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## Investigating a Mental Health Literacy Intervention Among Economically Disadvantaged Youth

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INVESTIGATING A MENTAL HEALTH LITERACY INTERVENTION AMONG  
ECONOMICALLY DISADVANTAGED YOUTH

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Counselor Education and School Psychology  
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## ABSTRACT

Mental health is a critical and pervasive issue for children and adolescents in the United States, with one in five youth living with a diagnosable mental health condition (Center for Disease Control and Prevention, 2017). Despite the increasing rates of mental health disorders, barriers to treatment are abundant and most young people do not receive appropriate treatment (Merikangas, 2009). Mental health literacy is the knowledge and beliefs surrounding mental health that guide recognition, management, and prevention (Jorm, 1997, p. 143). Mental health literacy is a particularly important framework for youth from economically disadvantaged backgrounds as they face increased vulnerabilities to mental health distress and barriers to treatment (World Health Organization, 2017).

The aim of the present study was to investigate if an after school mental health literacy intervention changed adolescents' self-reported measures of mental health knowledge, mental health stigma, help-seeking, and hope across three waves of data collection: wave one (immediately before the intervention), wave two (immediately after the intervention), and wave three (one month post-intervention) as measured by: (a) *Mental Health Knowledge and Attitude Survey* [MHKAS] (Kutcher, McLuckie, & Weaver, 2014), (b) *General Help Seeking Questionnaire* [GHSQ] (Wilson, Deane, Ciarrochi, & Rickwood, 2005) 2005), (c) *Children's Hope Scale* [CHS] (Snyder et al., 1997).; and *Self-Stigma of Mental Illness-Short Form* [SSMIS-SF] (Corrigan et al., 2012).

Main findings of the investigation included a significant difference for multivariate analysis between wave one and wave two (Pillai's Trace = .546,  $F(4, 56) = 16.816$ ,  $p < .001$ ,

partial  $\eta^2 = .546$ ). There was a statistically significant positive change in mental health knowledge ( $p < .001$ ;  $d = 1.992$ ) and help-seeking attitudes ( $p = .025$ ;  $d = .934$ ) and a significant negative change in personal mental health stigma ( $p < .001$ ;  $d = .582$ ) across wave one and wave two. There was no statistically significant change in hope ( $p = .904$ ;  $d = .000$ ) across wave one and wave two. Moreover, there was a statistically significant change from wave one to wave three for multivariate within subjects analysis (Pillai's Trace = .604,  $F_{(4, 27)} = 10.297$ ,  $p < .001$ , partial  $\eta^2 = .604$ ), indicating changes were maintained at one-month follow-up. Specifically, there was a statistically significant positive change in mental health knowledge ( $p < .001$ ,  $d = 1.960$ ) and help-seeking attitudes ( $p = .007$ ;  $d = 1.210$ ) and a significant decrease in mental health stigma ( $p = .002$ ;  $d = 1.210$ ). There was no significant change in measures of hope from wave one to wave three ( $p = .467$ ;  $d = .271$ ). Results of the study are reviewed and compared to similar studies. The researcher discusses implications of findings for counseling, counselor education, and public policy.

This dissertation is dedicated to my Mom and Dad.

Everything I am is because of you.

Thank you.

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## CHAPTER ONE: INTRODUCTION

One in five youth aged 13-18 live with a diagnosable mental health disorder (Center for Disease Control and Prevention, 2017). Depression and anxiety are notably prevalent in young people; anxiety disorders affect approximately 30% of youth in the United States (Merikangas, 2010) and rates of depression in children and adolescents have increased from 8.7% in 2005 to 11.5% in 2014 (Mojtabai, Olfson, & Han, 2016). Currently, mental health concerns rank as a leading risk factor for adolescent mortality; suicide is the second most common cause of death for youth (Center for Disease Control and Prevention, 2016). Moreover, mental health concerns place an enormous economic burden on individuals and families; estimates include approximately \$201 billion annually due to loss of productivity and treatment services in the United States (Roehrig, 2016).

Despite the common occurrence of mental health disorders, barriers to treatment are abundant and 60% of young people do not receive appropriate mental health treatment (Merikangas et al., 2010). This service gap is even greater for children and adolescents from racial/ethnic minority groups and economically vulnerable backgrounds (Olfson, Druss, & Marcus, 2015). Concerns regarding cost of treatment, confidentiality, belief in the ability to handle problems on their own, and beliefs that treatments will not work are identified as reasons individuals do not seek help (Berridge, McCann, Cheetham, & Lubman, 2018; Sayer et al., 2011). Additionally, many children and adolescents lack the emotional competence, have negative feelings about help seeking, and stigmatizing attitudes towards mental illness (Gulliver, Griffiths, & Christensen, 2010). Conversely, youth who do seek help are more likely to display



emotional competence, possess knowledge surrounding mental health, experience social encouragement from peers, and have trusted relationships with professionals (Rickwood, Deane, & Wilson, 2007). Thus, children and adolescents are likely to benefit from education that leads them toward help-seeking behavior and reduced stigma towards mental health disorders.

Considering the widespread prevalence, barriers to treatment, and economic impact of mental illness, researchers have proposed a paradigm shift, conceptualizing mental health similarly to physical health, which emphasizes knowledge and prevention alongside treatment options. *Mental health literacy* (Jorm et al., 1997) is defined as individual's knowledge and beliefs surrounding mental health that guide recognition, management, and prevention. Mental health literacy (MHL) encompasses an individual's ability to identify specific mental health disorders, seek information pertaining to mental health, possess knowledge of risk factors, causes, and self-help treatments, and attitudes to promote recognition and help-seeking.

The guiding principle of MHL is that treatment alone is insufficient; knowledge and prevention must also be emphasized to decrease the impact of mental health disorders in the affected person, their families, and society (Jorm, 2012). Thus, MHL also encompasses *positive mental health*, defined as protective factors such as hope, self-esteem, and problem-solving which aid against mental illness. Hope is a particularly critical construct of positive mental health because it encompasses an individual's perceived capability to reach goals as well as motivation via agency thinking (Snyder, Rand, & Sigmon, 2018). Researchers investigating hope found that there are unique mental health benefits to a hopeful disposition including increased well-being and adaptive psychological and school-related functioning (e.g., Dunstan, Falconer, & Price, 2017; Marquez et al., 2011). Thus, hope may be an important contributor to overall

mental health and a component of MHL. In sum, the framework of MHL may provide benefits to youth, including increased awareness, preventative care, and positive coping. To this end, the primary aim of this investigation was to investigate the influence of a MHL intervention for adolescents in an after-school setting on measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes.

### Statement of the Problem

17.1 million children in the United States are estimated to be living with a mental health condition (Child Mind Institute, 2015) and mental health diagnoses in children and adolescents are increasing at an alarming rate (Mojtabai, Olfson, & Han, 2016). Despite the demand for mental health services for this population, there are significant barriers to treatment and most youth do not receive appropriate services (U.S. Department of Health and Human Services, 2016). Negative attitudes about help-seeking, insufficient knowledge about how to seek help, and mental health stigma are identified as factors that prevent adolescents from seeking help (Gulliver, Griffiths, & Christensen, 2010). Inadequate mental health treatment has consequences for adolescents, as mental health related issues are associated with lower academic achievement (McLeod, Uemura, & Rohrman, 2012), greater family distress and conflict (Hancock, Mitrou, Shipley, Lawrence, & Zubrick, 2013), and increased risk of suicidality (Hill, Castellanos, & Pettit, 2011). In addition, racial and ethnic minority youth are disproportionately impacted by the effects of mental health problems and less likely to receive appropriate treatment (Olfson, Druss, & Marcus, 2015).

