2 and RSCA, I looked at the Pearson R (R correlation) in SPSS. Correlation is the relationship existing between statistical variables in a way that is not determined by chance alone (Akoglu, 2018). Akoglu (2018) states that the Pearson R is a correlation coefficient that

looks to both determine the relationship between two quantitative variables and to what degree the variables are related. The Pearson correlation is best used to describe linear relationships, and any form of non-linear patterns can signify a lower correlated or weaker relationship (Hung et al., 2017). The values of the correlation vary from -1 to 1, with positive values indicating a tendency of one variable to increase or decrease together with another variable, and negative values indicate a tendency that the increased value of one variable is associated with the decreased value of another variable (Schober et al., 2018).

During the process of data analysis when using the Pearson R, it was important to check the typical assumptions. The following information was taken from Schober et al. (2018) on looking at assumptions around data analysis. Assumptions for the Pearson R were to check the level of measurement, related pairs, absence of outliers and linearity. Level of measurement referred to each variable and should be continuous. Absence of outliers looked at any skewed responses that could pull the correlation too far in one direction. Typically, an outlier is identified as a value that is plus or minus 3.29 standard deviations away from the mean. Lastly, linearity looks at the scatterplot and was determined by the shape that the values form. A straight-line relationship should form between the variables.

Research Question 4

From the perception of these gifted and talented students, what effect, if any, has the COVID-19 pandemic had on their mental health and ability to cope?

Because I aimed to determine whether there was any effect, either positive or negative, I looked at descriptive statistics to get an understanding of how things may have changed since COVID-19. The descriptive statistics looked at were measures of central tendency (e.g., mean, mode, median).

Missing Data

According to the BYI-2 manual (Beck et al., 2005):

Youth should be encouraged to complete all items. In instances where this is not possible,

up to two missing items are admissible. In computing the total raw score, missing item

responses should be estimated by the mean response value of the items answered by

youth on that inventory. Total raw scores may not be converted to T scores without this

missing item estimation step. (p. 12)

This handling of missing data is consistent for all five scales of the BYI-2.

According to the RSCA manual (Prince-Embury, 2006, 2007)

Youth should be encouraged to complete all items. If a child or adolescent expresses

uncertainty, he or she should be encouraged to respond with his or her best estimate at the

time. In instances where this is not possible, up to two missing items are admissible for

each Resiliency scale. If a missing response cannot be resolved, the score for the item can

be estimated. First determine which subscale the item belongs to, and then calculate the

mean response value of the other items answered on the subscale. Only one missing item

is allowed for each subscale. When summing the total raw scores for each scale, use the

estimated value for the missing item. (p. 20)

Power Analysis

The G*Power 3.1.9.7 program was used to calculate sample sizes needed to answer

research questions 1 and 2 of this study through a priori power analysis. To run a MANOVA

analysis for the variables in this study, the required sample sizes ranged from 84 participants to

212 participants (see Table 1). This is based on having an $\alpha = .05$, power $= .8$, and an effect size

f^2(V) = .0625. Social science research has traditionally used an α = .05 as the standard cutoff

and a minimum recommended power level of .80 (Cohen, 1998).

When calculating the sample sizes needed to answer research question 3 using two

independent Pearson R's, G*Power settings through a priori power analysis required a total

sample size of 282 for a one-tail test with an α = .05, power = .8, and an effect size of .3. Per this

analysis, effect size, or Cohen's d, means that if the two groups' means do not differ by .3

standard deviations or more, the difference is trivial, even if it is statistically significant. This is

considered a small effect size, with approximately 62% of the control group below the mean

(Cohen, 1998). When interpreting the Pearson R, the correlation varied between -1 (a perfect

negative correlation) to 1 (a perfect positive correlation), and the effect size is low if the r varies

around .1 (Cohen, 1998).

Summary

The intention of this study is to examine the mental health and resiliency factors of gifted

and talented students attending high school in a residential setting through universal mental

health screening, as well as to look at the demographics of these students. Because the focus of

this study involves looking at mental health and resiliency factors, two instruments were used to

gather data about students. In addition to the two instruments, demographic information was

gathered from participants. The data were collected using Qualtrics, an online database, and

analyzed using SPSS and spreadsheets.

Table 1

Sample Size Calculations

Scale	df	Sample #
BYI-2		
Gender	5	135
Male		
Female		
Non-binary		
Sexual Identity	5	212
Heterosexual		
Non-heterosexual		
Race	5	84
Asian		
Black/African-American		
Hispanic/Latinx		
White		
Two or more		
RSCA		
Gender	3	114
Male		
Female		
Non-binary		
Sexual Identity	3	180
Heterosexual		
Non-heterosexual		
Race	3	119
Asian		
Black/African-American		
Hispanic/Latinx		
White		
Two or more		

Note. BYI-2 = Beck Youth Inventories – Second Edition, RSCA = Resiliency Scales for Children and Adolescents

CHAPTER FOUR: RESULTS

The purpose of this study was to investigate the mental health and resiliency factors of gifted and talented high school students participating in an accelerative, residential-based academic program using two universal mental health screening (UMHS) tools. This study explored which students, if any, were most at-risk for social and emotional difficulties and which variables were associated with resiliency. The researcher also examined the differences among these students living in a residential setting by gender identity, sexual identity, and race to determine the need for additional screening and/or potential support service development. Finally, this study explored potential relationships among UMHS inventory subscales to identify further and understand the at-risk student population and what effect, if any, COVID-19 has had on student mental health.

Characteristics of the Sample

This study's sample was students in 11th and 12th grade attending an accelerative, residential-based academic program in the fall of 2020. Students were considered full-time students and had some experience living on campus during their secondary academic careers. Of the 652 students attending the residential program, 414 were in 11th and 12th grade at the time of survey administration. Of the 414 eligible students, four were removed because parental consent was not given. Of the 410 emailed students, 394 started the survey, with 376 giving consent to continue. Of the 376 assenting or consenting students, two responded to zero questions, so the sample size was 374.

Students were not required to answer all questions, and according to the BYI-2 and RSCA manuals (Beck et al., 2006, 2007), up to two missing items were admissible for each scale. Responses with missing scores were estimated by calculating the mean response value from the other items answered on the subscale. Thus, each subscale's total raw score included the estimated value for the missing item(s).

Participants were asked to disclose their sex assigned at birth, grade, gender identity, sexual identity, and race. Table 2 lists the demographic information of respondents. The participant demographics, such as gender identity, sexual identity, and race, were reduced to fewer groups due to the limited number of responses in some categories. Gender Identity was recoded as male, female, or non-binary, including transgender, non-binary, and genderqueer/gender fluid. Sexual Identity was recoded into a binary variable (i.e., heterosexual or non-heterosexual) with gay, lesbian, bisexual, pansexual, queer, asexual, and questioning/unsure included in the non-heterosexual category. Finally, race was recoded as Asian (including Native Hawaiian or other Pacific Islander), White, Black or African American, Hispanic or Latinx (including American Indian or Alaskan Native), and two or more races.

The respondent numbers are close to evenly split based on assigned sex at birth, which is reflective of the student population. The high school's priority is to maintain a balance of male and female students, so a distribution of approximately half males and females was expected. Moreover, the school begins each year with the same number of students enrolled. To maintain a constant enrollment number, each incoming class's size depends on the size of the most recent graduating class. Thus, the cohorts of students, while similar in size, can vary based on these factors. There were more juniors than seniors from the students that were emailed, so the percentages of responses obtained were in alignment with the student population.

Table 2

Demographics of Respondents

Demographics	n	%
Assigned Sex at Birth		
Male	188	50.3
Female	186	49.7
Grade Level		
11	195	52.1
12	179	47.9
Gender Identity		
Male	185	49.7
Female	173	46.5
Non-binary[†]	14	3.8
Sexual Identity		
Heterosexual	263	70.5
Not Heterosexual[††]	110	29.5
Race		
Asian[†††]	151	40.4
Black/African-American	38	10.1
Hispanic/Latinx[††††]	40	10.7
White	116	31.0
Two or more	29	7.8

Note. [†]includes transgender, non-binary, and genderqueer/gender-fluid
[††]includes gay, lesbian, bisexual, pansexual, queer, asexual, and questioning/unsure
[†††]includes Native Hawaiian or other Pacific Islander
[††††]includes American Indian or Alaskan Native

The largest identifying race from this sample was Asian (40.4%). According to the

racial/ethnic numbers of public schools in the United States, public school students are White

(48%), Hispanic (27%), Black (15%), Asian (5%), two or more races (4%), and Pacific Islander

or American Indian or Alaskan Native (1%; U.S. Department of Education, 2019). In 2016, 52% of children in the state where the high school is located identified as White, 25% as Latinx, 15% as Black, 5% as Asian, and 3% as Multiracial (Voices for Children, 2021). Students identifying as Asian and Multiracial are overrepresented at this high school, and students identifying as White, Black/African American, and Hispanic/Latinx are underrepresented. However, based on the school's current population, the percentages of these races were anticipated.

Outcomes

In this section, the researcher explores the four research questions related to this study. Research questions one and two targeted the results from the two selected UMHS tools. Research question three looks at the correlation between the two selected UMHS tools. The final research question looks at the cumulative responses pertaining to student mental health experiences concerning COVID-19.

Research Question 1 (RQ1)

The first research question of this study was, "According to the Beck Youth Inventories--2nd edition (BYI-2), what are the prevalent mental health concerns, if any, that gifted and talented high school students participating in an accelerative, residential-based academic program display?" The researcher also examined any differences between the BYI-2 subscale scores based on three demographic characteristics: gender identity, sexual identity, and race.

BYI-2 Analysis

To answer RQ1 with its three sub-questions, a multi-step process was conducted. The first step in this process was to look at the reliability factors by looking at internal consistency reliability. Reliability is the degree of consistency surrounding the data collection and evaluation process (Wiersma & Jurs, 2009). Internal consistency suggests how strongly items within a

measure correlate with each other (Henson, 2001). One of the more well-known methods of evaluating internal consistency reliability is coefficient (Cronbach's) alpha (Cronbach, 1951). According to the BYI-2 manual (Beck et al., 2005), Cronbach's alpha for each of the five inventories indicated strong internal consistency reliability with values ranging from .91 to .95 for males and females aged 15 to 18. To verify the current sample's internal consistency reliability, the researcher ran several reliability analyses on the data (see Table 3). According to the sample data, the five inventories had an internal consistency reliability ranging from .86 to .95 for females and .93 to .96 for males, which are consistent with the instrument reliabilities provided in the BYI-2 manual.

Table 3

Alpha Coefficients

Inventory Name	Instrument Reliabilities			Sample Reliabilities		
	n	Male	Female	n	Male	Female
BYI-2						
BSCI-Y	200	.91	.92	368	.94	.91
BAI-Y	200	.92	.92	368	.94	.91
BANI-Y	200	.96	.95	368	.94	.92
BDI-Y	200	.95	.95	368	.96	.95
BDBI-Y	200	.91	.91	367	.93	.86

Note. BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth

Next, the researcher examined the descriptive statistics for each BYI-2 subscale (i.e., means and standard deviations) to compare the sample statistics to the instrument's norms. This

process indicated how the sample differed from the norms. The results, including the sample

means and BYI-2 norms, are located in Table 4.

Table 4

BYI-2 Descriptive Statistics

Subscale	Instrument		Sample		
	Mean	SD	Mean	SD	Comparison to the Norm
BSCI-Y	50.00	10.00	44.60	11.24	Lower than Average
BAI-Y	50.00	10.00	58.34	12.09	Mildly Elevated
BANI-Y	50.00	10.00	49.43	9.59	Average
BDI-Y	50.00	10.00	56.20	12.32	Mildly Elevated
BDBI-Y	50.00	10.00	46.27	7.90	Average

Note. BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth

As previously discussed, the BYI-2 has five inventories: the Beck Depression Inventory

for Youth (BDI-Y), the Beck Anxiety Inventory for Youth (BAI-Y), the Beck Anger Inventory

for Youth (BANI-Y), the Beck Disruptive Behavior Inventory for Youth (BDBI-Y), and the

Beck Self-Concept Inventory for Youth (BSCI-Y; Beck et al., 2005). Additionally, the T-score

for all subscales represents a point on a severity continuum, allowing for comparisons to the

standardized sample. On four of the five inventories (i.e., BAI-Y, BANI-Y, BDI-Y, and BDBI-

Y), the higher the respondent's total score, the more distress the respondent is reporting. For

these four subscales, the normative levels are Average, Mildly elevated, Moderately elevated,

and Extremely elevated. Conversely, a higher score on the BSCI-Y indicates a more positive

self-concept, and a lower score indicates less of a positive self-concept. For this subscale, the

normative levels are: Much lower than average, Lower than average, Average, and Above

average.

Comparing the sample statistics to the published scale norms, it is evident that the scores

for anger and behavioral concerns (i.e., BANI-Y and BDBI-Y) were within the average range of

the distress continuum. Furthermore, of the measured mental health concerns on the BYI-2,

respondents as a whole reported mildly elevated scores related to anxiety and depression and

lower than average scores related to self-concept. Overall, the descriptive statistics give a general

overview of how this sample compared to the norm, but additional analyses were used to explore

the research questions.

BYI-2 Multivariate Analysis of Variance

Next, the three sub-questions of RQ1 were addressed by running three separate one-way

multivariate analyses of variance (MANOVA). These analyses were conducted to identify

whether students with varying gender identities, sexual identities, or race differed in the

prevalence of mental health concerns for each BYI-2 subscale. To reduce redundancy, the outlier

detection, assumption, and descriptive statistics section was only be presented once. Following

that discussion, the MANOVA results for the BYI-2 subscales based on gender identity, sexual

identity, and race are presented.

Outlier detection. To examine the data for outliers, Mahalanobis Distances were used

with five degrees of freedom, five dependent variables, and an alpha level of .001. Using this

information, the chi-squared critical value was 20.517. After data analysis, the same seven cases,

all of which identified as male, were excluded as outliers for gender identity, sexual identity, and

race. Once the outliers were removed, the final sample size was 367 respondents for each of the

five BYI-2 subscales.

Assumptions. After the removal of cases containing outliers, the non-statistical and statistical assumptions of MANOVA were examined. The non-statistical assumptions (i.e., types of variables, between-subjects factor, independence of observations, and adequate sample size) are discussed first, followed by the statistical assumptions.

In this research question, the independent variables of gender identity, sexual identity, and race were used to examine the effect of change on the dependent variables, the five subscales of the BYI-2. The independent variables, also known as between-subjects factors, consist of two or more categorically independent groups. For example, there are three response options for gender identity, two response options for sexual identity, and five response options for race. Moreover, there was no relationship between the observations within each group. Lastly, there were two categories—non-binary for gender identity and Two or more for race—that did not meet the minimum suggested sample size for an ordinary study, which is 30 participants per group (see Table 2; Cohen, 1988). It is essential to address the smaller sample sizes as they can undermine the results' internal and external validity and reliability. The purpose of leaving them in this study was to add to the minimal published data about these sample groups, specifically those who are gifted and talented. These discrepancies are discussed in more detail in Chapter Five, within the interpretation and the limitations sections.

After checking that all non-statistical assumptions had been met, the statistical assumptions of linearity, multivariate normality, multicollinearity, and homogeneity of variance-covariance matrices were examined. Linearity was tested using SPSS to examine the relationship between each BYI-2 subscale for each of the following demographics: gender identity, sexual identity, and race. The researcher examined the scatterplot matrix for each of the previously stated demographics to determine whether there was a linear relationship among the variables.

Based on these data, the assumption of linearity was determined to be tenable for four of the five subsections, with the BDBI-Y lacking a linear relationship.

Next, multivariate normality was tested because it is an underlying assumption that, if violated, can lead to non-reliable or invalid interpretations and inferences (Pituch & Stevens, 2016). A multivariate normality assumption is more stringent than a single variable, but the researcher can look for normality on each variable separately as a necessary but insufficient condition to satisfy multivariate normality (Pituch & Stevens, 2016). One of the best methods for assessing univariate normality, according to Pituch and Stevens (2016), is to use the Shapiro-Wilk test of normality, as it has superior performance for small samples (see Table 5).

Table 5

BYI-2 Shapiro-Wilk Test of Normality

Subscale	Statistic	df	Sig
BSCI-Y	.993	360	.069
BAI-Y	.968	360	.000
BANI-Y	.937	360	.000
BDI-Y	.942	360	.000
BDBI-Y	.847	360	.000

Note. BYI-2 = Beck Youth Inventories – Second Edition,
BSCI-Y = Beck Self-Concept Inventory for Youth,
BAI-Y = Beck Anxiety Inventory for Youth,
BANI-Y = Beck Anger Inventory for Youth,
BDI-Y = Beck Depression Inventory for Youth,
BDBI-Y = Beck Disruptive Behavior Inventory for Youth

According to the Shapiro-Wilk test, the data for the BSCI-Y were normal, with the other four subscales deviating from the normal distribution. With sample sizes greater than 50, the Shapiro-Wilk test becomes sensitive to minor deviations from normality (Razali & Wah, 2011).