## Mental Health Among Racial/Ethnic Minority Groups

Although researchers have found racial and ethnic minorities to have lower overall rates of mental health diagnoses, mental health problems in racial and ethnic minorities tend to be more persistent and severe compared to white non-Latino individuals (American Psychological Association, 2017; Budhwani, Herald, & Chavez-Yenter, 2015). Moreover, racial and ethnic minority youth are significantly less likely to utilize mental health services and face heightened barriers to treatment including stigma, lack of quality care, and financial concerns compared to white non-Latino youth (Alegria, et al., 2012).

Youth from racial and ethnic minority backgrounds are significantly more likely to experience poverty. 39% of African-American youth and 33% of Latino youth live in poverty in the United States compared to 14% of non-Latino, White, and Asian children and adolescents (U.S. Census Bureau, 2016). Poverty poses a psychological burden on children and families as the amount of time spent in poverty predicts externalizing symptoms of mental health concerns in adulthood (Evans & Cassells, 2013). Furthermore, financial hardship predicts the onset of anxiety, mood, behavioral and substance use disorders (McLaughlin et al., 2011) and is associated with an increased risk of suicidality (Cheung et al., 2018). Considering the psychological ramifications of poverty, researchers have called for increased research among economically vulnerable and racial and ethnic minority groups with an emphasis on preventive mental health initiatives (Salerno, 2016). As such, this study was implemented at six Boys and Girls Clubs across the central region of a southeastern state, with each club representing a high

percentage of youth from racial and ethnic minority and economically disadvantaged backgrounds.

### Mental Health Literacy

Mental health literacy (MHL) is defined as "knowledge and beliefs about mental disorders which aid recognition, management or prevention (Jorm et al., 1997, p. 143)." Jorm and colleagues propose MHL is directly tied to symptom management activities; recognizing mental health distress leads to behavioral change which results in a reduction of symptoms. However, several related factors contribute to this process including beliefs about the causes of mental health problems and attitudes towards seeking help. Furthermore, individuals who fear negative repercussions or stigma from self or others are more likely to resist mental health treatment (Corrigan, Druss, & Perlick, 2014). Summarily, MHL encompasses knowledge of mental health disorders, attitudes including stigma, and ability to cope.

### Knowledge of Mental Health

Recognition of mental health concerns and distress is a primary component of MHL (Jorm, 1997) However, adolescents have difficulty identifying mental health disorders and distinguishing them from the normal stresses of adolescent life. Olsson & Kennedy (2010) assessed MHL among adolescents in a small town in eastern USA ( $N = 286$ ) and found 27.5% of respondents correctly identified anxiety and 42.4% correctly identified depression. Notably, recognition of mental health disorders predicted endorsement of helping action such as telling an

adult about the problem (depression: odds ratio 3.27; CI 1.43-.46, anxiety: OR: 4.43; CI 2.23-8.79). Similarly, Coles and colleagues (2016) found that in a sample of adolescents ( $N = 1,104$ ), 40% of respondents correctly identified depression and less than 1% identified social anxiety when presented with vignettes portraying mental health disorders, instead opting for identifiers such as “shy” “quiet” and “low self-esteem.” Furthermore, Skre and colleagues (2013) found that in a sample of adolescents ( $N = 1,070$ ), 28.3% of adolescents correctly identified depression, 24% schizophrenia, 12.4% anxiety, and 66.2% eating disorder. The authors noted that prevalence of mental health concerns did not predict recognition, less common diagnoses like schizophrenia and eating disorders were more easily identified than depression and anxiety (Skre et al., 2013). Thus, education on the most common mental health concerns faced by adolescents may make considerable impact and lead to increased help-seeking behavior.

The relationship between mental health knowledge, and demographic factors (e.g., ethnicity, socioeconomic status, and age) have seldom been investigated. Researchers have analyzed correlations between gender and mental health knowledge and concluded that females are more likely to possess higher levels of mental health knowledge than males (Burns and Rapee, 2006; Coles, Gibb, Ravid, & George-Denn 2016; Cotton et al., 2006; Reavley, Morgan, & Jorm, 2014; Swami, 2012). However, Wei, McGrath, Hayden, & Kutcher (2015) in a scoping review of mental health measures state that contextual factors such as culture, ethnicity, and geography’s impact on MHL is still unknown. Additionally, Salerno (2016) notes that the several studies investigating mental health awareness programs do not include demographic variables at all. In sum, adolescent’s overall knowledge of mental health is limited; however, the relationship between cultural factors and mental health knowledge is not currently known.

## Mental Health Stigma

The most established definition of stigma is “an attribute that is deeply discrediting, that reduces someone from a whole and usual person to a tainted, discounted one” (Goffman, 1963, p.3). Mental health stigma encompasses *personal stigma*, negative attitudes and beliefs that lead to rejection, avoidance, and discrimination against those with mental health concerns and *self-stigma*: the negative attitudes and beliefs about self that is internalized by the stigmatized person (Corrigan et al., 1999). Mental health stigma is identified as a primary barrier to seeking mental health services (Pinto-Foltz, & Logsdon, 2009) and is associated with increased risk of premature termination of mental health treatment (Knaack, Mantler, & Szeto, 2017). Adolescents may experience heightened sensitivity to stigma. Moses (2010) conducted a qualitative analysis of narratives from mixed method interviews with adolescents with mental health concerns ( $N = 56$ ) and found that 62% ( $n = 35$ ) of adolescents reported stigmatization in their relationships with peers, 46% ( $n = 26$ ) described stigmatizing interactions with family members, and 35% ( $n = 20$ ) described stigma stemming from school staff, underscoring the pervasive nature of stigma within adolescents’ primary social settings. Moreover, the stigma experienced by adolescents in inpatient mental health care ( $N = 80$ ) is heightened, with nearly 75% ( $n = 60$ ) of children reporting stigmatizing experiences upon returning to school from a psychiatric hospitalization (Moses, 2014).

Mental health stigma in the adolescent population is common. The unique factors that influence mental health including gender, knowledge, and stigma paves the way for comprehensive, tailored mental health interventions. For example, when adolescents perceive an

unclear cause of mental health distress, they judge their peers with mental health concerns more harshly. Adolescents also think of the potential disruption peers with mental health concerns may have on group dynamics (O'Driscoll, Heary, Hennessy, & McKeague, 2015). Additionally, researchers have found that males experience elevated levels of mental health stigma compared to females. For example, Dolphin and Hennessy (2014) found when presenting vignettes of characters with mental health concerns, participants ( $N = 403$ ) endorsed greater acceptance of the female character compared to the male character ( $\beta = .20, p < .05$ ). Along this same trend, Cear, Batterham, Griffiths & Christensen (2016) examined levels of public stigma and perceived stigma regarding generalized anxiety disorder (GAD) and found that male gender, lower anxiety literacy, non-English speaking background, and not living with both or one parent predicted personal GAD stigma ( $F(11, 1726) = 21.8, p < .001, 12.2\%$  variance explained). Additionally, being male, living with one parent, higher levels of depressive symptoms, and anxiety literacy ( $F(11, 1726) = 5.3, p < .001, 3.3\%$  of variance explained) predicted perceived stigma. Additional variables associated with higher mental health stigma include identifying with the “popular” peer group ( $B = .27, p = .01$ ), affiliating with friends with mental health concerns ( $B = .34, p < .001$ ), higher internalizing symptomology ( $B = .28, p = .01$ ), and disciplinary problems ( $B = .24, p < .05$ ) (Moses, 2014). In sum, mental health stigma is prevalent in the adolescent population, particularly among adolescent males, and anti-stigma programs are needed.

## Help-Seeking

Help-seeking is a process involving adolescents seeking assistance from informal or formal services to cope with problems, and encompasses help-seeking efficacy, the belief that one can find professional help and knowledge of help-seeking resources (Rickwood, Thomas, & Bradford, 2012). Despite the prevalence of mental health issues in adolescence, only one third of adolescents diagnosed with a mental health disorder seek professional help (CDC, 2014). The World Health Organization (2007) synthesized the critical issues surrounding help-seeking in the adolescent population and has called for increased research and programs to target the discrepancy between diagnosis and treatment. However, help-seeking behavior remains a significant area of adolescent health concern. When mental health concerns are left untreated, mental health concerns in adolescence intensify and mental health declines (Gillen, Berry & Bater, 2016; Thapar, Collishaw, Pine & Thapar, 2012). Currently, suicide is the leading cause of death among girls age 15-19 and is the third leading cause of death among adolescents globally (World Health Organization, 2017). Moreover, Substance Abuse and Mental Health Services Administration (2011) reports that 30% of individuals who experience chronic homelessness report having a serious mental health problem. Thus, adolescents with untreated mental health problems have an increased risk of intensifying mental health concerns, housing instability, homelessness, and suicide.

When faced with mental health problems, adolescents tend to prefer informal means of help-seeking such as asking friends and family members for help over formal help-seeking (Cakar & Savi, 2014; D'Avanzo et al., 2012; Rickwood, Deane, & Wilson, 2007). It is important



to note that parents often act as a gateway for adolescent mental help-seeking by recognizing their adolescent child's mental health distress and connecting them to appropriate resources (Reardon et al., 2017; Thurston, Phares, Coates, & Bogart, 2015). Although parental involvement is a valuable means of connecting adolescents with treatment options, parental referrals occur disproportionately in families of high socioeconomic status, resulting in a large percentage of economically vulnerable adolescents not receiving appropriate treatment options (Benjet et al., 2016). Additionally, researchers have identified ethnicity and culture as moderating variables between mental health need and help-seeking behavior in adult populations (Guo, Nguyen, Weiss, Ngo, & Lau, 2015; Turner, Jensen-Doss, & Heffer, 2015), underscoring the need for future research surrounding adolescent help-seeking to include diverse samples (Divin, Harper, Curran, Corry, & Leavey, 2018).

Several factors contribute to adolescents' likelihood of seeking help when experiencing mental health distress. In a study investigating the accessibility of school-based mental health services, Biolcati, Paaraeti, and Mameli (2018) found that in a sample of high school students ( $N = 2,335$ ), males were less likely to seek treatment compared to females (73.87 vs. 63.333%,  $p < .001$ ). Furthermore Nestor, Cheek, and Liu (2016) found racial and ethnic minority youth are less likely to receive outpatient mental healthcare ( $OR_{\text{Black}} = .4$ ,  $OR_{\text{Native American}} = .2$ ,  $OR_{\text{Hispanic}} = .55$ ,  $OR_{\text{Asian/Pacific Islander}} < .01$ ,  $OR_{\text{multiracial}} = .3$ ) compared to majority youth ( $OR_{\text{white}} = 1.00$ ). In addition to demographic factors, stigma has a large role in deciding to seek help. Yap, Wright, and Jorm (2011) found that in a sample of youth aged 12-25 ( $N = 2,935$ ), adolescents who held the stigmatizing belief that people with mental health problems were "weak, not sick" had decreased odds of believing a counselor would be helpful if they had a mental health concern ( $OR: 0.55$ -

0.99,  $p = 0.007$ ). In sum, significant barriers impede adolescents from seeking appropriate help including gender roles, the influence of culture, knowledge, and mental health stigma.

## Hope

In order to understand the nature of help-seeking, researchers seek to determine both the barriers to help-seeking and the positive psychological factors that facilitate help-seeking. Recent attention has been drawn to the concept of hope, defined as “the perceived capability to derive pathways to desired goals, and motivate oneself via agency thinking to use those pathways” (Snyder, 2002, p. 249). Hope is a burgeoning theory of interest in the field of positive psychology, as a hopeful disposition is associated with higher levels of well-being, fewer symptoms of depression, and positive coping (Davidson, Feldman, & Margalit, 2012; Gallagher & Lopez, 2009; Hassija, Luterk, Naragon-Gainey, Moore, & Simpson, 2012).

A hopeful disposition may mitigate symptoms of mental health problems. Yeung, Ho, Mak (2015) investigated the relationship of hope to happiness, anxiety, depressive symptoms, and interpersonal difficulties in a sample of 712 Chinese adolescents. Researchers found that a hopeful disposition was significantly associated with happiness ( $\beta = .297, p < .001$ ) and negatively associated with anxiety ( $\beta = -.078, p < .01$ ), depressive symptoms ( $\beta = -.066, p < .01$ ), and interpersonal difficulties ( $\beta = -.066, p < .001$ ). Authors concluded that a hopeful thinking style may serve as a protective factor for adolescents. Additionally, McDermott and colleagues (2016) investigated the relationship between hope and help-seeking in a sample of college students ( $N = 2,461$ ) using multigroup structural equation modeling. Researchers found a

robust positive relationship between hope and intentions to seek help from informal services for a personal-emotional problem ( $r = .45, p < .001$ ) but no such relationship existed between hope and intentions to seek help from formal services ( $r = .01, p = .753$ ). The authors concluded that further research was needed to investigate the relationship between hope and help-seeking, speculating that formal services may be utilized when a person perceives informal services to be insufficient in addressing their needs. In sum, individuals with higher levels of hope may be protected against mental health problems and have greater intentions to seek help.

### Mental Health Literacy Interventions

The World Health Organization (2013) has called for comprehensive, responsive, and integrative mental health education in school and community settings tailored to youth. However, this demand has not yet been met in the K-12 public school system in the United States. Although considerable initiatives to promote mental health have occurred at the local, state, and federal levels, efforts have largely been fragmented and unable to be sustained in the school structure (Fazel et al., 2014; Weist et al., 2017). Furthermore, the feasibility of implementation of mental health education programs has generally fallen on school teachers who report high levels of concern for the mental health of their students but very little training or knowledge on mental health (Moon, Willford, Mendenhall, 2017). Therefore, identifying accessible interventions that promote the core elements of MHL: mental health knowledge; stigma; help-seeking; and positive coping is critical if comprehensive mental health education were adopted in the United States.

Systematic reviews of MHL and education programs have highlighted the notion that MHL research is still in its infancy and future research is needed to further determine its' efficacy (Wei, Hayden, Kutcher, Zygmunt, & McGrath, 2012; Salerno 2016). Although most researchers of school-based MHL interventions report significant differences in measures of knowledge, stigma, and help-seeking, the research is plagued by methodological limitations. Wei, Hayden, Kutcher, Zygmunt, & McGrath (2012) note that most researchers fail to report confounding variables, attrition rates, and lack any mention of adverse events and outcomes associated with the intervention. Furthermore, the bulk of research on MHL has targeted convenience samples of university students (Lo, Gupta, Keating, 2018), despite the demand for mental health services in the adolescent population. Moreover, there has yet to be a MHL intervention focused on economically vulnerable and racial and ethnic minority populations (Salerno, 2016). In sum, research on MHL in school and community settings is still emerging; rigorous research design that includes adolescents from racial and ethnic minority groups propels this research forward.

### Theoretical Foundation

Hope Theory (Snyder, 1994) served as the guiding theoretical foundation for this research study. The main premise of Hope Theory is that hope predicts goal attainment. Hope is a motivational state based on three interactive components: (a) goals, (b) pathways, and (c) agency. *Goals* act as the anchor of hope theory, providing direction and an endpoint for hopeful thinking. *Pathways* act as the routes taken to achieve goals. Higher hope individuals can generate

multiple pathways and persist in their goals despite barriers they may encounter. Finally, *agency* refers to the motivation individuals have to use pathways to achieve goals (Snyder, 2000). In the context of MHL, *goals* take on the role of seeking formal and informal help, *pathways* encompass the multiple routes to mental health recovery such as seeking information about mental health and engaging in coping strategies, and *agency* refers to the motivation to persist in the pursuit and the belief that their mental health can improve despite difficult times.