Since the Shapiro-Wilk test suggested a significant difference from a normal distribution with BAI-Y, BANI-Y, BDI-Y, and BDBI-Y, additional analysis of data occurred by looking at the Q-Q Plot to determine normality. A few points appeared to be deviating from the expected value, which could have created the discrepancy. Overall, the data presented in an approximately straight line, suggesting that normality was reasonably met for all subscales.

The next assumption, multicollinearity, was tested by calculating the bivariate-correlations between the dependent variables (see Table 6). Correlations need to be between .20 and .90 for this assumption to be met (Tabachnick & Fidell, 2012). A value below .20 means that correlations are too low and the researcher may need to run separate one-way ANOVAs, whereas a value above .90 would suggest that the two variables were redundant (Frost, 2020). In the current study, the bivariate-correlation values ranged from -.211 to .791. The only negative correlations were between the BSCI-Y and other subscales, suggesting an inverse relationship between self-concept and mental health and behavioral factors. Since all correlations values were within the acceptable range, the assumption of multicollinearity has been met.

Finally, homogeneity of variance-covariance matrices was tested using Box's M test of equality of covariance. This test is a generalization to determine if the covariance matrices are equal and uses generalized variances (Pituch & Stevens, 2016). The Box's M test is sensitive to nonnormality. Pituch and Stevens (2016) suggested that it is possible to reject the Box's M due to a lack of multivariate normality and not because of unequal covariance matrices. Further, small sample sizes create little power for the test, leading to a potentially non-significant result, which is not an accurate indication that the covariance matrices are equal (Cohen, 2008). Conversely, large sample sizes can cause a statistically significant result when one does not exist, so it is recommended for these issues to use an alpha level of .001 (Hahs-Vaughn, 2016).

Table 6

BYI-2 Subscale Correlations

Subscale	BSCI-Y	BAI-Y	BANI-Y	BDI-Y	BDBI-Y
BSCI-Y	1				
BAI-Y	-.577**	1			
BANI-Y	-.454**	.707**	1		
BDI-Y	-.691**	.792**	.685**	1	
BDBI-Y	-.364**	.408**	.655**	.502**	1

Note. **$p < .001$; Note. BYI-2 = Beck Youth Inventories – Second Edition,
BSCI-Y = Beck Self-Concept Inventory for Youth,
BAI-Y = Beck Anxiety Inventory for Youth,
BANI-Y = Beck Anger Inventory for Youth,
BDI-Y = Beck Depression Inventory for Youth,
BDBI-Y = Beck Disruptive Behavior Inventory for Youth

The Box's M test for gender identity, sexual identity, and race had a significance value less than 0.001, suggesting that the assumption is not met and is most likely affected by the departure from the assumption of normality, as described above. When Box's M is significant, a review of each independent variable's log determinants can be performed through a discriminant function analysis to determine if there was a small or large difference (Brown & Wicker, 2000). According to Brown and Wicker (2000), log determinants measure the variability of the groups, and more significant differences in log determinants indicate that groups have different covariance matrices. Upon observing each of the three independent variables, there was no large discrepancy among the log determinants, which suggests that they are similar.

After reviewing the log determinants to examine the covariance matrices, the researcher looked at Levene's test to determine the variance matrices and confirm that there was no violation of the homogeneity of variance matrices. According to Levene's test, the BAI-Y, BANI-Y, and BDI-Y have a significance of $p > .05$, which means that equal variances are

assumed. For BSCI-Y and BDBI-Y, the significance was $p < .05$, which means that equal variances are not assumed.

Gender Identity MANOVA for BYI-2

The results (Table 7) indicated a statistically significant difference between the BYI-2 subscale scores based on gender identity, $F_{(10,704)} = 8.64$, $p < .001$; Pillai's Trace $= .219$. This means that there is a significant difference between total scores across the three gender identity groups of male, female, and non-binary for each of the BYI-2 subscales.

Table 7

Tests of Between-Subjects Effects for Gender Identity MANOVA for BYI-2

Dependent Variable	df	F	Sig.	Partial Eta Squared
BSCI-Y	2	26.911	.000*	.132
BAI-Y	2	18.962	.000*	.097
BANI-Y	2	15.140	.000*	.079
BDI-Y	2	18.042	.000*	.092
BDBI-Y	2	20.217	.000*	.102

Note: * Statistically significant difference: $p < 0.001$; BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth

To further examine which gender identities significantly differed, a post-hoc analysis was conducted. Post-hoc comparisons, analyzed using the Scheffe post-hoc test (Table 8), indicated that the mean score for gender identity compared to all BYI-2 subscales was significantly different between all genders for BSCI-Y, BAI-Y, and BDI-Y. The largest mean difference was 16.51 between non-binary and male respondents under the BDI-Y. This finding is consistent

with previous research pertaining to increased levels of depression and suicide with non-binary youth compared to their male and female peers. For the BANI-Y and BDBI-Y, there was statistical significance between male and female respondents, as well as between male and non-binary respondents. There were no statistically significant differences between female and non-binary respondents in these subscales.

Table 8

Scheffe Post-hoc Test for Gender Identity

Dependent Variable		Mean Difference	Std. Error
BSCI-Y			
Male	Female	6.56***	1.104
Male	Non-Binary	15.27***	2.845
Female	Non-Binary	8.71**	2.84
BAI-Y			
Male	Female	-5.70***	1.204
Male	Non-Binary	-14.79***	3.101
Female	Non-Binary	-9.09*	3.103
BANI-Y			
Male	Female	-4.72***	0.932
Male	Non-Binary	-7.41**	2.402
Female	Non-Binary	-2.69	2.404
BDI-Y			
Male	Female	-4.77***	1.224
Male	Non-Binary	-16.51***	3.154
Female	Non-Binary	-11.73***	3.157
BDBI-Y			
Male	Female	-3.99***	0.672
Male	Non-Binary	-5.83***	1.731
Female	Non-Binary	-1.83	1.732

Note*:* *** Statistically significant difference: $p < .001$, ** Statistically significant difference: $p < .01$, * Statistically significant difference: $p < .05$; BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth

Sexual Identity MANOVA for BYI-2

The results (Table 9) indicate that there was a statistically significant difference between the

BYI-2 subscale scores based on sexual identity, $F_{(5,353)} = 20.00$, $p < .001$; Pillai's Trace = .221.

This means that there is a significant difference between total scores across the two groups of

sexual identity (i.e., heterosexual, non-hetersexual) for each of the BYI-2 subscales.

Table 9

Tests of Between-Subjects Effects for Sexual Identity MANOVA for BYI-2

Dependent Variable	df	F	Sig.	Partial Eta Squared
BSCI-Y	1	47.644	.000[*]	.118
BAI-Y	1	52.978	.000[*]	.129
BANI-Y	1	32.903	.000[*]	.084
BDI-Y	1	72.514	.000[*]	.169
BDBI-Y	1	52.903	.000[*]	.129

Note: [*] Statistically significant difference: $p < 0.001$; BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth
Note

The mean values were analyzed (see Table 10) to further examine the differences

between sexual identities. The mean scores for those identifying as heterosexual suggest fewer

at-risk factors in all BYI-2 subscales compared to non-heterosexual respondents. Heterosexual

respondents had higher scores in BSCI-Y (self-concept and self-worth), with a positive

correlation between scores and self-concept. When looking at the BAI-Y, BANI-Y, BDI-Y, and

BDBI-Y, heterosexual respondents had lower scores when compared to non-heterosexual

respondents. These scales look at anxiety, anger, depression, and behavior, respectively. They

positively correlated with scores and subscale screening (i.e., increased BAI-Y scores suggest

more risk for anxiety). This finding is consistent with the previous research pertaining to

increased levels of anxiety, depression, and suicide, along with decreased self-concept or self-

worth, among non-heterosexual youth compared to their heterosexual peers.

Table 10

Descriptive Statistics for BYI-2 Subscales Based on Sexual Identity

Variable	n	Mean	Std. Deviation
BSCI-Y			
Heterosexual	252	46.94	10.813
Non-Heterosexual	107	38.66	9.303
BAI-Y			
Heterosexual	252	55.19	10.934
Non-Heterosexual	107	64.41	11.069
BANI-Y			
Heterosexual	252	47.35	8.333
Non-Heterosexual	107	53.07	9.316
BDI-Y			
Heterosexual	252	52.66	10.694
Non-Heterosexual	107	63.39	11.437
BDBI-Y			
Heterosexual	252	44.23	5.204
Non-Heterosexual	107	49.42	8.044

Note: BYI-2 = Beck Youth Inventories – Second Edition, BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth

Race MANOVA for BYI-2

The results indicate that there was no statistically significant difference between the BYI-2 subscale scores based on race, $F_{(20,1416)} = 1.274$, $p = .186$; Pillai's Trace = .071. Results indicating no significant differences between the total sample scores across the five racial groups of Asian, Black/African-American, Hispanic/Latinx, White, and Two or more races for each of the BYI-2 subscales mean that the strength of these relationships observed in the sample would more than likely not be observed in the population.

Research Question 2 (RQ2)

The second research question of this study was, "According to the Resiliency Scales for Children and Adolescents (RSCA), what are the prevalent concerns and identified strengths, if any, around resiliency that gifted and talented high school students participating in an accelerative, residential based academic program display?" The researcher also examined any differences between the RSCA subscale scores based on the three demographic factors of gender identity, sexual identity, and race.

RSCA Analysis

To test RQ2 with its three sub-questions, a multi-step process was conducted. The first step in this process was to look at the internal reliability of the instrument. Reliability is the degree of consistency surrounding the data collection and evaluation process (Wiersma & Jurs, 2009); internal consistency suggests how strongly items within a measure correlate with each other (Henson, 2001). One of the more well-known methods of evaluating internal consistency reliability is coefficient (Cronbach's) alpha (Cronbach, 1951). According to the RSCA manual (Prince-Embury, 2006, 2007), Cronbach's alpha for each of the three inventories indicated strong internal consistency reliabilities with values ranging from .93 to .95 both males and females aged

15 to 18. This finding was not consistent over all the scales in this age range, as males

demonstrated more stability in the REA scale over time. The researcher ran several reliability

analyses on the data to verify the current sample's internal consistency reliability (see Table 11).

According to the sample data, the three inventories had an internal consistency reliability ranging

from .93 to .94 for females and .95 to .96 for males, which is consistent with the instrument

reliabilities provided in the RSCA manual.

Table 11

Alpha Coefficients

Inventory Name	Instrument Reliabilities			Sample Reliabilities		
	n	Male	Female	n	Male	Female
RSCA						
MAS	200	.94	.95	366	.96	.94
REL	200	.95	.95	363	.96	.93
REA	200	.95	.93	361	.95	.93

Note*: RSCA = Resiliency Scales for Children and Adolescents, MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Next, the researcher explored the descriptive statistics for each RSCA subscale (i.e.,

means and standard deviations) to compare the sample statistics to the instrument's norms. This

process indicated how the sample differed from the norms (see Table 12).

As previously discussed, the RSCA has three inventories: Resiliency and the Sense of

Mastery (MAS), Resiliency and the Sense of Relatedness (REL), and Resiliency and Emotional

Reactivity (REA; Prince-Embury, 2006, 2007). Additionally, the T-score for all of the subscales

represents a point on a resiliency continuum, which allows for comparisons with the standardized

sample. On two of the three inventories (i.e., MAS and REL), the higher the respondent's total

score, the more a sense of self-efficacy and competency, or a view of interpersonal relationships

as available to the respondent, was reported. These are skills that are viewed as positively

connected to high levels of resiliency. Conversely, a higher score on the REA indicates more

frequent emotional reactivity experiences, which equates to reduced ability to modulate and

regulate this reactivity. The normative levels are Low, Below average, Average, Above average,

and High for these subscales.

Table 12

RSCA Descriptive Statistics

Subscale	Instrument		Sample		
	Mean	SD	Mean	SD	Comparison to the Norm
MAS	50.00	10.00	46.65	11.37	Average
REL	50.00	10.00	46.08	10.74	Average
REA	50.00	10.00	50.05	10.92	Average

Note: RSCA = Resiliency Scales for Children and Adolescents, MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Comparing the sample statistics to the published scale norms, it is evident that the scores

were within the average range of the resiliency level continuum. Furthermore, it can be

determined that of the measured resiliency factors on the RSCA, respondents as a whole are not

reporting elevated or decreased scores related to mastery, relatedness, or emotional reactivity.

These RSCA indices (see Table 13) may be better suited to look at individually, but the

participants' overall scores are examined for this study. These indices are evaluated on the same

normative scale as above and fall within the average range. The resource index, which looks at

the level of mastery and relatedness, suggests that the sample is in the 33rd percentile of positive

strengths available. The vulnerability index, which looks at the discrepancy between the REA

and the Resource Index, suggests that the sample is in the 67th percentile of higher personal risk

for prolonged challenges combating negative emotional responses

Table 13

RSCA Index Statistics

Index	Raw Score	T-Score	Cumulative Percentages	Ranking
Resource	46.37	46	33.0	Average
Vulnerability	3.68	52	67.0	Average

RSCA Multivariate Analysis of Variance

Next, the three sub-questions of RQ2 were addressed by running three separate, one-way

multivariate analyses of variance (MANOVA). These analyses were conducted to identify

whether students with varying gender identities, sexual identities, or race differed in the

prevalence of resiliency factors for each RSCA subscale. To reduce redundancy, the outlier

detection, assumption, and descriptive statistics section was only presented once. Following that

discussion, the MANOVA results for the RSCA subscales based on gender identity, sexual

identity, and race are presented.

Outlier detection. To examine the data for outliers, Mahalanobis Distances were used

with three degrees of freedom, three dependent variables, and an alpha level of .001. Using this

information, the Chi-Squared critical value was 16.268. After analyzing the data, the same four

cases were excluded as outliers based on gender identity, sexual identity, and race. All were 12th

graders who were Asian, and three of the four identified as male. Once the outliers were removed, the final sample size was 370 respondents for each of the three RSCA subscales.

Assumptions. After detecting and removing cases containing outliers, the non-statistical and statistical assumptions of MANOVA were examined. The non-statistical assumptions (i.e., types of variables, between-subjects factor, independence of observations, adequate sample size) are discussed first, followed by the statistical assumptions.

In this research question, the independent variables of gender identity, sexual identity, and race were used to examine the effect of change on the dependent variables, the three subscales of the RSCA. The independent variables are nominal, as they are given distinctive categories. The dependent variables are continuous intervals, as they can be measured along a continuum and have a numerical value. The independent variables, also known as between-subjects factors, consist of two or more independent categorical groups. For example, there are three response options for gender identity, two response options for sexual identity, and five response options for race.

Moreover, when looking at the independence of observations, there was no relationship between the observations within each group. Lastly, when looking at the sample size of each demographic category (see Table 2), there were two categories—non-binary for gender identity and Two or more for race—that did not meet the minimum suggested sample size for an ordinary study, which is 30 participants per group (Cohen, 1988). It is essential to address the smaller sample sizes because they can undermine the results' internal and external validity and reliability. They were left in this study because there was minimal published data pertaining to these sample groups, specifically those who are gifted and talented. These discrepancies are discussed in more detail in Chapter Five, within the interpretation and the limitations sections.

After it was determined that all non-statistical assumptions had been met, the statistical assumptions of linearity, multivariate normality, multicollinearity, and homogeneity of variance-covariance matrices were examined. Linearity was tested using SPSS to look at the relationship between each RSCA subsection for each of the following groups: gender identity, sexual identity, and race. The researcher examined the scatterplot matrix for each of the previously stated demographics to determine whether there was a linear relationship among the variables. Based on these data, an assumption of linearity was determined to be tenable for two of the three subsections, with REA lacking a linear relationship.

Next, multivariate normality was tested because it is an underlying assumption that, if violated, can lead to non-reliable or invalid interpretations and inferences (Pituch & Stevens, 2016). A multivariate normality assumption is more stringent than a single variable, but the researcher can look for normality on each variable separately as a necessary but not sufficient condition to satisfy multivariate normality (Pituch & Stevens, 2016). One of the strongest methods to assess univariate normality, according to Pituch and Stevens (2016), is to use the Shapiro-Wilk test of normality, as it has superior performance for small samples (Table 14).

Table 14

RSCA Shapiro-Wilk Test of Normality

Subscale	Statistic	df	Sig
MAS	.985	357	.001
REL	.985	357	.001
REA	.966	357	.000

Note*:* RSCA = Resiliency Scales for Children and Adolescents,
MAS = Resiliency and the Sense of Mastery,
REL = Resiliency and the Sense of Relatedness,
REA = Resiliency and Emotional Reactivity

According to the Shapiro-Wilk test, the data for the RSCA subscales deviates from the normal distribution. With sample sizes greater than 50, the Shapiro-Wilk test becomes sensitive to minor deviations from normality (Razali & Wah, 2011). Because the Shapiro-Wilk test suggests a significant difference from a normal distribution with the MAS, REL, and REA, additional data analysis occurred by looking at the Q-Q Plot to determine normality. After analyzing the MAS, REL, and REA data, a few points appeared to deviate from the expected value, which could be creating the discrepancy. Overall, the data presented in an approximately straight line, suggesting that normality was reasonably met for all subscales.

The next assumption, multicollinearity, was tested by calculating the bivariate-correlations between the dependent variables (see Table 15). Correlations need to be between .20 and .90 for this assumption to be met (Tabachnick & Fidell, 2012). A value below .20 means that correlations are too low and the researcher may need to run separate one-way ANOVAs, whereas a value above .90 would suggest that the two variables are too closely connected and redundant (Frost, 2020). In the current study, the bivariate-correlation values ranged from -.458 to .774. The negative correlations were between the REA and other subscales, which suggests an inverse relationship between emotional reactivity and resiliency factors. Since all correlation values were within the acceptable range, the assumption of multicollinearity was met.

Gender Identity MANOVA for RSCA

The results (Table 16) indicate that there was a statistically significant difference between the RSCA subscale scores based on gender identity, $F_{(6,702)} = 9.73$, $p < .001$; Pillai's Trace = .153. This means that there is a significant difference between total scores across the three gender identity groups of male, female, and non-binary for each of the RSCA subscales.

Table 15

RSCA Subscale Correlations

Subscale	MAS	REL	REA
MAS	1		
REL	.774**	1	
REA	-.458**	.435**	1

Note. **$p < .001$; RSCA = Resiliency Scales for Children and Adolescents,
MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness,
REA = Resiliency and Emotional Reactivity

Finally, the homogeneity of variance-covariance matrices was tested using Box's M test of equality of covariance. This test is a generalization to determine if the covariance matrices are equal and uses generalized variances (Pituch & Stevens, 2016). The Box's M test for gender identity, sexual identity, and race had no significance, with a value of 0.063, suggesting that the assumption of the homogeneity of variance-covariance matrices was met.

To further examine which gender identities significantly differed, a post-hoc analysis was conducted. Post-hoc comparisons, analyzed using the Scheffe post-hoc test (Table 17), indicated that the mean score for gender identity compared to all RSCA subscales was significantly different between all genders for MAS and REL. The largest mean difference—between non-binary and male respondents under MAS—was 15.30. There was a statistically significant difference between male and female respondents for the REA subscale but no statistical significance between male and non-binary or female and non-binary respondents.

Table 16

Tests of Between-Subjects Effects for Gender Identity MANOVA for RSCA

Dependent Variable	df	F	Sig.	Partial Eta Squared
MAS	2	30.572	.000*	.148
REL	2	22.585	.000*	.114
REA	2	10.179	.000*	.055

Note. * Statistically significant difference: p < 0.001; MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Table 17

Scheffe Post-hoc Test for Gender Identity

Dependent Variable		Mean Difference	Std. Error
MAS			
Male	Female	6.56***	1.104
Male	Non-Binary	15.27***	2.845
Female	Non-Binary	8.71**	2.84
REL			
Male	Female	5.70***	1.204
Male	Non-Binary	14.79***	3.101
Female	Non-Binary	9.09*	3.103
REA			
Male	Female	-3.99***	0.672
Male	Non-Binary	-5.83***	1.731
Female	Non-Binary	-1.83	1.732

Note: *** Statistically significant difference: $p < .001$, ** Statistically significant difference: $p < .01$, * Statistically significant difference: $p < .05$; MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Sexual Identity MANOVA for RSCA

The results (Table 18) indicate that there was a statistically significant difference between the RSCA subscale scores based on sexual identity, $F_{(3,352)} = 21.022$, $p < .001$; Pillai's Trace =

.152. This means that there is a significant difference between total scores within the two sexual

identity groups of heterosexual and non-heterosexual for each of the RSCA subscales.

Table 18

Tests of Between-Subjects Effects for Sexual Identity MANOVA for RSCA

Dependent Variable	df	F	Sig.	Partial Eta Squared
MAS	1	56.806	.000*	.138
REL	1	41.887	.000*	.106
REA	1	32.169	.000*	.083

Note. * Statistically significant difference: $p < 0.001$; MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

To further examine the differences between sexual identity and how they significantly

differed, the mean values were analyzed (see Table 19). The mean scores for those identifying as

heterosexual suggest fewer at-risk factors in all RSCA subscales compared to non-heterosexual

respondents. Non-heterosexual respondents had higher scores in REA, which looks at emotional

reactivity. There is a positive correlation between scores and frequency of intense emotional

experiences or difficulty coping with feelings. When looking at the MAS and REL, heterosexual

respondents had higher scores when compared to non-heterosexual respondents. MAS looks at

optimism, self-efficacy, and adaptability, while REL explores trust, support, comfort, and

tolerance within relationships. These two scales positively correlate with scores and subscale

screening (i.e., increased scores in MAL suggest increased levels of optimism, self-efficacy, and

adaptability).

Table 19

Descriptive Statistics for RSCA Subscales Based on Sexual Identity

Variable	n	Mean	Std. Deviation
MAS			
Heterosexual	248	49.46	10.674
Non-Heterosexual	108	40.44	9.704
REL			
Heterosexual	248	48.15	10.242
Non-Heterosexual	108	40.63	9.707
REA			
Heterosexual	248	47.81	10.054
Non-Heterosexual	108	54.42	10.215

Note: MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Race MANOVA for RSCA

The results indicate that there was not a statistically significant difference between the RSCA subscale scores based on race, $F_{(12, 1056)} = 1.33$, $p = .195$; Pillai's Trace = .045. The results indicated no significant differences between the total sample scores across the five racial groups of Asian, Black/African-American, Hispanic/Latinx, White, and Two or more races for each of the RSCA subscales. The strength of the relationships observed in the sample would more than likely not be observed in the population.

Research Question 3 (RQ3)

The third research question of this study was, "What is the relationship among the subscale scores of the BYI-2 and RSCA for gifted and talented high school students participating in an accelerative, residential-based academic program?"

Correlation between BYI-2 and RSCA

To test the relationship among the subscale scores of the BYI-2 and RSCA for gifted and talented high school students participating in an accelerative, residential-based academic program, a bivariate (i.e., Pearson product-moment) correlation was conducted (see Table 19).

Table 20

Correlations

Subscale	BSCI-Y	BAI-Y	BANI-Y	BDI-Y	BDBI-Y	MAS	REL	REA
BSCI-Y	1							
BAI-Y	-.510**	1						
BANI-Y	-.352**	.720**	1					
BDI-Y	-.602**	.793**	.710**	1				
BDBI-Y	-.212**	.437**	.660**	.531**	1			
MAS	.718**	-.533**	-.420**	-.613**	-.252**	1		
REL	.693**	-.478**	-.451**	-.578**	-.295**	.785**	1	
REA	-.365**	.547**	.646**	.595**	.478**	-.415**	-.379**	1

Note. ** Correlation is significant at the 0.001 level (2-tailed); BSCI-Y = Beck Self-Concept Inventory for Youth, BAI-Y = Beck Anxiety Inventory for Youth, BANI-Y = Beck Anger Inventory for Youth, BDI-Y = Beck Depression Inventory for Youth, BDBI-Y = Beck Disruptive Behavior Inventory for Youth, MAS = Resiliency and the Sense of Mastery, REL = Resiliency and the Sense of Relatedness, REA = Resiliency and Emotional Reactivity

Both positive and negative correlations between the BYI-2 and RSCA subscales were found to be statistically significant. The lowest correlation was between the BDBI-Y and BSCI-Y at -.212, and the highest correlation was .793 between the BDI-Y and BAI-Y (Table 20). Results indicated a strong positive correlation between the BSCI-Y and two of the RSCA subscales, MAS and REL, suggesting that scores related to self-concept are related to the scores related to a sense of self-efficacy, competency, or view of interpersonal relationships. There is a

negative correlation between the BSCI-Y and the REA, which suggests that lower self-concept scores are connected to increased emotional reactivity.

Research Question 4 (RQ4)

The final research question in this study was, "From the perception of these gifted and talented students, what effect, if any, has the COVID-19 pandemic had on their mental health and ability to cope?"

<u>**Instrumentation**</u>

The researcher added three COVID-19 related questions before the outset of the BYI-2 and RSCA inventories. These questions consisted of topics related to depression, anxiety, and attention/focus. The questions utilized a 5-point Likert-type scale with response options of "significantly worse," "slightly worse," "no change," "slightly improved," or "significantly improved." The following questions were asked:

1. During the pandemic, what has happened, if anything, about my feelings or symptoms related to depression? (e.g., sadness, isolation, loss of appetite, loss of interest, over/under sleeping).

2. During the pandemic, what has happened, if anything, about my feelings or symptoms related to anxiety? (e.g., feeling nervous or tense, a sense of impending danger, panic, or doom, rapid breathing, stomach hurting).

3. During the pandemic, what has happened, if anything, about my ability related to attention/focus? (e.g., difficulty staying focused, making careless mistakes, easily distracted, fidgeting, losing track of things).

COVID-19 Data

The results of the participants' responses related to COVID-19 are illustrated in Figure 1.

Findings revealed that most of the students who responded to these questions indicated that their feelings/symptoms related to depression, anxiety, and attention were either slightly or significantly worse than before the pandemic. Just under three-quarters of respondents (70.6%) indicated that their focus and attention were worse than before the pandemic. Over half of the respondents indicated that their symptoms of depression (57.6%) and anxiety (53.1%) were worse than before the pandemic.

Considering the data collected from respondents regarding the effect that COVID-19 has had on their feelings of depression and anxiety and their attention and focus, some conclusions can be suggested. Increased feelings of depression and anxiety likely contributed to an increase in the BYI-2 scale scores for BDI-Y and BAI-Y. There were lower scores on the BSCI-Y related to self-concept and ability. Though the RSCA does not look directly at depression, anxiety, and attention issues, the MAS described optimism, self-efficacy, and adaptability, which could have been negatively affected by COVID-19. Similarly, the REL looks at comfort with others, and during the pandemic, people were encouraged to stay home to avoid infection concerns. The REA scale explored sensitivity and impairment related to emotional reactivity and arousal, and respondents likely experienced strong emotional responses that created disequilibrium within their lives. It would be beneficial to rerun the study post-COVID-19 to look at the BYI-2 and RSCA scores to determine the accuracy of these assumptions.
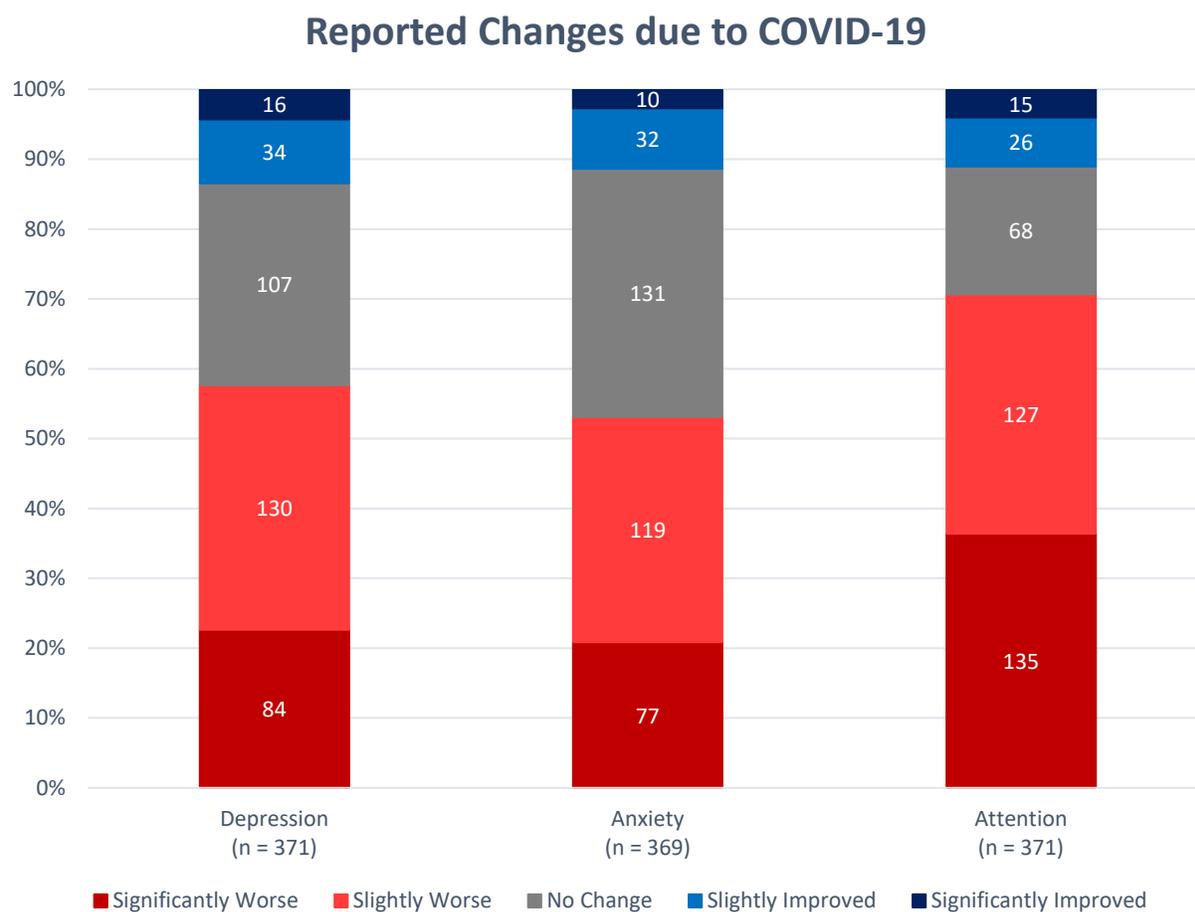
Reported Changes due to COVID-19

Figure 1. COVID-19 statistics.

Summary

This study investigated the mental health and resiliency factors of gifted and talented high school students participating in an accelerative, residential-based academic program using two UMHS tools. The study included a sample size of 374 participants from 11th and 12th grade. Descriptive statistics, MANOVAs, and Pearson product-moment correlations were used to answer the four research questions guiding this study.

In Chapter Five, I discuss the findings detailed in this chapter in more depth. The relationship between the results of this study and existing research will be presented. The researcher will also discuss the limitations of this study and its implications for future research, school counselors, and administrators.

CHAPTER FIVE: DISCUSSION

Chapter Five includes a summary and a discussion of the findings of this study. The results of this study are discussed and linked to prior research. The study's limitations are detailed, and the implications of the study for counselor educators and the counseling profession are described. Recommendations for future research conclude this chapter.

Purpose of Study

The purpose of this study was to investigate the mental health and resiliency factors of gifted and talented high school students participating in an accelerative, residential-based academic program using two UMHS tools. This study looked to identify which students may be most at-risk for social and emotional difficulties and variables associated with resiliency. This research also examined the differences among these students by gender identity, sexual identity, and race to provide information about mental health screening and potential support service development. Lastly, this study explored potential relationships among UMHS inventory subscales to further identify and understand the at-risk student population and what effect, if any, COVID-19 has had on student mental health.

Summary of Results for Research Question One

The results of the descriptive statistical analysis showed that respondents' overall mental health for anxiety and depression were mildly elevated, and they had lower than average scores for self-concept. When exploring the findings for the three MANOVAs to look at answering the sub-questions regarding gender identity, sexual identity, and race, the data for gender identity was found to be statistically significant [$F_{(10,704)} = 8.64$, $p < .001$; Pillai's Trace = .219]. Post-hoc

comparisons indicated that the mean score for gender identity compared to all BYI-2 subscales was significantly different between all genders for self-concept, anxiety, and depression. BSCI-Y, BAI-Y, and BDI-Y. For anger and behavioral concerns, there was statistical significance between male and female respondents, as well as between male and non-binary respondents. There were no statistically significant differences between female and non-binary respondents in these subscales.