Researchers have investigated the relationship between hope, mental health, and goal attainment to substantiate Snyder's conceptualization of hope. Ciarrochi, Parker, Kashdan, Heave, & Barkus (2015) collected measures of hope and positive and negative affect from adolescents ( $N = 295$ ) over a 6-year period. Using structural equation modeling, authors found that hope had a significant effect on change in positive affect over the course of high school ( $\beta = 0.23, p < .001$ ). Furthermore, hope predicted lower levels of sadness ( $\beta = -0.12$ ), fear ( $\beta = -0.10$ ), and hostility ( $\beta = -0.10$ ),  $p < .001$  among adolescents. Additionally, Kivlighan and colleagues (2018) explored the relationship between hope, belongingness, and academic achievement with a sample of undergraduates ( $N = 167$ ), finding that changes in students' ratings of hope were associated with changes in their semester grade point average ( $\gamma_{120} = 1.31, .09, SE = .42$ ),  $t(21) = 3.13, p < .005$ ). Moreover, a positive relationship exists between hope and informal help-seeking ( $r = .45, p < .001$ ; McDermott et al., 2016). In sum, the components of hope: goals, pathways, and agency have distinct relevance in the context of MHL.

### Purpose of the Study

As individuals grapple with the complexity of mental health and its impact on society, the application of MHL becomes increasingly important. However, limited research exists investigating MHL and its influence on adolescents of low socioeconomic status and racial/minority background. Given the increased impact of mental health concerns and barriers within these populations, further research is critical. The purpose of this study was to investigate if a MHL curriculum, *Mental Health and High School Curriculum Guide (The Guide*; Kutcher, 2009) changes adolescents' measures of mental health knowledge, mental health stigma, hope, and attitudes towards help-seeking over time.

### Primary Research Question

Do adolescents reported levels of mental health knowledge, mental health stigma, hope, and help-seeking attitudes change between pre-test (wave one) and post-test (wave two) during the course of a MHL intervention?

### Exploratory Research Question One

Is there a significant difference between participants who frequently attended the MHL intervention (< 5 weeks) compared to participants who infrequently attended (> 5 weeks) the MHL intervention on measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes from pre-test (wave one) to post-test (wave two)?

## Exploratory Research Question Two

Is there a significant difference between middle school and high school students' measures of mental health knowledge, stigma, hope, and help-seeking attitudes from pre-test (wave one) to post-test (wave two)?

## Secondary Research Question

Do adolescents reported levels of mental health knowledge, mental health stigma, hope, and help-seeking attitudes change between pre-test (wave one) and follow-up (wave three) over the course of a mental health literacy intervention?

## Significance of the Study

Adolescence is often a tumultuous and vulnerable time in an individual's life. Although mental health concerns in adolescence is common; 60% of youth with mental health challenges do not receive appropriate mental health treatment. This service gap is even wider among adolescents from racial and ethnic minority groups who face increased mental health stigma and barriers to treatment. As such, research aimed to promote mental health in adolescents from ethnic and racial minority groups is warranted. The results from this investigation provide an increased understanding of how educators and counselors can support adolescents from racial and ethnic minority groups' mental health and provides a framework for implementation of a MHL curriculum into the school and community setting. Additionally, this study furthers the

field of MHL and provide relevant research applicable to counselor educators addressing mental health stigma and help-seeking in their educational curriculum.

### Methodology

The following section presents the methodology of the research study. The methodology includes (a) research design; (b) population and sampling; (c) data collection procedures; (d) intervention curriculum; (e) instrumentation; (f) statistical analysis; and (g) ethical considerations and limitations of the study.

### Research Design

This research study utilized a one-group quasi-experimental design to measure the influence of the *Guide* curriculum on measures of mental health knowledge, mental health stigma, hope, and attitudes towards help-seeking. This study took place at six Boys and Girls clubs in the central region of a southeastern state. The intervention was divided into six 75-minute sessions occurring once a week. There were three waves of data collection: (a) first session (wave one); (b) last session (wave two); and (c) at one-month post intervention (wave three).



## Population and Sampling

Purposeful sampling involves researchers using their judgement to select a specific sample that will provide needed information (Fraenkel & Wallen, 2011). The aim of this study was to investigate a MHL intervention on a sample of adolescents from economically disadvantaged backgrounds. Therefore, the researcher purposefully partnered with Boys and Girls Clubs, a non-profit with the mission of providing a safe, inclusive, affordable place for kids and teens during out-of-school time (Boys and Girls Clubs of America, 2018). Boys and Girls Clubs seeks to serve young people who are frequently marginalized or overlooked in other settings. Boys and Girls Club branches (i.e., clubs) are community centers for young people to go to after school hours. Boys and Girls Club initiatives include programming on childhood bereavement, disability inclusion, and LGBTQ inclusion. The accessible population for the present study was adolescents enrolled in six Boys and Girls Club branches in the central region of a southeastern state. The inclusion criteria for this study was: (a) frequent attendance at Boys and Girls clubs (determined by Boys and Girls Clubs staff); (b) parent or guardian consent; (c) being between 11 and 18 years of age; and (d) English level proficiency. The required sample size for the present study was determined by doing an *a priori* power analysis using the software G\*Power (Erdfelder, Lang, & Buchner, 2006). Previous research has indicated small to medium effect sizes (Kutcher, McLuckie, Weaver, and Wei, 2014). Therefore, given the parameters of an alpha of .05, small effect size (.25), power of .80, and two time-points (pre-test and post-test), a sample size of 65 participants was required for adequate power. The researcher recruited approximately 80 participants to account for attrition associated with previous MHL

interventions (McLuckie, Kutcher, Weaver, & Wei, 2014; Kutcher, 2015). Further, the researcher collaborated with Boys and Girls Clubs staff to develop strategies to mitigate attrition including: allowing for personal recruitment from Boys and Girls staff to club members and providing refreshments to participants during each session.

### Data Collection Procedures

Alongside personal recruitment from Boys and Girls clubs' staff, the researcher recruited participants through visitations to the six Boys and Girls Clubs prior to the start of the intervention. The researcher explained the study including the purpose of the research, the time commitment, and the potential benefits to the intervention and answered any questions the club members had about participating in the study. After recruitment, parents or guardians were provided detailed informed consent forms with an emphasis on voluntary participation, ability to leave the study without penalty, and confidentiality of data. Youth received verbal informed assents at the start of the intervention.

The intervention was implemented by counselors-in-training at a nearby large public university. Each club had two designated counselors-in-training to co-facilitate the intervention, with the exception of one club which was facilitated by one counselor-in-training. The researcher provided counselors-in-training with a comprehensive training prior to the start of the intervention to increase treatment fidelity. Training consisted of a half day meeting where the researcher oriented counselors-in-training to the curriculum, introduced teaching strategies to engage youth, and reviewed group facilitation skills to encourage dialogue among participants.

The researcher went through each session of *The Guide* which corresponded to detailed lesson plan with associated PowerPoint slides, discussion questions, and activities. Moreover, counselors-in-training participated in a one-hour lesson on cultural considerations when working with youth from racial and ethnic minority backgrounds, facilitated by a counselor educator with expertise in multicultural counseling. At the end of the training, counselors-in-training completed a 30-question multiple-choice fidelity test covering the curriculum and procedural responsibilities associated with the research. Counselors-in-training all scored above an 80%, the required threshold for participation. Counselors-in-training were not compensated; however, participation satisfied their *Counseling Practicum I* requirement of leading ten hours of group counseling.