The data for sexual identity was also found to be statistically significant [, $F_{(5,353)} = 20.00$, $p < .001$; Pillai's Trace = .221]. The mean scores for those identifying as heterosexual suggest fewer at-risk factors in all BYI-2 subscales compared to non-heterosexual respondents. Heterosexual respondents had higher scores in self-concept. When looking at anxiety, anger, depression, and behavioral concerns, heterosexual respondents had lower scores when compared to non-heterosexual respondents, meaning less at risk.

The data for race was not found to be statistically significant [$F_{(20,1416)} = 1.274$, $p = .186$; Pillai's Trace = .071]. Results indicated no significant differences between the total sample scores across the five racial groups of Asian, Black/African-American, Hispanic/Latinx, White, and Two or more races.

Discussion of Results for Research Question One

The results are a mixture of expected and surprising, as there is literature that supports the mental health concerns identified, as well as research about gender and sexual identity, but not the outcomes of this study regarding race. Similar to the findings of Eren et al. (2018), respondents to this survey present information that gifted and talented students are at risk regarding mental health issues, including increased anxiety, both general and around test-taking, self-confidence issues accompanied by depressive symptoms, and a diagnosis of ADHD (Eren et

al., 2018). The elevated scores of anxiety and depression with lower scores in self-concept not only indicate that students within the sample are at risk for these mental health concerns, but that there is an inverse relationship when looking at mental health factors with self-concept. Beck et al. (2005) suggest that these data are consistently linked with each other, which states that gifted and talented students are no different than their peers when looking at trends. Although anger and behavioral issues were not elevated scores with this sample does not mean that is consistent across the population of gifted and talented youth (Eren et al., 2018).

When exploring gender and sexual identity from this section, the results are not surprising, based on the literature that examines mental health issues of gifted and talented students who identify as part of the LGBTQIA+ community. Data indicated that gender identity is a relevant factor when looking at the subscales related to self-concept, anxiety, and depression among all students. Although anger and behavioral concerns were significant between male students and all other students, it was not significant between female and non-binary students. This means that male identifying students may be at less risk for developing these factors when compared to their non-male identifying peers. Though male students may not be as at risk as their female or non-binary peers related to these factors, research does support that young men tend to screen more highly on indicators of conduct issues, substance use, and interpersonal violence when compared to their non-male peers (Rice et al., 2017). This may not carry true with gifted and talented students, but Rice et al. (2017) do state that young men are prone to social challenges around self-stigma and shame, toxic masculinity, and overall mental health literacy, which can be of detriment.

Research that exists looking at the mental health concerns of gifted and talented youth who identify as non-heterosexual is consistent with this study's findings. Gifted and talented

youth within the LGBTQIA+ community report experiencing isolation, social withdrawal, shame, guilt, depression, suicidality, anxiety, and risky behaviors (Peterson & Rischar, 2000). Overall, youth are coming out earlier than ever before, and because there is less education for young people regarding gender and sexual identity, there are more incidents of prejudice and homophobic behaviors documented at younger ages (Poteat & Anderson, 2012). It is necessary to document that youth who come out are more likely to be victimized by their peers, causing an increased likelihood of psychological consequences and trauma. Ultimately, these students have an increased risk of developing mental health concerns because they are not supported or accepted by family, friends, or society for who they are (Russell & Fish, 2016).

The findings related to race and mental health were surprising based on current research. According to this study, race was not a significant factor in the mental health areas being screened. This is inconsistent with the general mental health of youth of color (Alegria et al., 2011). Further, there is minimal information regarding the mental health of gifted and talented youth of color due to the inequity built around the system of identifying and developing talent (Grissom & Redding, 2016; Wright et al., 2017). Students of color are much more likely to experience microaggressions than their White peers. This ongoing exposure to microaggressions leads to negative emotional and physical stress, depression, and physical and mental strain (Stambaugh & Ford, 2014). They also state that these microaggressions can lead to more avoidance, leading to various forms of isolation, which are precursors to depression (Stambaugh & Ford, 2014).

Summary of Results for Research Question Two

The results of the descriptive statistical analysis showed that respondents' overall resiliency factors were within the average range when compared to the statistical norms. When

exploring the findings for the three MANOVAs to look at answering the sub-questions regarding gender identity, sexual identity, and race, the data for gender identity was found to be statistically significant [$F_{(6,702)} = 9.73$, $p < .001$; Pillai's Trace = .153]. Post-hoc comparisons indicated that the mean score for gender identity compared to all RSCA subscales was significantly different between all genders for mastery and relatedness. There was a statistically significant difference between male and female respondents for the REA subscale but no statistical significance between male and non-binary or female and non-binary respondents

The data for sexual identity was also found to be statistically significant [$F_{(3,352)} = 21.022$, $p < .001$; Pillai's Trace = .152]. The mean scores for those identifying as heterosexual suggest fewer at-risk factors in all RSCA subscales compared to non-heterosexual respondents. Non-heterosexual respondents had higher scores in emotional reactivity, indicating increased emotional reactivity when compared to heterosexual respondents. When looking at the mastery and relatedness scales, heterosexual respondents had higher scores when compared to non-heterosexual respondents, meaning increased level of these resiliency factors.

The data for race was not found to be statistically significant [$F_{(12, 1056)} = 1.33$, $p = .195$; Pillai's Trace = .045]. Results indicated no significant differences between the total sample scores across the five racial groups of Asian, Black/African-American, Hispanic/Latinx, White, and Two or more races.

Discussion of Results for Research Question Two

Similar to RQ1, this study's findings are both consistent and surprising based on current research regarding which variables are being discussed. Because the overall student sample fell within the average range for the three resiliency subscales, this data suggests that these students do not present with at risk factors. When comparing the scores of the subscales pertaining to the

BYI-2 and RSCA and looking at the elevated and lower than average scores on the various BYI-2 scales, it may be that the BYI-2 is a more appropriate screener for overall student wellness than the RSCA, as the RSCA subscales, some of which are correlated moderately to strongly with the BYI-2 subscales, did not show any deviations from the norms. Although both of these screening tools can be used on an individual level with students, using the RSCA to screen overall sample norms may not be as beneficial. It is relevant to acknowledge that the overall are consistent with research showing that resiliency factors with gifted and talented students can vary, so outcomes can also vary. Factors such as belief in self, determination, motivation, extra-curricular activities, and participation in sports were linked to more successful achievers. One of the more prominent factors around achievement is positive relationships with others, both peer and with a supportive adult (Reis et al., 2005).

When exploring gender and sexual identity from this section, again, the results are not surprising based on the literature that looks at resiliency factors of gifted and talented students who identify as part of the LGBTQIA+ community. According to Peterson and Rischar (2000), gifted individuals who identify as gay may have intensified feelings of being different that their gifted peers because there is an added layer of potential isolation in not feeling supported, finding compatible partners with equal identities and intellectual ability, and decreased self-esteem. This study's findings are consistent with research showing that factors related to resiliency (i.e., high self-esteem, a heightened sense of personal mastery, increased perceived social support with relationships) are predictive of more positive mental health outcomes for transgender and non-binary youth (Grossman et al., 2011). Transgender children who had social support with their transitions showed no elevations in depression and slightly elevated anxiety relative to the population averages and the control groups, suggesting that social support and

interventions can increase resilience factors (Olson et al., 2016). A majority of individuals indicated that engaging with counseling and having positive and healthy relationships with their counselor helped them open up and sort out their feelings (Peterson & Rischar, 2000). It is equally as important to reiterate here that youth who feel supported and accepted within their family and community may not have the same challenges that their peers who lack support experience.

Similar to RQ1, the findings related to race and mental health were surprising based on current research. According to this study, there was no statistically significant difference between the RSCA subscale scores based on race, thus race was not a significant factor in resiliency. Data from this study may not be consistent with findings from previous youth of color. The challenge is regarding the lack of research on developing diverse youth of color from a positive development framework. This is an inequity issue that needs to be addressed in order to determine how to best support gifted youth of color. The National Center for Education Statistics (2017) documents that current classrooms are disproportionately filled with White and Asian students and that bright Black and Hispanic students often get overlooked. This inequity is similar to the demographics of this study's sample size, so having defined research on gifted and talented students of color and resiliency factors needs continued exploration. Something that points to a potential reason why this data was not significant could be due to the resiliency factors that youth of color identify compared to how the scales were normed. Some resiliency-based factors not directly included in the RSCA that high-achieving youth of color identify as beneficial are critical reflection, spirituality, and quality mentoring relationships (Bowers et al., 2020).

Summary of Results for Research Questions Three and Four

Analysis of the bivariate correlation scores of the BYI-2 and RSCA to look at the relationship of the screening tool's subscales indicated statistically significant correlations between subscales, with both positive and negative correlations. Some scores had a strong positive correlation (e.g., self-concept with mastery and relatedness), and some had a moderate to strong positive correlation (e.g., anxiety, depression, anger, and behavioral concerns with emotional reactivity). There was also a moderate negative correlation with some subscales (e.g., anxiety, depression, anger, and behavioral concerns with mastery and relatedness). Data suggests that increased scores around anxiety, anger, depression, and disruptive behaviors are related to increased emotional reactivity. Per the data, all of these positive correlations are considered moderate to strong. The four BYI-2 subscales looking at mental health factors were negatively correlated with the RSCA's mastery and related subscales, meaning that as mental health concerns are increased, resiliency skills are decreased.

When looking at the data collected around COVID-19 to answer RQ4, this study's findings revealed that most of the students who responded to these questions indicated that their feelings/symptoms related to depression, anxiety, and attention were either slightly or significantly worse than before the pandemic. Just under three-quarters of respondents (70.6%) indicated that their focus and attention were worse than before the pandemic. Over half of the respondents indicated that their symptoms of depression (57.6%) and anxiety (53.1%) were worse than before the pandemic.

Discussion of Results for Research Questions Three and Four

Overall, this data are consistent with published research about the BYI-2 and RSCA (Prince-Embury & Saklofske, 2012). Additional research has suggested that resiliency is

associated with positive self-concept or self-esteem (Rutter, 1993) and that positive self-concept and personal resiliency overlap (Prince-Embury & Saklofske, 2012). Previous research has also suggested that increased resiliency is connected to better mental health (Davydov et al., 2010).

No previous studies have examined the BYI-2 and RSCA subscales' correlations with gifted and talented students. Kumar et al. (2010), who studied BYI-2 and RSCA factors among adolescent psychiatric patients, found similar correlations but conclude that different personal resiliency profiles should be considered based on treating specific psychiatric inpatient concerns. In addition, two recent studies, one in the United Kingdom and one in Poland, explored the correlation between resiliency and mental health factors among adolescent offenders (Gibson & Clarbour, 2017; Konaszewski et al., 2021). Gibson and Clarbour (2017) examined the BYI-2 and RSCA, and Konaszewski et al. (2021) examined the Resilience Scale-14 and Kutcher Adolescent Depression Scale. Both of these studies found similar correlations compared to the sample from this research with BYI-2 and RSCA and resilience and mental well-being. Ultimately, these screening tools can be used with gifted and talented students, but there are some limitations pertaining to psychometric scales to determine validity and cultural bias that will be discussed later.

As more peer-reviewed research continues to be published about the mental health of young people, more will be understood about the effect that the pandemic has had on our youth. Right now, a decrease in the general mental health of children and adolescents has occurred because of isolation, loneliness, and income reduction within families (Marques de Miranda et al., 2020). Youth are also more susceptible to increased rates of anxiety, depression, and post-traumatic symptoms (Marques de Miranda et al., 2020). In a recently published article, Duraku and Hoxha (2020) found that COVID-19's effect which led to social isolation and remote

learning for gifted and talented students disrupted normal routines and decreased overall

wellness. Many of the students from their study identified negative effects, such as sleep issues,

isolation, anger, and lack of motivation, which are similar to what this study found. What is

relevant to state related to these statistics is that COVID-19 affected the mental health and well-

being of respondents, and, in turn, the responses given by the students in this study may have

also been affected.

Limitations

One of the primary limitations of this study includes the circumstances occurring around

the research period. During this research, the world began living through a pandemic (COVID-

19), which created disturbances in many people's daily functioning. According to the Center for

Disease Control and Prevention (CDC, 2020), pandemics may be stressful, with fear and anxiety

about the disease having the potential to overwhelm and cause strong emotions. The CDC cites

social distancing as having the potential to make people feel isolated and lonely, which increases

stress and anxiety. Initially, this research survey was to be given to participants while they were

living on campus, but the state determined on-campus living to be unsafe. Participants in the

study had experienced living on-campus but were not living at the educational institution at the

time of the survey's administration. The data captured from the COVID-19 related questions

suggest that increased depressive, anxiety, and attention issues could have influenced the study's

outcomes. There are additional questions that were not asked about the home environment of the

students. The students were not asked about family working conditions, unemployment, limited

space to work, other family members either doing work or school remotely, Internet connectivity

issues, family illness, or losses. Students living in a residential setting away from family can

develop more universal routines across the campus. Living at home can be a unique experience

for each student that could cause disruption. It would be beneficial to gauge the outcomes' reliability and validity by retesting the population upon return to a post-pandemic residential standing.

A second limitation of this study involves the cross-sectional study design. A cross-sectional study is a snapshot of the population based on a sample size, which has strengths and flaws (Ranganathan & Aggarwal, 2018). The primary weakness is the predictive limitation that there is generally no evidence of a temporal relationship between exposure and outcome, as it is not possible to determine which came first (Singh Setia, 2016). Cross-sectional designs are also prone to bias, with this study having self-reports that could contain responder or social bias within the responses. (Singh Setia, 2016).

The third limitation of this study is the inventories that were administered to the sample. According to the manuals, the BYI-2 and RSCA were normed with a sample size of 200 participants. For the BYI-2, this is a relatively small sample size, and there is a limitation around sufficient psychometric evidence to demonstrate the reliability of both severity and change over time (Bose-Deakins & Floyd, 2004). Bose-Deakins and Floyd (2004) also noted that there are no validity indices, such as a lie scale, that there is a lack of item analysis to detect cultural bias for students of diverse ethnic backgrounds, and that the ability of the inventories to discriminate between children with and without emotional and behavioral problems or the different types of emotional or behavioral problems are weak or absent. Prince-Embury and Saklofske (2014) addressed the need for additional research to replicate the findings given the study's ongoing, exploratory nature. They address the cultural implications around using the RSCA in diverse populations but, as with the BYI-2, there is no lie scale to validate the indices.

The last limitation is regarding the sample size totals for some of the data. Ideal sampling sizes were not met in this study for respondents identifying as non-binary under gender identity and Two or more under race. This data was left in because of its importance to continued research regarding inclusivity and equity. Because of the disproportionate size among some of the samples, the outcomes of this study should be looked at cautiously. Continued research in this area will hopefully provide some validity and reliability to this data.

Implications for Counselors and Future Research

Although MTSS was not the primary focus of the research study, the use of UMHS, an MTSS Tier 1 intervention, as a tool to screen for mental health and resiliency factors was a primary focus. Previous literature indicates that MTSS Tier 1 interventions within the educational system had various potential benefits on student behavioral health and academic outcomes (Kase et al., 2017). To date, the published work on MTSS Tier 1 programming has looked at traditional K-12 schools, mental health treatment programming, and transitioning back to traditional schools, alternative schools, and within the juvenile justice system. This study is significant because it is the first to collect MTSS Tier 1 data around universal mental health screening with gifted and talented students who live in a residential setting.

On a broad level, this data can assist school mental health providers with some knowledge of the mental health and resiliency factors their gifted and talented students may be experiencing. Developing mechanisms to assist staff with early identification of student concerns can allow for support staff to construct individualized interventions for the student population. This includes, and is not limited to, the entire student body's needs, each specific grade level's needs, and then the one-on-one needs of each student. This is why all schools would are

encouraged to consider UMHS, as it is a focused needs assessment that can provide valuable feedback on both overall student needs as well as individual student concerns.

Because there are a handful of residential high schools working with gifted and talented students, this study can provide some guidance and data around what support staff can do to support student wellness. Aside from residential high schools, this data may be of use for highly academic universities or Honors colleges to consider how to learn more about incoming student mental health and what their student population may need pertaining to broad and more focused support services.

Additionally, when working with high achieving students and their families, it is necessary to keep culture at the forefront of one's data collection and intervention implementation. Currently, stigma affects individuals of color and marginalized communities (Gary, 2005), which can prevent students of color from engaging in conversations around mental health. Gary (2005) coined the term "double stigma," which is a proposed concept that intersects the prejudice and discrimination of someone's racial identity and mental illness. Culture can go beyond race, as it can encompass gender, sexuality, religion, ability, and more. It is imperative for counselors to consider these factors when discussing UMHS or mental health topics with their administration, staff, students, and community members.