Counselors-in-training were responsible for teaching the six modules to their assigned club. At the beginning of the first session of the intervention and immediately following the last session, counselors-in-training distributed assessment materials, presented as paper assessments. Although all assessments were self-report in nature, the researcher verbally explained each instrument, reviewed the purposes of the study, and answered any questions the counselors-in-training may have about the study or instruments. At each data collection point, counselors-in-training collected assessments from participants, secured in a latch-lock filing box, and returned to the principal investigator for appropriate data collection procedures. The researcher and counselors-in-training were present for data collection at wave three.

## Intervention

This research study utilized the evidence-based MHL curriculum *Mental Health and High School Curriculum Guide* (e.g., *The Guide*, Kutcher, 2009). *The Guide* was developed in collaboration between mental health experts, educators, and the Canadian Mental Health Association (CMHA). *The Guide* takes approximately eight hours to implement and has six distinct modules: (1) stigma of mental health, (2) understanding mental health, (3) specific mental health disorders, (4) experiences of mental illness, (5) seeking mental health help, and (6) the importance of positive mental health.

*The Guide* has been previously investigated and demonstrated promising results in improving students' mental health knowledge and reducing mental health stigma. Kutcher, McLuckie, Weaver, and Wei (2014) found that Canadian high school students' ( $N = 273$ ) knowledge of mental health significantly increased ( $p < .001$ ,  $d = .90$ ) and attitudes towards mental health improved ( $p < .001$ ;  $d = .25$ ). Researchers have replicated this study in other high schools in metropolitan areas of Canada have found similar findings (Kutcher, 2015; Milin et al., 2016). However, no research studies are currently published that investigate *The Guide* in the United States.

## Data Collection Instruments

This study incorporated four self-report instruments and a demographic scale. Information on each of the four assessments is presented below.

### Demographic Scale

A brief demographic scale was administered to participants to measure age, gender, grade, race/ethnicity, income (measured through free and reduced lunch enrollment), previous exposure to counseling, perception of personal mental health, and strength of familial relationships. Prior to data collection, the researcher submitted the demographic scale to the university's Institutional Review Board and co-chairs for feedback regarding readability and face-validity.

### Knowledge of Mental Health and Attitude Survey

The *Knowledge of Mental Health and Attitude Survey* (McLuckie, Weaver, & Wei, 2014) assesses knowledge and attitudes surrounding mental health. The self-report survey consists of 28 items assessing mental health knowledge. *The Knowledge of Mental Health and Attitude Survey* was specifically designed for high school students and has an internal consistency of  $\alpha = .71$  in a sample of 273 high school students. The instrument has undergone multiple revisions and authors encourage researchers and educators utilizing the scale to modify as they see fit.

### Self-Stigma of Mental Illness Scale-Short Form

The *Self-Stigma of Mental Illness Scale-Short Form* (Corrigan et al., 2012) is a 20-item instrument intended to assess attitudinal stigma. The purpose of SSMS-SF is to evaluate the effectiveness of programs geared towards increasing hopefulness, recovery, and stigma change. The scale consists of four subscales: awareness of stigma in public stigma, agreement with

stigma, application to self, and harm to self-esteem. Internal consistencies range from from  $\alpha = .67$  to  $\alpha = .87$  for the three subscales with the exception of the application scale with an internal consistency of  $\alpha = .22$  (Corrigan et al., 2006; Corrigan et al., 2011; Rusch et al., 2006). Corrigan and colleagues (2012) recommend subscales be used as individual scale scores opposed to an overall score. For the purpose of this study, the personal stigma subscale (agreement with stigma) was utilized to measure adolescents' mental health stigma.

### General Help-Seeking Questionnaire

The *General Help Seeking Questionnaire* [GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005) measures help-seeking intentions for both formal and informal sources. The scale consists of two subscales: intentions to seek help for personal and emotional problems and intention to seek help for suicidal ideation. As a single scale, the GHSQ has a Cronbach alpha of .85 and a test-retest reliability of .92 (over three weeks) among a sample of 218 high school students, indicating strong internal consistency and reliability. The suicidal problem subscale has a Cronbach's alpha of .82 and a test-retest reliability of .88. The personal/emotional problems subscale has a Cronbach alpha of .70 and a test-retest reliability of .86. Help-seeking attitudes were measured using both subscales.

### Children's Hope Scale

The *Children's Hope Scale* (Snyder, 1997) is a self-report scale consisting of six Likert-type items assessing hope as defined as a combination of agency and pathways (Snyder, 1994).

The *Children's Hope Scale* has acceptable internal consistency ranging from .72 to .86 (Snyder, 1997) and a test-retest rate of .71 ( $r(359) = .71, p < .001$ ). The scale was created for children aged 8-19. The scale has demonstrated strong psychometric properties with Mexican American Youth ( $n = 135$ ; Edwards, Ong, & Lopez, 2007), African American high school students ( $n = 17$ ; McClintock, 2015), and academically gifted high school students ( $n = 321$ ; Peters, 2010). The *Children's Hope Scale* was utilized in this study to assess changes in hope across wave one, wave two, and wave three.

### Data Analysis

The IBM Statistical Package for Social Sciences (SPSS) Version 25 software package was utilized to analyze the data in this study. The dataset for the investigation included one independent variables (time) and multiple dependent continuous variables (a) mental health knowledge scores, (b) mental health stigma scores, (c) hope scores, and (d) help-seeking attitudes. Additional variables of interest included demographic factors including participants' age, gender, race/ethnicity, income, attendance, and grade level. Prior to data analysis, the researcher cleaned data and checked for assumptions associated with RM-MANOVA: multivariate and univariate normality, linearity, multicollinearity, and adequate sample size. Additionally, psychometric analysis was conducted on each scale to assess for internal consistency across the three waves of data collection.

### Primary Research Question

A repeated measures multivariate analysis of variance (RM-MANOVA) was used to determine if there was a significant change in participants' mental health knowledge, stigma, help-seeking attitudes, and hope over wave one and wave two (Pallant, 2010; Tabachnick & Fidell, 2013). A RM-MANOVA was utilized because there were multiple dependent variables and multiple measure points (Hahs-Vaughn, 2017).

### Exploratory Research Question One

The researcher used a RM-MANOVA to investigate how the dosage of intervention, measured through participant attendance, influenced changes from wave one to wave two. To examine the impact of attendance, the researcher coded participants as high attenders (attending five or more weeks) or low attenders (attending four or less weeks) and compared the groups on measures of mental health knowledge, stigma, help-seeking attitudes, and hope across wave one and wave two.

### Exploratory Research Question Two

A repeated measures multivariate analysis of variance (RM-MANOVA) was used to determine if there were significant differences between participants in middle school and high school on measures of mental health knowledge, stigma, help-seeking attitudes, and hope at wave one and wave two.



### Secondary Research Question

A repeated measures MANOVA was used to determine if there were significant changes from wave one to wave three on measures of mental health knowledge, stigma, help-seeking attitudes, and hope. A RM-MANOVA was selected because there were multiple dependent variables multiple measure points (Hahs-Vaughn, 2017).

### Study Funding

The researcher applied for and receive funding to support the current investigation through the Chi Sigma Iota (CSI) *Excellence in Counseling Research Grant* (\$825.20); and the University of Central Florida (UCF) *Graduate Studies Doctoral Research Support Award* (\$2,215.00). The awards funded background checks for the researcher and group facilitators, equipment needed for the intervention (lock boxes, paper, pens, etc.), participant incentives (light refreshments for each session), and travel to and from the intervention sites.

### Ethical Considerations

Prior to recruitment and data collection, the researcher obtained Institutional Review Board (IRB) approval from the university to ensure the research study was compliant with legal, institutional, and ethical standards. A copy of the IRB approval letter can be found in Appendix of this document. Additionally, the researcher met with participating Boys and Girls Clubs program directors to discuss further ethical considerations. Informed consent was approached in

accordance to Parsons, Sherwood, and Abbott's (2016) recommendations for informed consent with minor populations. Appropriations such as establishing rapport and trust with participants, tailoring language to the developmental level of the adolescent, and revisiting informed consent throughout the research were taken to increase participants comfort levels. Although this intervention poses minimal risks, the researcher took precautions to ensure any participants negatively affected due to the sensitivity of the material were referred to appropriate resources including Boys and Girls staff and mental health resources in the area.