On a more specific level, school mental health providers and clinical counselors, specifically those at residential academies, working with gifted students may find the results of this study useful for continued research or development of intervention programming. According to the information synthesized in this study, intervention programming from an overall Tier 1 level would include education on depression, anxiety, and self-concept development for the entire community. It would also be beneficial to explore data-driven programming that focuses

on teaching resiliency-based skills, especially focusing on gender and sexual identity. These could be large format discussions that start with a quick lecture and presentation and then have smaller processing groups with each grade level, a curriculum given in segments to students during their classes, or, for residential schools, topics led by counseling staff infused with residential life curriculum. Information included in student orientation is an additional option, as well as developing campus-wide community events such as wellness assemblies or student organizational groups discussing mental health and wellness. If possible, having educators incorporate these topics within the student curriculum would reinforce the information to students.

Counselors should also consider developing small counseling groups with Tier 2 at risk students, which run for six to eight weeks and allow students to talk about mental health challenges or how do develop resiliency skills (Bailey, 2011). Those working directly with gifted and talented students in a residential school may find that this study's results help explain the everyday social and emotional challenges students may face, especially factors around resiliency. The results may help them determine how students' various backgrounds or identities can affect the transition to on-campus living and community integration, especially in light of the COVID-19 pandemic.

School counselor educators can use this study within teaching and training programs to discuss two areas: (a) special populations of students and (b) practical implementation of MTSS in a unique setting not addressed in previous school counselor education and curriculum. According to Colangelo and Wood (2015), most counselors-in-training graduate from CACREP accredited institutions and are not required to take classes to prepare them for working with gifted and talented youth. School counselor educators can also educate future school counselors

to recognize a potential gifted and talented student, common concerns these students may face, and how to collect and use data to drive the development of Tier 2 and 3 interventions with this unique population of students.

This study has some implications for future research. Because it is the first empirical study of its kind, its data can serve as a starting point for continued research around UMHS with specialized populations and program or intervention development to explore effect and effectiveness after administration. The data can also be used to look at specific factors around mental wellness and resiliency that can affect how staff are trained to work and support student wellness or better support students from various backgrounds as they transition to a residential setting. Part of this residential transition can extend past secondary education to allow post-secondary based institutions to consider how to best support their academically talented students.

Based on some of the limitations discussed, repeating this study during a non-pandemic situation would be of benefit in order to look at determining the validity and reliability of this data. In addition, because some of the scales do not take into account norms outside of male and female to score and interpret, the development of a culturally inclusive screening tool which looks at both positive and negative mental health and resiliency factors for all identities and races, with psychometric indicators for deception and bias is needed. It is also important to continue to publish research that does not stigmatize students who identify as transgender, non-binary, genderqueer, gender fluid, gay, lesbian, bisexual, pansexual, queer, asexual, or are questioning/unsure.

Overall Summary

The current study was the first known quantitative study to explore the mental health and resiliency factors of gifted and talented students participating in an accelerative, residential

program. The overall results indicated that the gifted and talented students living in a residential setting focused on accelerative learning are at risk for developing mental health concerns related to depression, anxiety, and self-concept. Students who are part of marginalized communities related to identity, both gender and sexual, are at an increased risk of depression, anxiety, anger, behavioral concerns, and self-concept issues. These students are also in potential need for increased development of resiliency skills to improve self-efficacy, develop trust and support with others, and reduce reactional sensitivity to emotional responses while improving the time needed to recover from emotional experiences.

Findings revealed that most students who responded to questions about their feelings related to depression, anxiety, and attention during COVID-19 said that their experiences were worse, to some degree. This revelation is relevant for school mental health workers who support students because it can help them determine how to discuss topics around sadness, isolation, worry, fear, and focusing. All of these factors can significantly impact student achievement and overall wellness. The more long-term implications of COVID-19 are unknown, but the lack of daily structure, access to mental health services, potential losses (i.e., family unemployment, death), and social isolation are likely to have some adverse effects on youth development and functioning. It may be relevant for school staff to treat the pandemic as a traumatic event for students and consider some trauma-based support for their community.

REFERENCES

Akoglu, H. (2018). User's guide to correlation coefficients. *Turkish Journal of Emergency Medicine*, *18*(3), 91–93.

Alegria, M., Vallas, M., & Pumariega, A. (2010). Racial and ethnic disparities in pediatric mental health. *Child and Adolescent Psychiatric Clinics of North America, 19*(4), 759–774.

Alfano, C. A., Ginsburg, G. S., & Kingery, J. N. (2007). Sleep-related problems among children and adolescents with anxiety disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *46*, 224–232.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425596

American Psychiatric Association. (2015). *Anxiety disorders: DSM-5® selections* (1st ed.). Author.

American Psychiatric Association. (2015). *Depressive disorders: DSM-5® selections* (1st ed.). Author.

American Psychiatric Association. (2017). *Mental health disparities: Diverse populations.* https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental-Health-Disparities/Mental-Health-Facts-for-Diverse-Populations.pdf

American Psychological Association. (2012). *Building your resilience.* https://www.apa.org/topics/resilience

Bailey, C. L. (2007, October). *Social and emotional needs of gifted students: What school counselors need to know to most effectively serve this diverse student population* Paper based presented at the Association for Counselor Education and Supervision Conference, Columbus, OH, United States.

Bailey, T. R. (2019, September 20). Is MTSS the new RTI? Depends on where you live. The Center on Response to Intervention at American Institutes for Research. https://rti4success.org/blog/mtss-new-rti-depends-where-you-live#:~:text=Most%20likely%20yes%2C%20especially%20given,MTSS%20only%20on%20their%20website.

Bakar, A. Y. A., & Ishak, N. M. (2014). Counseling services for Malaysian gifted students: An initial study. *International Journal for the Advancement of Counseling*, *36*(4), 372–383.

Baldessarini, R., & Tondo, L. (2003). Suicide risk and treatments for patients with bipolar disorder. *Journal of the American Medical Association*, *290*(11), 1517–1519.

Bandelow, B., & Michaelis, S. (2015). Epidemiology of anxiety disorders in the 21st century. *Dialogues in Clinical Neuroscience*, *17*(3), 327–335.

Barrett, P. M., & Pahl, K. M. (2006). School-based intervention: Examining a universal approach to anxiety management. *Australian Journal of Guidance and Counseling*, *16*, 55–75.

Basker, M., Moses, P. D., Russell, S., & Russell, P. S. (2007). The psychometric properties of Beck Depression Inventory for adolescent depression in a primary-care pediatric setting in India. *Child and Adolescent Psychiatry and Mental Health*, *1*(1), 8.

Batsche, G. M., Elliot, J., Gradon, J. L., Grimes, J., Kovaleski, J. F., & Prassse, D. (2005). *Response to intervention: Policy considerations and implementation.* National Association of State Directors of Special Education.

Beck, J. S., Beck, A.T., & Jolly, J. B. (2001). *Beck youth inventories of emotional & social impairment manual.* Psychological Corporation.

Beck, J. S., Beck, A. T., Jolly, J. B., & Steer, R. A. (2005). *Beck youth inventories: Second edition for children and adolescents manual.* Psychological Corporation.

Bener, A., Shuloum, S., & Dafeeah, E. E. (2011). Prevalence of common phobias and their socio-demographic correlates in children and adolescents in a traditional developing society. *African Journal of Psychiatry*, *14*, 140–145.

Berg, I., & Jackson, A. (1985). Teenage school refusers grow up: A follow-up study of 168 subjects, ten years on average after in-patient treatment. *British Journal of Psychiatry*, *147*, 366–370.

Bergan, J. R. (1977). *Behavioral consultation.* Merrill.

Bernstein, G. A., Bernat, D. H., Victor, A. M., & Layne, A. E. (2008). School-based interventions for anxious children: 3, 6, and 12 month follow-ups. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(9), 1039–1047.

Besser, A., Flett, G. L., & Hewitt, P. L. (2004). Perfectionism, cognition, and affect in response to performance failure vs. success. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *22*, 297–324. http:// dx.doi.org/10.1023/B:JORE.0000047313.35872.5c

Besser, A., Flett, G. L., Hewitt, P. L., & Guez, J. (2008). Perfectionism, and cognitions, affect, self-esteem, and physiological reactions in a performance situation. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *26*, 206–228.

Bieschke, K., & Kirsch, M. (2017, May). Identifying mental health concerns of honors students. Paper presented at the Honors Education at Research Universities national conference, Columbus, OH. https://honors-scholars.osu.edu/heru/presentations

Blaas, S. (2014). The relationship between social-emotional difficulties and underachievement of gifted students. *Australian Journal of Guidance and Counseling*, *24*(2), 243–255.

Blum, R. W. (1997). Healthy youth development as a model for youth health promotion. *Journal of Adolescent Health*, *22*, 368–375.

Bose–Deakins, J. E., & Floyd, R. G. (2004). A review of the beck youth inventories of emotional and social impairment. *Journal of School Psychology*, *42*, 333–340.

Bowers, E. P., Winburn, E. N., Sandoval, A. M., & Clanton, T. (2020). Culturally relevant strengths and positive development in high achieving youth of color. *Journal of Applied Developmental Psychology*, *70*. https://doi.org/10.1016/j.appdev.2020.101182

Brown, M. T., & Wicker, L. R. (2000). *Discriminant analysis.* In H. E. A. Tinsley & S. D. Brown (Eds.), *Handbook of the applied multivariate statistics and mathematical modeling* (pp. 209–235). Academic Press.

Bruhn, A. L., Woods-Groves, S., & Huddle, S. (2014). A preliminary investigation of emotional and behavioral screening practices in K-12 schools. *Education and Treatment of Children*, *37*(4), 611–634.

Buros, O. K. (Ed.). (2017). *The mental measurements yearbook*. The Gryphon Press.

Burns, M. D., Jimerson, S. R., VanDerHeyden, A. M., & Deno, S. L. (2016). Toward a unified response-to-intervention model: Multi-tiered systems of support. In S. R. Jimerson, M. Burns, & A. M. VanDerHeyden, (Eds.) *Handbook of response to intervention: The science and practice of multi-tiered systems of support* (pp. 719–732). Springer Science Business Media LLC.

Byrne, B. M. (1984). The general/academic self-concept nomological network: A review of construct validation research. *Review of Educational Research*, *54*, 427–456.

Carlson, G. A., & Klein, D. N. (2014). How to understand divergent views on bipolar disorder in youth. *Annual Review of Clinical Psychology*, *10*, 529–551.

Castillo, J. M., Batsche, G. M., Curtis, M. J., Stockslager, K., March, A., & Minch, D. (2016). *Problem solving/response to intervention evaluation tool technical assistance manual.* University of South Florida. http://www.floridarti.usf.edu/resources/program_evaluation/ta_manual_revised2016/ta_manual_revised2016.pdf

Center for Disease Control. (2016). *Trends in the prevalence of suicide–related behavior national Youth Risk Behavior Study (YRBS): 1991–2017.* https://www.cdc.gov/healthyyouth/data/yrbs/factsheets/2017_suicide_trend_yrbs.htm

Center for Disease Control. (2019). National center for health statistics: Attention deficit hyperactivity disorder. https://www.cdc.gov/nchs/fastats/adhd.htm

Center for Disease Control. (2020). Children's mental health: Data and statistics. https://www.cdc.gov/childrensmentalhealth/data.html

Child Mind Institute. (2015). *Children's mental health report.* https://childmind.org/2015-childrens-mental-health-report/

Chong, S. A., Subramaniam, M., Lee, I. M., Pek, E., Cheok, C., & Verma, S. (2009). Academic attainment: A predictor of psychiatric disorders? *Social Psychiatry and Psychiatry Epidemiology*, *44*, 999–1004. https://doi.org/10.1007/s00127-009-0027-3

Clark, A. G., & Dockweiler, K. A. (2019). *Multi-tiered systems of support in secondary schools: The definitive guide to effective implementation and quality control.* Routledge.

Clark, C., Schwitzer, A., Paredes, T., & Grothaus, T. (2018). Honors college students' adjustment factors and academic success: Advising implications. *NACADA Journal*, *38*(2), 20–30.

Clark, L. A., & Watson, D. (2006). Distress and fear disorders: An alternative empirically based taxonomy of the 'mood' and 'anxiety' disorders. *British Journal of Psychiatry*, *189*, 481–483.

Clauss, J. A., & Urbano Blackford, J. (2012). Behavioral inhibition and risk for developing social anxiety disorder: A meta-analytic study. *Journal of the American Academy of Adolescent Psychiatry*, *51*(10), 1066–1075.

Cohen, B. (2008). *Explaining psychological statistics.* Wiley & Sons.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.

Colangelo, N., & Wood, S.M. (2015). Counseling the gifted: past, present, and future directions. *Journal of Counseling and Development*, *93*, 133–142.

Conner, J. O., Miles, S. B., & Pope, D. C. (2014). How many teachers does it take to support a student? Examining the relationship between teacher support and adverse health outcomes in high-performing, pressure-cooker high schools. *The High School Journal, 98*(1), 22–42. https://doi.org/10.1353/hsj.2014.0012

Consolacion T. B., Russell, S. T., & Sue, S. (2004). Sex, race/ethnicity, and romantic attractions: Multiple minority status adolescents and mental health. *Cultural Diversity and Ethnic Minority Psychology, 10*, 200–214.

Cresswell, J. W., & Cresswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches.* SAGE Publications.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297–334.

Cross, J. R., & Cross, T. L. (2015). Clinical and mental health issues in counseling the gifted individual. *Journal of Counseling & Development, 93*, 163–172. https://doi.org/10.1002/j.1556-6676.2015.00192.x

Cross, T. L., Adams, C., Dixon, F., & Holland, J. (2004). Psychological characteristics of academically gifted adolescents attending a residential academy: A longitudinal study. *Journal for the Education of the Gifted, 28*(2), 159–181.

Cross, T. L., & Frazier, A. D. (2010). Guiding the psychosocial development of gifted students attending specialized residential STEM schools. *Roeper Review, 32*, 32–41.

Cross, T. L., & Miller, K. A. (2007). The overview of three models of publicly funded residential academies for gifted adolescents. In J. L. VanTassel-Baska (Ed.), *Serving gifted learners beyond the traditional classroom: A guide to alternative programs and services* (pp. 81–104). Prufrock Press.

Cross, T. L, Speirs Neumeister, K. L., & Cassady, J. C. (2007). Psychological types of academically gifted adolescents. *Gifted Child Quarterly, 51*, 285–294.

Cross, T. L., & Swiatek, M. (2009). Social coping among academically gifted adolescents in a residential setting: A longitudinal study. *Gifted Child Quarterly, 53*, 25–33.

Curran, T., & Hill, A. (2019). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological Bulletin, 145*(4), 410–429.

Dabrowski, K. (1972). *Psychoneurosis is not an illness*. Gryf.

Daniels, S, & Piechowski, M. M. (2008). *Living with intensity: Understanding the sensitivity, excitability, and emotional development of gifted children, adolescents, and adults.* Great Potential Press.

Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical Psychology Review*, *30*(5), 479–495.

Deighton, J., Croudace, T., Fonagy, P., Brown, J., Patalay, P., & Wolpert, M. (2014). Measuring mental health and wellbeing outcomes for children and adolescents to inform practice and policy: A review of child self-report measures. *Child and Adolescent Psychiatry and Mental Health*, *8*(1), 1–14.

Deno, S. L., & Mirkin, P. (1977). *Data-based program modification: A manual*. Leadership Training Institute for Special Education.

Dixon, F. A., Cross, T. L., & Adams, C. M. (2001). Psychological characteristics of academically gifted students in a residential setting: A cluster analysis. *Psychology in the Schools*, *38*(5), 433–445.

Donohue, P., Goodman-Scott, E., & Betters-Bubon, J. (2016). Using universal screening for early identification of students at risk: A case example from the field. *Professional School Counselor*, *19*(1), 133–143.

Donovan, C. L., & Spence, S. H. (2000). Prevention of childhood anxiety disorders. *Clinical Psychology Review*, *20*(4), 509–531.

Donovan, M. S., & Cross, C. T. (2002). *Minority students in special and gifted education.* National Academy Press.

Dowdy, E., Ritchey, K., & Kamphaus, R. W. (2010). School-based screening: A population-based approach to inform and monitor children's mental health needs. *School Mental Health*, *2*(4), 166–176.

Dray, J., Bowman, J., Campbell, E., Freund, M., Wolfenden, L., Hodder, R. K., McElwaine, K., Tremain, D., Bartlem, K., Bailey, J., Small, T., Palazzi, K., Oldmeadow, C., & Wiggers, J. (2017). Systematic review of universal resilience-Focused interventions targeting child and adolescent mental health in the school setting. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*(10), 813–824.

Duraku, H. Z., & Hoxha, N. (2020). The impact of COVID-19, school closure, and social isolation on gifted students' wellbeing and attitudes toward remote (online) learning. *Roeper Review*, *3*(12), 33–50.

Dvorsky, M. R., Girio-Herrera, E., & Owens, J. S. (2014). Factor structure of the BASC-2 behavioral and emotional screening system student form. *Psychological Assessment*, *23*(2), 379–387.

Dvorsky, M. R., Girio-Herrera, E., & Owens, J. S. (2014). School-based screening for mental health in early childhood. In *Handbook of school mental health* (pp. 297–310). Springer.

Elijah, K. (2011). Meeting the guidance and counseling needs of gifted students in school settings. *Journal of School Counseling*, *9*(14), 287–296.

Embse, N. V. D., Barterian, J., & Segool, N. (2013). Test anxiety interventions for children and adolescents: A systematic review of treatment students from 2000–2010. *Psychology in the Schools*, *50*(1), 57–71.

Enns, M. W., & Cox, B. J. (2005). Perfectionism, stressful life events, and the 1-year outcome of depression. *Cognitive Therapy and Research*, *29*, 541–553.

Eren. F., Cete, A. O., Avcil, S., & Baykara, B. (2018). Emotional and behavioral characteristics of gifted children and their families. *Noropsikiyatri Arsivi Archives of Neuropsychiatry*, *55*(2), 105–112.

Ergene, T. (2003). Effective interventions on test anxiety reduction: A meta-analysis. *School Psychology International*, *24*(3), 313–328.

Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour, Research, and Therapy*, *37*, 831–843.

Evans, G. W., & Cassells, R. C. (2014). Childhood poverty, cumulative risk exposure, and mental health in emerging adults. *Clinical Psychological Science*, *2*, 287–296.

Fergusson, D. M., Horwood, J., & Beautrais, A. L. (1999). Is sexual identity related to mental health problems and suicidality in young people? *Archives of General Psychiatry*, *56*, 876–880.

Fisher, E. S., & Kennedy, K. (2016). *Counseling diverse populations in schools.* Oxford University Press.

Fisher, P. H., Masia-Warner, C., & Klein, R. G. (2004). Skills for social and academic success: A school-based intervention for social anxiety disorder in adolescents. *Clinical Child and Family Psychology Review*, *7*(4), 241–249.

Flakierska, N., Lindstrom, M., & Gillberg, C. (1988). School refusal: A 15–20-year follow-up study of 35 Swedish urban children. *British Journal of Psychiatry*, *152*, 834–837.

Fletcher, J. M., & Vaughn, S. (2009). Response to Intervention: Preventing and Remediating Academic Difficulties. *Child Development Perspectives*, *3*(1), 30–37. https://doi.org/ 10.1111/j.1750-8606.2008.00072.x

Fletcher, K. L., & Speirs Neumeister, K. L. (2012). Research on perfectionism and achievement motivation: Implications for gifted students. *Psychology in the Schools*, *49*, 668–677. https://doi.org/10.1002/pits.21623

Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences*, *14*, 119–126

Frost, J. (2020). *Introduction to statistics: An intuitive guide for analyzing data and unlocking discoveries.* Statistics by Jim

Fry, P. S., & Debats, D. L. (2009). Perfectionism and the five-factor personality traits as predictors of mortality in older adults. *Journal of Health Psychology*, *14*, 513–524.

Funk, D. C., Robinson, D. H., Halbur, D., & O'Ryan, L. (2003). The .05 level of significance in educational research: Traditional, arbitrary, sacred, magical, or simply psychological. *Research in the Schools*, *10*(2), 79–86.

Furlong, M. J., You, S., Renshaw, T. L., Smith, D. C., & O'Malley, M. D. (2014). Preliminary development and validation of the Social and Emotional Health Survey for secondary students. *Social Indicators Research*, *117*(3), 1011–1032. https://doi.org/10.1007/s11205-013-0373-0

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H., & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PLoS ONE*, *15*(4), e0241924. https://doi.org/10.1371/journal.pone.0231924

Garcia, S. B., & Dominguez, L. (1997). Cultural contexts that influence learning and academic performance. *Child and Adolescent Psychiatric Clinics of North America*, *6*(3), 621–655.

Gardner, H. (2004). *Frames of mind: The theory of multiple intelligences.* Basic Books.

Garmezy, N. (1991). Resilience in children's adaptation to negative life events and stressed environments. *Pediatric Annals*, *20*(9), 459–466.

Gary, F. A. (2005). Stigma: Barrier to mental health care among ethnic minorities. *Issues in Mental Health Nursing, 26*, 979-999. http://dx.doi.org/10.1080/01612840500280638

Ghandour, R. M., Sherman, L. J., Vladutiu, C. J., Ali, M. M., Lynch, S. E., Bitsko, R. H., & Blumberg, S. J. (2019). Prevalence and treatment of depression, anxiety, and conduct problems in U. S. children. *The Journal of Pediatrics*, *206*, 256–267.

Ghanei Gheshlagh R, Sayehmiri K, Ebadi A, Dalvandi A, Dalvand S, Maddah, S., & Tabrizi, K. (2017). The relationship between mental health and resilience: A systematic review and meta-analysis. *Iran Red Crescent Medical Journal*, *19*(6):e13537. https://doi.org/10.5812/ircmj.13537.

Gibson, R. A., & Clarbour, J. (2017). Factorial structure of the resiliency scale for children and adolescents (RSCA) among incarcerated male adolescent offenders. *The Journal of Forensic Practice*, *19*(1), 23–36.

Glover, T. A., & Albers, C. A. (2007). Considerations for evaluating universal screening assessments. *Journal of School Psychology*, *45*(2), 117–135.

Golberstein, E., Wen, H., & Miller, B. F. (2020). Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents. *Journal of the American Medical Association for Pediatrics, 174*(9), 819-820.

Goldstein, T. R., Birmaher, B., Axelson, D., Ryan, N. D., Strober, M. A., Gill, M. K., Valeri, S., Chiappetta, L., Leonard, H., Hunt, J., Bridge, J. A., Brent, D. A., & Keller, M. (2005). History of suicide attempts in pediatric bipolar disorder: factors associated with increased risk. *Bipolar Disorders*, *7*(6), 525–535.

Goodman, S., & Bohanon, H. (2018). A framework for supporting all students: One-size-fits-all no longer works in schools. *American School Board Journal*, 1–4. https://ecommons.luc.edu/cgi/viewcontent.cgi?article=1138&context=education_facpubs

Goodman-Scott, E., Betters-Bubon, J., & Donohue, P. (2015). Aligning comprehensive school counseling programs and positive behavioral interventions and supports to maximize school counselors' efforts. *Professional School Counseling*, *19*(1), 57–67.

Goodman-Scott, E., Donohue, P., & Betters-Bubon, J. (2019, September 5). The case for universal mental health screening in schools, *Counseling Today.* https://ct.counseling.org/2019/09/the-case-for-universal-mental-health-screening-in-schools/

Grissom, J. A., & Redding, C. (2016). Discretion and disproportionality: Explaining the underrepresentation of high-achieving students of color in gifted program. *AERA Open, 2*(1), 1–25.

Grossman, A. H., D'augelli, A. R., & Frank, J. A. (2011). Aspects of psychological resilience among transgender youth. *Journal of LGBT Youth*, *8*(2), 103–115.

Hahs-Vaughn, D. (2016). *Applied multivariate statistical concepts.* Taylor & Francis.

Hamilton, S., & Armando, J. (2008). Oppositional defiant disorder. *American Family Physician*, *78*(7), 861–866.

Haneef, N. (2013). Empirical research consolidation: A generic overview and a classification scheme for methods. *Quality and Quantity*, *47*(1), 383–410. https://doi.org/10.1007/s11135-011 9524z

Harrison, G. E., & Van Haneghan, J. P. (2011). The gifted and the shadow of the night: Dabrowski's overexcitabilities and their correlation to insomnia, death anxiety, and fear of the unknown. *Journal for the Education of the Gifted*, *34*, 669–697.

Harrison, J. R., Vannest, K. J., & Reynolds, C. R. (2013). Social acceptability of five screening instruments for social, emotional, and behavioral challenges. *Behavioral Disorders*, *38*(3), 171–189.

Harter, S. (1989). Causes, correlates, and the functional role of global self-worth: A life-span perspective. In J. Kolligian & R. Sternberg (Eds.), *Perceptions of competence and incompetence across the life-span* (pp. 67–97) Yale University Press.

Hedegaard, H., Curtin S.C., & Warner, M. (2018). Suicide mortality in the United States, 1999–2017. NCHS Data Brief, no. 330. National Center for Health Statistics. https://www.cdc.gov/nchs/data/databriefs/db330-h.pdf

Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development*, *34*(3), 177.

Herbert, J. D., Gaudiano, B. A., Rheingold, A. A., Moitra, E., Myers, V. H., Dalrymple, K. L., & Brandsma, L. L. (2009). Cognitive behavior therapy for generalized social anxiety disorder in adolescents: A randomized controlled trial. *Journal of Anxiety Disorders*, *23*(2), 167–177.

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*, 456–470.

Hoff, N., Peterson, R. L., Strawhun, J. & Fluke, S. (2015, April). *School-wide behavior screening, topic brief.* Student Engagement Project, University of Nebraska-Lincoln and the Nebraska Department of Education. http://k12engagement.unl.edu/school-wide-behavior-screening.

Hollingworth, L. S. (1926). *Gifted children: Their nature and nurture*. Macmillan.

Hollingworth, L. S. (1927). Who are gifted children? *Child Study*, *5*(2), 3–5.

Hollingworth, L. S. (1931). The child of very superior intelligence as a special problem in social adjustment. *Mental Hygiene*, *15*(1), 3–16.

Hollingworth, L. S. (1942). *Children above 180 IQ Stanford-Binet: Origin and development*. World Book.

Hofmann, S. G., Albano, A. M., Heimberg, R. G., Tracey, S., Chorpita, B. F., & Barlow, D. H. (1999). Subtypes of social phobia in adolescents. *Depression and Anxiety*, *9*, 15–18.

Hu, T., Zhang, D., & Wang, J. (2015). A meta-analysis of the trait resilience and mental health. *Personality and Individual Differences*, *76*, 18–27. https://doi.org/10.1016/j.paid.2014.11.039

Huebner, E.S., Gilman, R., Reschly, A.L., & Hall, R. (2009). Positive schools. In S. J. Lopez & C. R. Synder (Eds.), *The Oxford handbook of Positive Psychology* (2nd ed., pp. 561–568). Oxford University Press.

Hugh-Jones, S., Beckett, S., Tumelty, E., & Mallikarjun, P. (2020). Indicated prevention interventions for anxiety in children and adolescents: A review and meta-analysis of school-based programs. *European Child and Adolescent Psychiatry*, https://doi.org/10.1007/s00787-020-01564-x

Humphrey, N., & Wigelsworth, M. (2016). Making the case for universal school-based mental health screening. *Emotional and Behavioural Difficulties*, *21*(1), 22–42.

Hung, M., Bounsanga, J., & Wright Voss, M. (2017). Interpretation of correlations in clinical research. *Postgraduate Medicine*, *129*(8), 902–906.

Irvin, L. K., Tobin, T. J., Sprague, J. R., Sugai, G., & Vincent, C. G. (2004). Validity of ODR measures as indices of school-wide behavioral status and effects of schoolwide behavioral interventions. *Journal of Positive Behavior Interventions*, *6*(3), 131–147.

Jaureguizar, J., Garaigordobil, M., & Bernaras, E. (2018). Self-concept, social skills, and resilience as moderators of the relationship between stress and childhood depression. *School Mental Health: A Multidisciplinary Research and Practice Journal,* *10*(4), 488–499.

Johns Hopkins Medicine. (2020). Mood disorders. https://www.hopkinsmedicine.org/health/conditions-and-diseases/mood-disorders

Johnson, C. P., & Myers, S. M. (2007). Identification and evaluation of children with autism spectrum disorders. *Pediatrics*, *120*, 1183–1215.

Jones, B. M. (2009). Profiles of state-supported residential math and science schools. *Journal of Advanced Academics*, *20*(3), 472–501.

Kase, C., Hoover, S., Boyd, G., West, K. D., Dubenitz, J., Trivedi, P. A., Peterson, H. J., & Stein, B. D. (2017). Educational outcomes associated with school behavioral health interventions: A review of the literature. *Journal of School Health*, *87*(7), 554–562.

Kelly, K.R., & Colangelo, N. (1984). Academic and social self-concepts of gifted, general, and special students. *Exceptional Children*, *50*, 551–554.

Kendall, P. C., Compton, S. N., Walkup, J. T., Birmaher, Albano, A. M., Sherrill, J., Ginsburg, G., Rynn, M., McCracken, J., Gosch, E., Keeton, C., Bergman, L., Sakolsky, D., Suveg, C., Iyengar, S., March, J., & Piacentini, J. (2010). Clinical characteristics of anxiety disordered youth. *Journal of Anxiety Disorders*, *24*(3), 360–365.

Kennedy, K., & Farley, J. (2018). Counseling gifted students: School-based considerations and strategies. *International Journal of Elementary Education*, *10*(3), 361–367.

Kennedy-Moore, E, & Lowenthal, M. S. (2011). *Smart parenting for smart kids: Nurturing your child's true potential*. Jossey-Bass.

Kessler, R. C., Avenevoli, S., Costello, J., Georgiades, K., Green, J. G., Gruber, M. J., He, J., Doretz, D., McLaughlin, K. A., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Merikangas, K. R. (2012). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication adolescent supplement. *Archives of General Psychiatry*, *69*, 372–380.

Keyes, K. M., Gary, D., O'Malley, P. M., *et al.* (2019). Recent increases in depressive symptoms among US adolescents: trends from 1991 to 2018. *Social Psychiatry Psychiatric Epidemiology*, *54*, 987–996. https://doi.org/10.1007/s00127-019-01697-

Khalid-Khan, S., Santibanez, M., McMicken, C., & Rynn, M. A. (2007). Social anxiety disorder in children and adolescents: Epidemiology, diagnosis, and treatment. *Pediatric Drugs*, *9*, 227–237.

Khesht-Masjedi, M. F., Shokrgozar, S., Abdollahi, E., Golshahi, M., & Sharif-Ghaziani, Z. (2017). Comparing depressive symptoms in teenage boys and girls. *Journal of Family Medicine and Primary Care*, *6*(4), 775–779.

Kim, H. Y. (2015). Statistical notes for clinical researchers: Type 1 and type II errors in statistical decisions. *Restorative Dentistry & Endodontics*, *40*(3), 249–252.

Kim, M. (2015). Enhancing resilience of gifted students. *Tempo: Journal of the Texas Association for the Gifted and Talented*, *36*(3), 17–21.

Klein, D., Depue, R., & Slater, J. (1986). Inventory identification of cyclothymia: IX. Validation in offspring of bipolar I patients. *Archives of General Psychiatry*, *43*(5), 441–445.

Konaszewski, K., Niesiobedzka, M., & Surzykiewicz, J. (2021). Resilience and mental health among juveniles: role of strategies for coping with stress. *Health and Quality of Life Outcomes*, *19*(1), 58.

Korczak, D. J. (2015). Suicidal ideation and behaviour. *Paediatrics and Child Health*, *20*(5), 257–260.

Kumar, G., Steer, R. A., & Gulab, N.A. (2010). Profiles of personal resiliency in child and adolescent psychiatric inpatients. *Journal of Psychoeducational Assessment*, *28*(4), 315–325.

Kutcher, S., Robertson, H. A., & Bird, D. (1998). Premorbid functioning in adolescent onset bipolar I disorder: A preliminary report from an ongoing study. *Journal of Affective Disorders*, *51*(2), 137–144.

Lambert, M. C., Epstein, M. H., & Cullinan, D. (2014). The diagnostic quality of the emotional and behavioral screener. *Journal of Psychoeducational Assessment*, *32*(1), 51–61.

Lamont, R. T. (2012). The fears and anxieties of gifted learners: Tips for parents and educators. *Gifted Child Today*, *35*(4), 271–276.

Lane, K. L., Carter, E. W., Jenkins, A., Dwiggins, L., & Germer, K. (2015). Supporting comprehensive, integrated, three-tiered models of prevention in schools: Administrators' perspectives. *Journal of Positive Behavior Interventions*, *17*(4), 209–222.

Lane, K. L., Oakes, W. P., & Menzies, H. M. (2014). Comprehensive, integrated, three-tiered models of prevention: Why does my school—and district—need an integrated approach to meet students' academic, behavioral, and social needs? *Preventing School Failure: Alternative Education for Children and Youth*, *58*(3), 121–128, https://doi.org/10.1080/1045988X.2014.893977

Larsen, T. K., Melle, I., Auestad, B., Friis, S., Haahr, U., Johannessen, J. O., Opjordsmoen, S., Rund, B. R., Simonsen, E., Vaglum, P., & McGlashan, T. (2006). Early detection of first-episode psychosis: The effect on 1-year outcome. *Schizophrenia Bulletin*, *32*(4), 758–764.