### Limitations of the Study

Given that the study occurred in multiple Boys and Girls Clubs and was implemented by counselors-in-training with varying teaching pedagogies, complete treatment fidelity was not realistic. Unique characteristics of the clubs and participants may have influenced the results. Additionally, the researcher encouraged group facilitators to adapt the curriculum to be more culturally and developmentally appropriate. Therefore, the treatment was employed with flexibility, adhering to the specific learning objectives while also considering the cultural and developmental needs of the groups (Kendall & Frank, 2018)

The novelty of this intervention in the setting posed threats to validity as it may have impacted the behavior of the participants. Further, all instruments were self-report; thus, social desirability bias may have impacted participant's responses. The principal researcher considered including a social desirability scale to account for this. However, past research has indicated that the adolescent population has lower than average levels of social desirability and the impact of

social desirability is negligible (Crandall, Crandall, & Katkovski, 1965; Oerke & Bogner, 2011; Tilgner, Wetheim, Paxton; 2004). Therefore, the researcher elected to not include an additional scale to minimize participatory fatigue. Finally, the present study took place in a southeastern state in the United States. Although the geographical region is diverse in nature, results of this study are not generalizable to the population at large.

### Chapter One Summary

In Chapter One, the researcher presented an outline of the research study. Chapter one includes a review of pertinent constructs (mental health knowledge, mental health stigma, help-seeking, and coping), the statement of the problem, theoretical foundation, research question, and significance of the study. Additionally, the research methods were presented including the population and sampling procedures, research setting, data collection procedures, instrumentation, and data analysis. Finally, potential limitations and ethical considerations were discussed.

### Operational Definitions

**Adolescent:** Adolescent refers to individuals between 10 and 19 years of age. Adolescence is the period of transition from childhood to adulthood. Adolescence spans early adolescence (10 -13 years), middle adolescence (14 -16 years) and late adolescence (17-19) (World Health Organization, 2018).

**Mental Health Literacy:** Mental health literacy (MHL) is the “knowledge and beliefs about mental health that guide recognition, management, or prevention (Jorm, 1997).” MHL includes knowledge of mental health disorders, understanding of how to seek information pertaining to mental health, recognition of risk factors and causes, and knowledge of self-help treatments. Inadequate MHL is associated with an increased risk of mental health distress (Lam, 2014).

**Mental Health Stigma:** Stigma is defined as “an attribute that is deeply discrediting (Goffman, 1963)” and involves lack of knowledge, negative attitudes, and behavior that disadvantages the stigmatized person (Thornicroft, Hassam, Sartorius, & 2007). Mental health stigma is a primary deterrent from individuals seeking mental health treatment (Sartorius, 2007).

**Help-Seeking:** The World Health Organization (2007) defines help seeking as “Any action or activity carried out by an adolescent who perceives herself/himself as needing personal, psychological, affective assistance or health or social services, with the purpose of meeting this

need in a positive way. This includes seeking help from formal services – for example, clinic services, counselors, psychologists, medical staff... as well as informal sources, which includes peer groups and friends, family members and/or other adults in the community.” Having a positive attitude towards help seeking is a component and precursor to behavioral help seeking.

Hope: Hope is defined as the perceived capability to derive pathways to desired goals and motivate oneself via agency thinking to use those pathways (Snyder, Rand, & Sigmon, 2018).

Hope can be divided into four categories: goals, pathway thoughts (routes taken to achieve goals), agency thoughts (motivation to undertake routes), and barriers (potential roadblocks to goals).

## CHAPTER TWO: LITERATURE REVIEW

This study investigated the influence of a mental health literacy intervention (MHL) on adolescents' mental health knowledge, mental health stigma, attitudes towards help-seeking, and hope. Chapter two begins with a discussion of mental health in adolescence. Next, the primary theoretical framework, Hope Theory (Snyder, 1994) is reviewed. Following the primary theoretical framework, a review of literature on the theoretical background and empirical support for MHL and each of the identified constructs: (a) mental health knowledge; (b) mental health stigma; and (c) help-seeking in adolescence is provided. Lastly, the chapter concludes with an integration of the primary constructs to provide support for the present investigation.

### Mental Health in Adolescence

Adolescence is a period of unprecedented growth; within this period of human development individuals experience rapid physical, emotional, psychological, and neurodevelopmental changes (Boyd & Bee, 2014). Consequently, adolescents face increased vulnerabilities to mental health concerns (Spear, 2013). Notably, half of all chronic mental health conditions begin by age 14 and 75% occur before the age of 24 (Kessler et al., 2012). Approximately one in five adolescents age 13-18 have a diagnosable mental health disorder in their lifetime (Center for Disease Control and Prevention, 2015). Currently, poor mental health ranks as a leading risk factor for adolescent death; as suicide is the second most common cause of death for individuals aged 10-24 (Center for Disease Control and Prevention [CDC], 2016). Thus, mental health is a critical issue surrounding adolescence in the United States.

A landmark CDC report was released in 2013 that described federal efforts to monitor mental health disorders and present estimates of the number of children in the United States with specific mental health disorders during the years 2005-2011. Key findings of this study included prevalence rates of children age 3-17 with diagnoses of: attention deficit and hyperactivity disorder (6.8%); behavioral or conduct problems (3.5%); anxiety (3.0%); depression (2.1%); and autism spectrum disorders (1.1%). However, this study reported diagnoses rather than symptomology. Considering 60%-75% of youth do not receive mental health treatment, these estimates are likely low (Merikangas et al., 2010; Capp, 2015). Markedly, researchers when assessing symptomology, report higher prevalence of mental health diagnoses, with 11.7% of youth meeting the criteria for major depression disorder or dysthymia and 15.4% meeting the criteria for a mood disorder (Merikangas et al., 2010; Mojtabai, Olfson, & Han, 2016). Researchers noted that the number of children with a mental health diagnoses increased with age, with the exception of autism spectrum disorder (CDC, 2013). Thus, the risk for mental health concerns in adolescence is heightened compared to that in early childhood.

Adolescents are facing increased mental health concerns than in years past. For example, for children 4-17 years of age, rates of ADHD diagnosis increased from 7.8% in 2003 to 11.0% in 2011 (CDC, 2013). Depression has also increased in recent years from 8.7% in 2001 to 11.5% in 2014 (Mojtabai, et al., 2016). Moreover, self-harm rates have increased among adolescents. Between 2009 and 2013, rates of self-harm injuries among youth aged 10-17 increased by 25.1 injuries per 100,000 members of the population per year ( $p < .004$ ). The difference was greatest among girls aged 10-14, increasing from 66.86 self-harm injuries per 100,000 10-14-year-olds in 2009 to 165.81 self-harm injuries per 100,000 10 to 14-year-olds in 2013, a 48% increase (Bell,

Qiao, Jenkins, Siedlecki, & Fecher, 2015). Further, rates of suicide have risen in recent years, with the highest percent increase among girls 10-14, tripling from .5 per 100,000 girls in 1999 to 1.5 per 100,000 girls in 2014 (Center for Disease Control and Prevention, 2016).