Leary, K. A., & DeRosier, M. E. (2012). *Factors promoting positive adaptation and resilience during the transition to college. Psychology*, *3*, 1215–1222.

Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet: Child and Adolescent Health*, *4*, 421. https://doi.org/10.1016/S2352-4642(20)30128-0

Levine, S. (2003). Psychological and social aspects of resilience: A synthesis of risks and resources. *Dialogues of Clinical Neuroscience*, *5*(3), 273–280.

Levy, J., & Plucker, J. (2008). A multicultural competence model for counseling gifted and talented children. *Journal of School Counseling*, *6*(4), 1–47. www.jsc.montana.edu/articles/v6n4.pdf

Lewinsohn, P. M., Holm-Denoma, J. M., Small, J. W., Seeley, J. R., & Joiner Jr., T. E. (2008). Separation anxiety disorder in childhood as a risk factor for future mental illness. *Journal of the American Academy of Child and Adolescent Psychiatry*, *47*(5), 548–555.

Lyons, M. D., Huebner, E. S., Hills, K. J., & Shinkareva, S. V. (2012). The dual-factor model of mental health: Further study of the determinants of group differences. *Canadian Journal of School Psychology*, *27*(2), 183–196. https://doi.org/10.1177/0829573512443669

MacCarthy, B. L., Lewis, M., Voss, C., & Narasimhan, R. (2013). The same old methodologies? Perspectives on OM research in the post-lean age. *International Journal of Operations & Production Management*, *33*(7), 934–956. https://doi.org/10.1108/IJOPM-08-2013-0373

Mackinnon, S. P., & Sherry, S. B. (2012). Perfectionistic self-presentation mediates the relationship between perfectionistic concerns and subjective well-being: A three-wave longitudinal study. *Personality and Individual Differences*, *53*, 22–28.

Maenner, M. J., Shaw, K. A., Baio, J., Washington, A., Patrick, M., DiRienzo, M., Christensen, D. L., Wiggins, L. D., Pettygrove, S., Andrews, J. G., Lopez, M., Hudson, A., Baround, T., Schwenk, Y., White, T., Robinson Rosenburg, C., Lee, L., Harrington, R. A., Huston, M., Hewitt, A., Esler, A., Hall-Lande, J., Poynter, J. N., Hallas-Muchow, L., Constantino, J. N., Fitzgerald, R. T., Zahorodny, W., Shenouda, J., Daniels, J. L., Warren, Z., Vehorn, A., Salinas, A., Durkin, M. S., & Dietz, P. M. (2020). Prevalence of autism spectrum disorder among children aged 8 years – Autism and developmental disabilities monitoring network, 11 sites, United States, 2016. *Surveillance Summaries*, *69*(4), 1–12.

Makover, H., Adrian, M., Wilks, C., Read, K., Vander Stoep, A., & McCauley, E. (2019). Indicated prevention for depression at the transition to high school: Outcomes for depression and anxiety. *Prevention Science*, *20*, 499–509.

Marchand, E., Ng, J., Rohde, P., & Stice, E. (2010). Effects of an indicated cognitive-behavioral depression prevention program are similar for Asian-American, Latino, and European American adolescents. *Behaviour Research and Therapy*, *48*(8), 821–825.

Marques de Miranda, D., da Silva Athanasio, B., Sena Oliveira, A. C., & Simoes-e-Silva, A. C. (2020). How is COVID-19 pandemic impacting mental health of children and adolescents? *International Journal of Disaster Risk Reduction*, *51*, 1–8.

Masia-Warner, C., Nangle, D. W., & Hansen, D. J. (2006). Bringing evidence-based child mental health services to the schools: General issues and specific populations. *Education and Treatment of Children*, *29*, 165–172.

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Masten, A. S., & Coatsworth, J. D. (1998). The development and competence in favorable and unfavorable environments: Lessons from successful children. *American Psychologist*, *53*, 205–220

Mayo Clinic. (2020). *Autism spectrum disorder.* https://www.mayoclinic.org/diseases-conditions/autism-spectrum-disorder/symptoms-causes/syc-20352928

Mayo Clinic. (2020). *Mood disorders.* https://www.mayoclinic.org/diseases-conditions/mood-disorders/symptoms-causes/syc-20365057

McClain, M., & Pfeiffer, S. (2012). Identification of gifted students in the United States today: A look at state definitions, policies, and practices. *Journal of Applied School Psychology*, *28*, 59–88. https://doi.org/10.1080/15377903.2012.643757

McDonald, A. S. (2001). The prevalence and effects of test anxiety in school children. *Educational Psychology: An International Journal of Experimental Educational Psychology*, *21*(1), 89–101.

McInnis, M. G., Riba, M., & Greden, J. F. (2014). Depressive disorders. In R. E. Hales, S. C. Yudofsky, & L. W. Roberts (Eds.), *The American Psychiatric Publishing Textbook of Psychiatry* (6th ed., pp. 353–389). American Psychiatric Publishing.

McIntosh, K., & Goodman, S. (2016). *Integrated multi-tiered systems so support blending RTI and PBIS*. The Guilford Press.

McIntosh, K., Predy, L. K., Upreti, G., Hume, A. E., Turri, M. G., & Mathews, S. (2014). Perceptions of contextual features related to implementation and sustainability of school-wide positive behavior support. *Journal of Positive Behavior Interventions*, *16*(1), 31–43.

McGarry, P. D., Killackey, E., & Yung, A. R. (2007). Early intervention in psychotic disorders: Detection and treatment of the first episode and the critical early stages. *Medical Journal of Australia*, *187*(7), 8–10.

Melle, I., Larsen, T. K., Haahr, U., et al. (2004). Reducing the duration of untreated first-episode psychosis: Effects on clinical presentation. *Archives of General Psychiatry*, *61*, 143–150.

Melle, I., Johannesen, J. O., Friis, S., Haahr, U., Joa, I., Larsen, T. K., Opjordsmoen, S., Rund, B. R., Simonsen, E., Vaglum, P., &McGlashan, T. (2006). Early detection of the first episode of schizophrenia and suicidal behavior. *American Journal of Psychiatry*, *163*, 800–804.

Merikangas, K. R., He, J., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., Benject, C., Georgiades, K., & Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the nation comorbidity survey replication—adolescent supplement (NCS-A). *Journal of the America Academy of Child & Adolescent Psychiatry*, *49*(10), 980–989.

Miller, C. (2020). Bipolar disorder: Why it's often misdiagnosed. https://childmind.org/article/bipolar-disorder-difficult-to-diagnose-in-adolescents/

Miller, A. L., Lambert, A. D., & Speirs-Neumeister, K. L. (2012). Parenting style, perfectionism, and creativity in high-ability and high-achieving young adults. *Journal for the Education of the Gifted*, *35*(4), 344–365. https://doi.org/10.1177/0162353212459257

Mills, J. S., & Blankstein, K. R. (2000). Perfectionism, intrinsic vs extrinsic motivation, and motivated strategies for learning: A multidimensional analysis of university students. *Personality and Individual Differences*, *29*, 1191–1204.

Moore, S. A., Widales-Benitez, O., Carnazzo, K. W., Kim, E. K., Moffa, K., Dowdy, E., & Furlong, M. J. (2018). *Universal complete mental wellness screening via student self-report: Rationale and step-by-step approach.* International Center for School Based Youth Development, Project CoVitality.

Morelock, M. J. (1996). On the nature of giftedness and talent: Imposing order on chaos. *Roeper Review*, *19*(1), 4–12.

National Alliance on Mental Illness (NAMI). (2020, February). *Mental health screening.* https://www.nami.org/Learn-More/Mental-Health-Public-Policy/Mental-Health-Screening

National Association for Gifted Children. (2010, March). *Redefining giftedness for a new century: Shifting the paradigm.* https://www.nagc.org/sites/default/files/Position%20Statement/Redefining%20Giftedness%20for%20a%20New%20Century.pdf

National Association for Gifted Children (2020). *A definition of giftedness that guides best practice.* https://www.nagc.org/sites/default/files/Position%20Statement/Definition%20of%20Giftedness%20%282019%29.pdf

National Association for Gifted Children (2020). *Frequently asked questions about gifted education.* https://www.nagc.org/resources-publications/resources/frequently-asked-questions-about-gifted-education

National Association for Gifted Children. (2020). *Statewide public high schools for advanced students.* https://www.nagc.org/resources-publications/gifted-state/statewide-public-high-schools-advanced-students

National Center for Educational Statistics (NCES). (2017). *Digest of educational statistics: Percentage of public school students enrolled in gifted and talented programs by sex, race/ethnicity, and state*. https://nces.ed.gov/programs/digest/d17/tables/dt17_204.90.asp

National Center for Learning Disabilities. (2017, January 25). *Identifying struggling students.* https://www.ncld.org/research/state-of-learning-disabilities/identifying-struggling-students

National Center for School Mental Health (NCSMH). (2020). *School mental health quality guide: Screening.* NCSMH, University of Maryland School of Medicine. http://www. schoolmentalhealth.org/media/SOM/Microsites/NCSMH/Documents/Quality-Guides/ Screening-1.27.20.pdf

National Institute of Mental Health. (2018). *Suicide.* https://www.nimh.nih.gov/health/statistics/ suicide.shtml

National Institute of Mental Health. (2020). *Any anxiety disorder.* https://www.nimh.nih.gov/ health/statistics/any-anxiety-disorder.shtml

Nealis, L. J., Sherry, S. B., Sherry, D. L., Stewart, S. H., & Macneil, M. A. (2015). Toward a better understanding of narcissistic perfectionism: Evidence of factorial validity, incremental validity, and mediating mechanisms. *Journal of Research in Personality*, *57*, 11–25.

Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, *29*(3), 208–215.

Nocera, E. J., Whitbread, K. M., & Nocera, G. P. (2014). Impact of school-wide positive behavior supports on student behavior in the middle grades. *Research in Middle Level Education Online*, *37*(8), 1–14.

Noymer, A. (2008). Alpha, significance level of test. In P. J. Lavrakas (Ed), *Encyclopedia of survey research methods.* SAGE Publications.

Ogundele, M. O. (2018). Behavioral and emotional disorders in childhood: A brief overview for paediatricians. *World Journal of Clinical Pediatrics*, *7*(1), 9–26.

Ollendick, T. H., King, N. J., & Muris, P. (2002). Fears and phobias in children: Phenomenology, epidemiology, and aetiology. *Child and Adolescent Mental Health*, *7*(3), 98–106.

Olson, K. R., Durwood, L., DeMeules, M., & McLaughlin, K. (2016). Mental health of transgender children who are supported in their identities. *Pediatrics*, *137*(3), 1–8.

Oshio, A., Taku, K., Hirano, M., & Saeed, G., (2018). Resilience and big five personality traits: A meta-analysis. *Personality and Individual Differences*, *127*, 54–60.

Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the predication of consequential outcomes. *Annual Review of Psychology*, *57*, 401–421.

PBIS.org. (2019). *Getting started: What is PBIS?* https://www.pbis.org/pbis/getting-started

Perlis, R. H., Miyahara, S., Marangell, L.B., et al. (2004). Long-term implications of early onset in bipolar disorder: data from the first 1,000 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Biological Psychiatry*, *55*(9), 875–881.

Peterson, J. S. (2007). *The essential guide for talking with gifted teens: Ready to use discussions about identity, stress, relationships, and more.* Minneapolis, MN: Free Spirit Publishing.

Peterson, J. S. (2009). Myth 17: Gifted and talented individuals do not have unique social and emotional needs. *Gifted Child Quarterly*, *53*(4), 280–282.

Peterson, J. S., & Lorimer, M. (2011). Student response to a small-group affective curriculum in a school for gifted children. *Gifted Child Quarterly*, *55*(3), 167–180. https://doi.org/10.1177/0016986211412770

Peterson, J. S., & Rischar, H. (2000). Gifted and gay: A study of the adolescent experience. *Gifted Child Quarterly*, *44*(4), 231–246.

Pituch, K. A., & Stevens, J. A. (2016). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBM's SPSS* (6th ed.). Routledge.

Poteat, V. P., & Anderson, C. J. (2012). Developmental changes in sexual prejudice from early to late adolescents: the effects of gender, race, and ideology on different patterns of change. *Developmental Psychology*, *48*, 1403–1415.

Poulus, J., Beier, N., Ryder, K., Schindel, C., & Venit, K. (2011). *Wisconsin positive behavior interventions and supports (PBIS) network 2010–2011 evaluation report.* (Evaluation Report). Wisconsin PBIS Network.

Preston, A. I., Wood, C. L., & Stecker, P. M. (2016). Response to intervention: Where it came from and where it's going. *Preventing School Failure: Alternative Education for Children and Youth*, *60*(3), 173–182.

Price-Mitchell, M. (2019, November). Anxiety in teens: How you can help. *Psychology Today*. https://www.psychologytoday.com/us/blog/the-moment-youth/201911/anxiety-in-teens-how-you-can-help

Prince-Embury, S. (2006). *Resiliency scales for adolescents: Profiles of personal strength.* Harcourt Assessment. https://doi.org/10.1177/0829573507305520

Prince-Embury, S. (2007). *Resiliency Scales for Children and Adolescents: Profiles of Personal Strength*. Harcourt Assessment. https://doi.org/10.1177/0829573507305520

Prince-Embury, S. (2008). The resiliency scales for children and adolescents, psychological symptoms, and clinical status in adolescents. *Canadian Journal of School Psychology*, *23*(1), 41–56.

Prince-Embury, S. (2010). Psychometric properties of the Resiliency Scales for Children and Adolescents and use for youth with psychiatric disorders. *Journal of Psychoeducational Assessment*, *28*(4), 291–302.

Prince-Embury, S. (2015). Assessing personal resiliency in school settings: The resiliency scales for children and adolescents. *Journal of Psychologists and Counsellors in Schools*, *25*(1), 55–65.

Prince-Embury, S., & Courville, T. (2008). Comparison of one, two and three factor models of personal resiliency using the Resiliency Scales for Children and Adolescents. *Canadian Journal of School Psychology*, *23*, 11–25. https://doi.org/10.1177/0829573508316589

Prince-Embury, S., & Saklofske, D. H. (2012). *Resilience in children, adolescents, and adults: Translating research into practice.* Springer.

Prince-Embury, S., & Saklofske, D. H. (2014). *Resilience interventions for youth in diverse populations.* Springer.

Prince-Embury, S., Saklofske, D. H., & Nordstokke, D. W. (2017). The resiliency scales for young adults. *Journal of Psychoeducational Assessment*, *35*(3), 276–290.

Racine, N., Cooke, J. E., Eirich, R., Korczak, D. J., McArthur, B., & Madigan, S. (2020). Child and adolescent mental illness during COVID-19: A rapid review. *Psychiatry Research, 292*. https://doi.org/10.1016/j.psychres.2020.113307

Ranganathan, P., & Aggarwal, R. (2018). Study designs: Part 1—An overview and classification. *Perspectives in Clinical Research*, *9*(4), 184–186.

Razali, N. M., & Wah, Y. B. (2011). Power comparisons of Shapiro-Wild, Kolmogorov-Smirnov, Lilliefors, and Anderson-Darling tests. *Journal of Statistical Modeling and Analytics*, *2*(1), 21–33.

Reavley, N, & Jorm, A. F. (2010). Prevention and early intervention to improve mental health in higher education students: A review. *Early Intervention in Psychiatry*, *4*(2), 132–142.

Reichow, B., Hume, K., Barton, E. E., & Boyd, B. A. (2018). Early intensive behavioral intervention (EIBI) for young children with autism spectrum disorders (ASD). *Cochrane Database of Systematic Reviews*, *5*(5).

Reis, S. M., Colbert, R. D., & Hebert, T. P. (2016). Understanding resilience in diverse, talented students in an urban high school. *Roeper Review*, *27*(2), 110–120.

Reisner, S. L., Katz-Wise, S. L., Gordon, A. R., Corliss, H. L., & Austin, S. B. (2016). Social epidemiology of depression and anxiety by gender identity. *Journal of Adolescent Health*, *59*(2), 203–208.

Rencher, A. C., & Christensen, W. F. (2012). *Methods of multivariate analysis* (3rd ed). Wiley.

Reynolds, A. J., Temple, J. A., Ou, S, Arteaga, I, A., & White, B. A. B. (2011). School-based early education and age-28 well-being: Effects by timing, dosage, and subgroups. *Science*, *333*(6040), 360–364.

Rice, S. M., Purcell, R., & McGorry, P. D. (2018). Adolescent and young adult male mental health: Trasforming system failures into proactive models of engagement. *Journal of Adolescent Health*, *62*(3), S9–S17.

Rinn, A. N. (2005). Trends among honors college students: An analysis by year in school. *The Journal of Secondary Gifted Education*, *16*(4), 157–167.

Rodgers, M. J., Zylstra, R. G., McKay, J. B., Solomon, A. L, & Choby, B. A. (2010). Adolescent bipolar disorder: A clinical vignette. *Primary Care Companion Journal of Clinical Psychiatry*, *12*(4), E1–E4.

Rollins, M. R., & Cross, T. L. (2014). Assessing the psychological changes of gifted students attending a residential high school with an outcome measurement. *Journal for the Education of the Gifted*, *37*(5), 337–354.

Russell, S. T., & Fish, J. N. (2014). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology*, *12*, 465–87.

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry*, *147*, 598–611.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health*, *14*(8), 626-–631.

Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and Latino lesbian, gay, and bisexual young adults. *Pediatrics*, *123*, 346–352.

Schenkel, L.S., West, A.E., Harral, E.M., et al. (2008). Parent-child interactions in pediatric bipolar disorder. *Journal of Clinical Psychology*, *64*(4), 422–437.

Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, *126*(5), 1763–1768.

Seeley, J. R., Kosty, D. B., Farmer, R. F., & Lewinsohn, P. M. (2011). The modeling of internalizing disorders on the basis of patters of lifetime comorbidity. *Journal of Abnormal Psychology*, *120*, 308–321.

Shaw, M., Hodgkins, P., Caci, H., Young, S., Kahle, J., Woods, A. G., & Arnold, L. E. (2012). A systematic review and analysis of long-term outcomes in attention deficit hyperactivity disorder: effects of treatment and non-treatment. *BMC Medicine*, *10*, 99.

Sherry, S. B., Hewitt, P. L., Flett, G. L., & Harvey, M. (2003). Perfectionism dimensions, perfectionistic attitudes, dependent attitudes, and depression in psychiatric patients and university students. *Journal of Counseling Psychology*, *50*, 373–386.

Shi, J., Li, Y., & Zhang, X. (2008). Self-concept of gifted children aged 9 to 13 years old. *Journal for the Education of the Gifted*, *34*(4), 481–500.

Siceloff, E. R., Bradley, W. J., & Flory, K. (2017). Universal behavioral/emotional health screening in schools: Overview and Feasibility. *Report on Emotional & Behavioral Disorders in Youth*, 17(2), 32–38.

Siegel, R. S., & Dickstein, D. P. (2012). Anxiety in adolescents: Update on its diagnosis and treatment for primary care providers. *Adolescent Health, Medicine, and Therapeutics*, *3*, 1–16.

Silliman Cohen, R. I., & Adlin Bosk, E. (2020). Vulnerable youth and the COVID-19 pandemic. *Pediatrics,* 146(1), 1-3. https://doi.org/10.1542/peds.2020-1306

Silverman, L. K. (1997). The construct of asynchronous development. *Peabody Journal of Education*, *72*(3/4) 36–58.

Silverman, L. K. (2013). Asynchronous development: Theoretical bases and current applications. In C. S. Neville, M. M. Piechowski, & S. S. Tolan (Eds). *Off the charts: Asynchrony and the gifted child* (pp. 18–47). Royal Fireworks Press.

Simonsen, B., Eber, L., Black, A. C., Sugai, G., Lewandowski, H., Sims, B., & Myers, D. (2012). Illinois statewide positive behavioral interventions and supports evolution and impact on student outcomes across years. *Journal of Positive Behavior Interventions, 14*(1), 5–16.

Singh Setia, M. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, *61*(3), 261–264.

Sink, C. A. (2016). Incorporating a multi-tiered system of supports into school counselor preparation. *The Professional Counselor*, *6*(3), 203–219.

Sink, C. A., & Ockerman, M. S. (2016). School counselors and a multi-tiered system of supports: Cultivating systemic change and equitable outcomes. *The Professional Counselor*, *6*(3), v-ix (Special Issue).

Smith, D., & Ghaemi, S. (2006). Hypomania in clinical practice. *Advances in Psychiatric Treatment*, *12*(2), 110–120.

Smith, M. M., Saklofske, D. H., Yan, G., & Sherry, S. B. (2016). Cultural similarities in perfectionism: Perfectionistic strivings and concerns generalize across Chinese and Canadian groups. *Measurement and Evaluation in Counseling and Development*, *49*, 63–76.

Smokowski, P. R., Reynolds, A. J., & Bezruczko, N. (1999). Resilience and protective factors in adolescence: an autobiographical perspective from disadvantaged youth. *Journal of School Psychology*, *37*(4), 425–448.

Sobhy, M., & Cavallaro, M. (2010). *Solution-focused brief counseling in schools: Theoretical perspectives and case application to an elementary school student.* http://counseling outfitters.com/vistas/vistas10/Article_81.pdf

Speirs Neumeister, K.L., Williams, K.K., & Cross, T.L. (2009). Gifted high-school students' perspectives on the development of perfectionism. *Roeper Review*, *31*, 198–206. https://doi.org/10.1080/02783190903177564

Stairs, A. M. (2009). *Examining the construct of perfectionism: A factor-analytic study* (Doctoral dissertation, University of Kentucky). https://uknowledge.uky.edu/gradschool_diss/733

Stambaugh, T., & Ford, D. Y. (2014). Microaggressions, multiculturalism, and gifted individuals who are black, Hispanic, or low income. *Journal of Counseling and Development*, *93*, 192–201.

Stanley, J. C. (1991). A better model for residential high schools for talented youths. *The Phi Delta Kappan*. *72*(6), 471–473.

Stapleton, L. M., Sander, J. B., & Stark, K. D. (2007). Psychometric properties of the Beck Depression Inventory for Youth in a sample of girls. *Psychological Assessment*, *19*(2), 230–235.

Steinmayr, R., Weidinger, A. F., Schwinger, M., & Spinath, B. (2019). The importance of students' motivation for their academic achievement-replicating and extending previous findings. *Frontiers in Psychology, 10*, 1730. https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01730/full

Stoeber, J. (2014). How other-oriented perfectionism differs from self-oriented and socially prescribed perfectionism. *Journal of Psychopathology and Behavioral Assessment*, *36*, 329–338. http://dx.doi.org/10.1007/ s10862-013-9397-7

Stoeber, J., & Diedenhofen, B. (2017). Multidimensional perfectionism and counterfactual thinking: Some think upward, others downward. *Personality and Individual Differences*, *119*, 118–121.

Stoeber, J., Feast, A. R., & Hayward, J. A. (2009). Self-oriented and socially prescribed perfectionism: Differential relationships with intrinsic and extrinsic motivation and test anxiety. *Personality and Individual Differences*, *47*, 423–428.

Stoeber, J., Kempe, T., & Keogh, E. J. (2008). Facets of self-oriented and socially prescribed perfectionism and feelings of pride, shame, and guilt following success and failure. *Personality and Individual Differences*, *44*, 1506–1516.

Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, *10*, 295–319. http://dx.doi. org/10.1207/s15327957pspr1004_2

Stoiber, K., & Gettinger, M. (2016). Multi-tiered systems of support and evidence-based practices. In S. Jimerson, M. Burns, & A. VanDerHeyden (Eds.). *Handbook of response to intervention* (pp. 121–141)*. Springer.

Substance Abuse and Mental Health Services Administration (SAMHSA). (2019). *Ready, set, go, review: Screening for behavioral health risk in schools.* Office of the Chief Medical Officer, SAMHSA. https://www.samhsa.gov/sites/default/files/ready_set_go_review_ mh_screening_in_schools_508.pdf

Sugai, G., La Salle, T. P., Everett, & Feinberg, A. B. (2019). Multi-tiered systems of support. In E. Goodman-Scott, J. Betters-Bubon, & P. Donohue (1st ed.). *The school counselor's guide to multi-tiered systems of support* (pp. 1–28). Routledge.

Suicide. (2020). In *Merriam-Webster online dictionary.* https://www.merriam-webster.com/ dictionary/suicide

Sullivan, A. L., Weeks, M. R., Kulkarni, T., & Goerdt, A. (2018). preventing disproportionality through nondiscriminatory tiered services. *Equity by Design*. Midwest & Plains Equity Assistance Center (MAP EAC).

Suveg, C., Hoffman, B., Zeman, J. L., & Thomassin, K. (2008). Common and specific emotion-related predictors of anxious and depressive symptoms in youth. *Child Psychiatry and Human Development, 40*, 223–239.ire

Tabachnick, B., & Fidell, L. S. (2012). *Using multivariate statistics.* Pearson.

Talbot, L. (2016). Test anxiety: Prevalence, effects, and interventions for elementary school students. *James Madison Undergraduate Research Journal*, *3*(1), 42–51.

Terrassier, J. C. (1985). Dyssynchrony - uneven development. In J. Freeman (Ed.), *The psychology of gifted children* (pp. 265–274). John Wiley.

Tucker, C., Smith-Adcock, S., & Trepal, H. C. (2011). Relational-cultural theory for middle school counselors. *Professional School Counseling*, *14*(5), 310–316.

United States Census. (2019). Census bureau report nearly 77 million student enrolled in U.S. schools. https://www.census.gov/newsroom/press-releases/2019/school-enrollment.html

U.S. Department of Education/The Institute of Education Sciences. (2009). Using student achievement data to support instructional decision making. National Center for Education Evaluation and Regional Assistance.

U.S. Department of Education/National Center for Educational Statistics. (2019). National elementary and secondary enrollment by race/ethnicity projection model, 1972 through 2029. Digest of Educational Statistics 2019.

Utley, C., & Obiakor, F. (2015). Special issue: Research perspectives on multi-tiered system of support. *Learning Disabilities: A Contemporary Journal*, *13*(1), 1–2.

Van Hoof, T. J., & Hansen, H. (1999). Mental health services in independent secondary boarding schools: The need for a model. *Psychology in the Schools*, *36*(1), 69–78.

Van Meter, A. R., & Youngstrom, E. A. (2012). Cyclothymic disorder in youth: Why is it overlooked, what do we know, and where is the field headed? *Neuropsychiatry*, *2*(6), 509–519.

Van Meter, A. R., Youngstrom, E. A., & Findling, R. L. (2012). Cyclothymic disorder: A critical review. *Clinical Psychology Review*, *32*(4), 229–243.

VanTassel-Baska, J. (1983). The teacher as counselor for the gifted. *Teaching exceptional children*, *15*(3), 145–150.

Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate response to instruction: The promise and potential problems. *Learning Disabilities Research and Practice*, *18*, 137–146.

Voices for Children. (2021). *Kids count: Data center.* https://datacenter.kidscount.org/data#IL/2/0/char/0

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman., Eds.) (A. R. Luria, M. Lopez-Morillas & M. Cole [with J. V. Wertsch], Trans.) Harvard University Press. (Original manuscripts [ca. 1930-1934])

Waters, A. M., Bradely, B. P., & Mogg, K. (2014). Biased attention to threat in paediatric anxiety disorders (generalized anxiety disorder, social phobia, specific phobia, separation anxiety disorder) as a function of "distress" versus "fear" diagnostic categorization. *Psychological Medicine*, *44*, 607–616.

Watson, D. (2005). Rethinking mood and anxiety disorders: a quantitative hierarchical model for DSM-V. *Journal of Abnormal Psychology*, *114*, 522–536.

Weir, K. (2019, March). Worrying trends in U. S. Suicide rates. *Monitor on Psychology*, *50*(3). http://www.apa.org/monitor/2019/03/trends-suicide

Weisenburgh-Synder, A. B., Malmquist, S. K., Robbins, J. K., & Lipshin, A. M. (2015). Teaching of mathematics and a multi-level assessment in a generative classroom. *Learning Disabilities: A Contemporary Journal*, *13*(1), 21–41.

Weist, M.D., Rubin, M., Moore, E., Adelsheim, S., & Wrobel, G. (2007). Mental health screening in schools. *Journal of School Health*, *77*(2), 53–58.

Werner, E. E. (1995). Resilience in development. *Current Directions in Psychological Science*, *4*, 81–85.

Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., & Christensen, H. (2017). School-based depression and anxiety prevention programs for young people: A systematic review and meta-analysis. *Clinical Psychology Review*, *51*, 30–47.

Widiger, T. A. (2009). *Neuroticism.* In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 129–146). The Guilford Press.

Widiger, T. A., & Ottmanns, J. R. (2017). Neuroticism is a fundamental domain of personality with enormous public health implications. *World Psychiatry*, *16*(2), 144–145.

Wiersma, W., & Jurs, S. G. (2009). *Research methods in education: An introduction* (9th ed.). Pearson.

Wiggins, L. D., Rice, C. E., Barger, B., Soke, G. N., Lee, L., Moody, E., Edmondson-Pretzel, R., & Levy, S. E. (2019). DSM-5 criteria for autism spectrum disorder maximized diagnostic sensitivity and specificity in preschool children. *Social Psychiatry and Psychiatric Epidemiology*, *54*, 693–701.

Williams, S. N. (2013). Bring in universal mental health checks in schools. *The British Journal of Medicine*, *347*(7930), f5478.

Woodard, T. J., Ume, U., & Davis, R. (2019). An introduction o oppositional defiant disorder and conduct disorder. *US Pharmacist*, *44*(11), 29–32.

World Health Organization. (2019, October 23). *Adolescent mental health*. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

Wright, B. L., Ford, D. Y., & Young, J. L. (2017). Ignorance or indifference? Seeking excellence and equity for under-represented students of color in gifted education. *Global Education Review*, *4*(1), 45–60.

Yell, M. L. (2018). Response to intervention, multi-tiered systems of support, and federal law analysis and commentary. In P. C. Pullen & M. J. Kennedy (1st ed.), *Handbook of response to intervention and multi-tiered systems of support* (pp. 26–39). Routledge.

Youngstrom, E. (2009). Definitional issues in bipolar disorder across the life cycle. *Clinical Psychology: Science and Practice*, *16*(2), 140–160.

Youngstrom, E., Van Meter, A., & Perez Algorta, G. (2010). The bipolar spectrum: Myth or reality. *Current Psychiatry Reports*, *12*(6), 479–489.

Zhang, L. (2011). Hardiness and the Big Five personality traits among Chinese university students. *Learning and Individual Differences*, *21*(1), 109–113. https://doi.org/10.1016/j.lindif.2010.05.006

APPENDIX

IRB APPROVAL NOTICE

APPROVAL NOTICE

Initial Review

17-Sep-2020

TO: Kevin Kusy (XXXXXXXX)
Counseling, Adult and Higher Education

RE: Protocol # XXXX-XXXX "**EXAMINING MENTAL HEALTH AND RESILIENCY FACTORS OF GIFTED AND TALENTED STUDENTS IN AN ACCELERATIVE, RESIDENTIAL PROGRAM**"

Your **Initial Review** submission was reviewed and approved under **Member Review** procedures by the Institutional Review Board on **17-Sep-2020**. Please note the following information about your approved research protocol:

Protocol Approval period: 17-Sep-2020 - 16-Sep-2021

It is important for you to note that **as an investigator conducting research that involves human participants, you are responsible for ensuring that this project has current IRB approval at all times.** If your project will continue beyond the above date, or if you intend to make modifications to the study, you will need additional approval and should contact the Office of Research Compliance, Integrity, and Safety for assistance. In addition, you are required to promptly report to the IRB any injuries or other unanticipated problems or risks to subjects or others.

Please note that the IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Informed Consent:

Unless you have been approved for a waiver of the written signature of informed consent, this notice includes a date-stamped copy of the approved consent form for your use. NIU policy requires that informed consent documents given to subjects participating in non-exempt research bear the approval stamp of the NIU IRB. This stamped document is the only consent form that may be photocopied for distribution to study participants.

If consent for the study is being given by proxy (guardian, etc.), it is your responsibility to document the authority of that person to consent for the subject. Also, the committee recommends that you include an acknowledgment by the subject, or the subject's representative, that he or she has received a copy of the consent form.

You are responsible for retaining the signed consent forms obtained from your subjects for a minimum of three years after the study is concluded.

Continuing Review:

Continuing review of the project, conducted at least annually, will be necessary until data collection is complete and you no longer retain any identifiers that could link the subjects to the data collected. Please remember to use your **protocol number** (XXXX-**XXXX**) on any documents or correspondence with the IRB concerning your research protocol.

Closing the Study:

Please note that a **final report submission** should be created in the record in lieu of an annual continuation form if data collection has ended and the data are free of identifiers. The final report is a separate submission form in the list of options in the InfoEd record, and it may be submitted prior to the annual review deadline.

With all of this said, the IRB extends best wishes for success in your research endeavors!