Consequently, more youth are receiving mental health care. Olfson, Druss, and Marcus (2015) analyzed nationally representative surveys of U.S. households for trends among youth's mental health and found that outpatient mental health services increased from 9.2% from 1996-1998 to 13.3% from 2010-2012. Rates of counseling use increased from 4.2% to 6.0% and the use of psychotropic medications increased from 5.5% to 8.9% among youth. However, discrepancies between diagnosis and treatment are still tangible with less than half of youth with severe mental health impairment accessing appropriate services. Moreover, disparities persist among minority and majority youth. 16.1% of white youth with impairment receive mental health services (odds ratio 1.54 (1.22- 1.79,  $p < .02$ ), compared to 9.8% of nonwhite youth with impairment receiving mental health services (odds ratio, 1.81(1.50- 2.18,  $p < .01$ ). In sum, mental health concerns in adolescence are increasing at an alarming rate and most youth are left untreated.

### Mental Health and Quality of Life

Inadequate mental health treatment in adolescence is directly related to increased negative outcomes in adulthood. Adolescents facing mental health concerns have lower levels of academic achievement and higher risk of dropping out of high school compared to their peers without mental health symptoms. Dupéré and colleagues (2018) found that in a sample of



Canadian adolescents ( $N = 545$ ) who dropped out of high school, one in four experienced clinically significant symptoms in the three months before leaving school and adolescents who experienced depression symptomology had a fifty percent higher likelihood of drop-out compared to their peers without depressive symptomology. Furthermore, researchers analyzing effects of mental health on educational attainment determined that mental health disorders accounted for 5.8-11.0% of high school drop-out and 3.2-11.4% of college non-completion among a sample of respondents ( $N = 5,001$ ) who completed the United States' National Comorbidity Survey (Mojtabai et al., 2016). Youth with disabilities may be at even greater risk. Poppen and colleagues (2016) surveyed professionals and educators ( $N = 648$ ) working with secondary students with disabilities and found that participants reported nearly half (48%) of the students they were working with were experiencing mental health concerns not addressed through their Individualized Education Plans (IEP). Moreover, The US Department of Education (2014) found that 37% of students with a mental health condition who were served by Special Education services dropped out of high school. This is the highest dropout rate for any disability group. Hence, the co-occurrence of mental health concerns with a disability diagnosis results in even greater obstacles to academic achievement.

Lack of mental health treatment also poses risks for physical health. Among adults who meet criteria for a mental health diagnosis, half report one or more other chronic medical conditions (Druss & Walker, 2011). Adults with untreated mental health concerns are less likely to maintain healthy habits and more likely to have substance use issues, physical inactivity, and poor diet (Druss & Walker, 2011; Laursen & Nordentoft, & Mortensen, 2014; Miller, 2014). Consequently, individuals with mental health disorders are more likely to develop chronic health

conditions including diabetes, asthma, pulmonary disease and die premature deaths (Druss & Walker, 2011; Walker, McGee, & Druss, 2015). Although there are few studies looking at comorbidity among youth, somatic health problems commonly occur in youth with mental health concerns. For example, children and adolescents with anxiety and depression frequently report stomachaches, headaches, muscle pain, and fatigue that interfere with their school life and daily functioning (Panelo et al., 2013).

### Barriers to Mental Health

Economic vulnerability is directly related to increased mental health challenges. Several researchers (American Psychological Association, 2014; Cheung et al., 2018; Evans & Cassells, 2013; Shafir & Mullainathan, 2013) find that poverty poses a psychological burden on individuals, increasing the risk and impact of mental health disorders. In the United States, 23% of children under the age of 18 live in households below the federal poverty line, meaning that one in four children live in a household with less than \$25,100 (United States Census Bureau, 2017). Adverse mental health outcomes are linked to childhood poverty and stress associated with financial hardship. Evans and Cassells (2013) found that in a sample of emerging adults ( $N = 196$ ) the proportion of time spent in poverty from birth to age nine significantly predicted externalizing symptoms of mental health concerns in adulthood ( $B = 2.75$ ,  $SE = 1.05$ ,  $p < .01$ ). Moreover, in a nationally representative sample of adults ( $N = 5,692$ ) financial hardship in childhood significantly predicted the onset of anxiety, mood, behavioral, and substance use disorders ( $ORs = 1.7\text{--}2.1$ ,  $\chi^2_1 = 22.5\text{--}35.1$ ,  $p < .001$ ) (McLaughlin et al., 2011). In addition,

economic vulnerability is associated with increased suicidal ideation. Utilizing data from National Comorbidity Study of Adolescents ( $N = 10,148$ ), Cheung and colleagues (2018), found that a higher percentage of adolescents from economically vulnerable backgrounds reported a history of suicidal ideation within the past year compared to adolescents without a history of economic vulnerability (7.4%, 5.0% respectively). Thus, the effect of poverty contributes to adverse adolescent mental health s and predicts mental health distress in adulthood.

The prevalence of untreated mental health disorders in economically vulnerable communities is exacerbated by significant obstacles to receiving professional help. Economically vulnerable individuals face barriers to treatment including limited transportation, lack of financial means to pay for services, and insufficient availability of mental health services in their communities (Bear et al., 2014; Gamble & Lambros, 2014). Consequently, individuals who need mental health services the most may have the most difficulty obtaining necessary services, further underscoring the necessity of mental health promotion in areas of economic deprivation (Hodgkinson, 2017; World Health Organization, 2014). Concurrently, students from low income backgrounds enrolled in schools that have accessible school-based mental health programs are not referred at similar rates across ethnic backgrounds. For example, Bear and colleagues (2014) found that, in a sample of 5<sup>th</sup> to 12<sup>th</sup> grade students ( $N = 990$ ) in a predominantly low SES district (70-81% of students receiving free or reduced lunches), Latinx students were referred to mental health programs at a significantly higher rate than their Asian American peers (13.8% and 3.6%, respectively) despite self-reporting mental health disorders at similar rates (approximately 20% and 22%, respectively). Authors spoke to the salient differences between Asian American and Latinx culture and how academic problems in the school setting may act as a gateway to mental

health services. Regardless of emotional distress, youth who maintain adequate academic performance may go unnoticed. In summary, both low socioeconomic status and culture interact to create barriers to mental health treatment.

### Protective Factors for Mental Health

Researchers have provided insight into positive mental health factors and environmental variables that protect vulnerable youth from poor mental health. Proctor and colleagues (2010) conducted a scoping review of 141 studies covering predictors of life satisfaction and well-being among youth. Researchers found that goal attainment, high personal standards, pursuit of intrinsic goals, hope, and self-efficacy positively predicted higher life satisfaction in youth. Further, the influence of perceived parental social support differentiated adolescents as “vulnerable” and “troubled” from those classified having positive mental health ( $\beta = -.57$ ,  $SE = .13$ ,  $t = -4.44$ , odds ratio:  $.56$ ,  $p < .05$ ) among a sample of 982 youth. (Lyons, Huebner, Hills, & Shinkareva, 2012). Thus, personal characteristics as well as the influence of parental social support buffer against adolescents’ risk for mental health concerns.

Adolescents’ use of positive coping strategies protects against mental health concerns (Dean et al., 2010; Kolaitis et al., 2014; Stankov, 2013). For example, Van Loon and colleagues (2015) revealed that when controlling for variables: gender; age; recruitment strategy; parental mental health; and baseline problem behavior, a confronting coping strategy ( $R^2 = .03$ ;  $\beta = .017$ ,  $p < .05$ ), high parental monitoring, ( $R^2 = .04$ ;  $\beta = -.20$ ,  $p < .05$ ), and greater child disclosure ( $R^2 = .04$ ;  $\beta = .017$ ,  $p < .05$ ) predicted fewer internalizing symptoms in youth. Authors concluded that

active coping strategies embedded within psychoeducational interventions may be of particular benefit to adolescents at risk for mental health concerns.

Positive MHL, an individual's understanding of how to obtain and maintain positive mental health, influences adolescents' overall mental health and well-being (Bjornsen, Espnes, Eilertsen, Ringedal, & Moksnes, 2017; Lam, 2014). For example, researchers assessed the relationship of positive mental health literacy (PMeHL) and adolescent well-being in a sample of Norwegian youth ( $N=1,888$ ) aged 15-21 and found that PMeHL (measured by *Mental Health Promoting Knowledge Scale*; Njornsen, Eilertsen, Ringfal, Espenes, & Moksnes, 2017) accounted for 41% of the variance in adolescents' well-being. Authors concluded that the results demonstrate support for positive mental health promotion for the adolescent population. Therefore, the present study aimed to promote positive mental health alongside increasing overall MHL.

In summary, the prevalence and severity of mental health concerns for adolescents is increasing. Several researchers have noted barriers to seeking treatment including financial and cultural obstacles as well as protective factors that promote positive mental health such as parental support, hope, and active coping strategies. In the next section, Snyder's Hope Theory is presented as a guiding theoretical framework for promoting MHL in the adolescent population.

### Hope Theory

Hope Theory was the primary theoretical foundation for the investigation (Snyder, 2002). Hope Theory grounds the relationships between the constructs: mental health knowledge, stigma,

hope, and help seeking. Further, the model supports the overarching goal of MHL, to empower individuals with the knowledge and skills necessary to attend to their own mental health and well-being and encourage help-seeking when necessary.

Hope is defined as “the perceived capability to derive pathways to desired goals and motivate oneself via agency thinking to use those pathways (Snyder, 2002, p. 249).” The core belief that anchors hope theory is human action is goal oriented. Goals vary in specificity and temporal frame. Goals can be short-term, long-term, vague, or specific. Hope theory involves three interrelated components: pathways, agency, and goals. *Pathways* are the routes taken to achieve desired goals. An individual with high hope can think of many different routes to achieve a goal. *Agency* is an individual’s capacity to use pathways to reach desired goals or the mental energy associated with goals (e.g., “I can do this!). Although Snyder conceptualizes hope as a cognitive process, *emotion sets*, or the dispositional hope and corresponding emotions also influence goal attainment, with high hope individuals experiencing more positivity towards the pursuit of goals. Additionally, *outcome values*, or the assessed importance of a particular goal further propels goal attainment. Lastly, *surprise events* and *stressors* influence hope and goal attainment. Surprise events can be positive or negative occurrences that elicit arousal, translating to an individual’s ongoing agency thinking. Stressors describe any impediment of magnitude that jeopardizes hopeful thought or motivation towards a particular goal. High hope individuals are better protected against the effect of stressors while low hope individuals are more susceptible to stress. The components of hope theory are iterative and additive. In sum, hope reflects the belief that one can find pathways to desired goals and become motivated, via agency, to use those pathways (Snyder, Rand, & Sigmon, 2018). Figure 1 details the hope process.

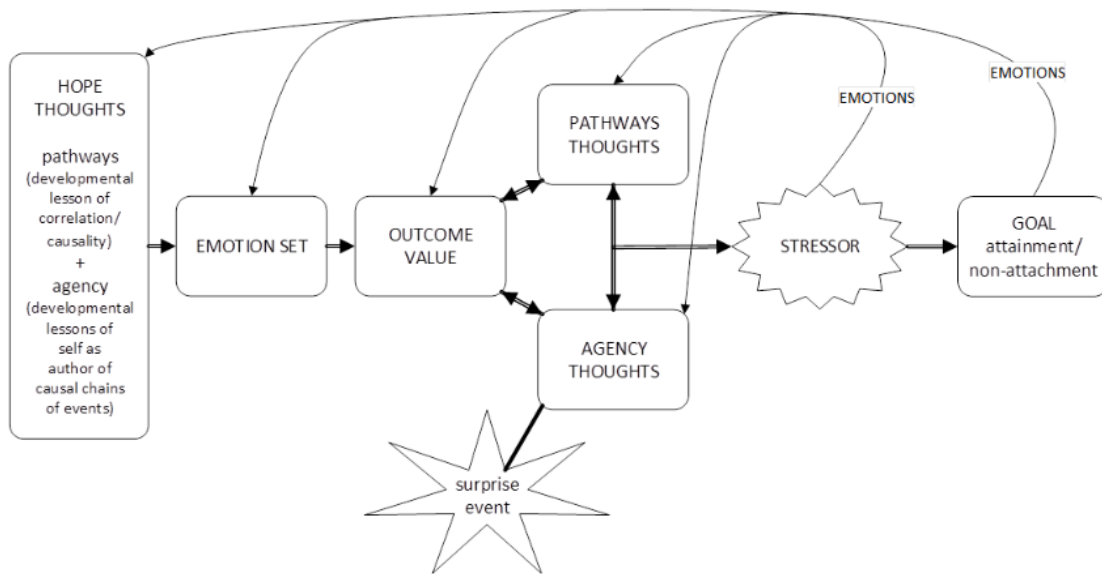


Figure 1: Model of Snyder's Hope Theory

### Empirical Studies of Hope Theory

Hope is a significant predictor of goal attainment and positive mental health. Venning, Kettler, Zajac, Wilson, & Elliott (2011) tested the hypothesis that hope was a stronger predictor of mental health than mental illness in young people. Participants were a sample of South Australian youth ( $N = 3,913$ ; aged 13 to 17 years) enrolled in 38 different schools across South Australia. Using confirmatory factory analysis (CFA) a model was tested to examine the relationship between hope, defined by scores on the *Adult Hope Scale* (AHS) (Snyder et al, 1991), mental health, measured by *Psychological Well-Being Scale* (Ryff, 1989) and the *Social Well-Being Scale* (Keyes, 1998) and mental illness, defined by scores on the *Depression Anxiety*

*Stress Scale* (DASS-21) (Lovibond & Lovibond, 1995). Researchers examined the relationship between hope and mental health, and mental illness and mental health. The fit statistics indicated good model fit:  $X^2(17) = 619.30, p < .001; N = 3,913; SRMR = .046; CFI = .96$ . Researchers then compared regression coefficients and found that hope was a stronger predictor than mental illness, explaining significantly more of the variance in mental health than mental illness ( $Z = 11.41, p < .001$  (two-tailed), 37% of the variance compared to 19%). Additional analysis revealed that agency explained significantly more of the variance in mental health than pathways ( $Z = 19.68, p < .001$  (two-tailed) (17% compared with 2%). The results of this study underscore the importance of assessing positive dimensions of mental health rather than solely the absence of mental illness. Researchers discussed the implications of this research for counseling, namely that a focus on enhancing young people's hope may be particularly effective in preventing and treating mental illness such as depression and anxiety. In this regard, the present study sought to embed positive mental health and coping strategies within the framework of MHL.

Dixon, Worrell, and Mello (2017) investigated the relationship between hope and several variables related to adaptive functioning in adolescence. Researchers sought to determine: (a) if cluster analysis based on pathway and agency scores would yield interpretable clusters; (b) examine the relationship between hope clusters and gender, SES, and grade; and (c) examine how cluster differences related to adaptive functioning (as determined by perceived stress, educational expectancies, self-esteem, academic investment, consideration of future consequences, academic self-concept, perceived life chances, school belonging, and academic achievement). Participants consisted of adolescents ( $N = 297$ , mean age = 16.09) from three schools and one academic program spanning rural, urban, and suburban areas in the United



States. Racial and ethnic representation was 10.1% African American ( $n = 30$ ), 25.7% Asian American ( $n = 76$ ), 41.6% European American ( $n = 123$ ), 10.5% Hispanic American ( $n = 31$ ), and 12.2% multi-ethnic ( $n = 36$ ). Researchers operationalized SES by asking participants "How would you describe your family's socioeconomic status?" Participants reported poor ( $n = 6$ , 2%), working class ( $n = 30$ , 10.1%), lower middle class ( $n = 31$ , 10.4%), middle class ( $n = 107$ , 36%), upper middle class ( $n = 95$ ; 32%), lower upper class ( $n = 11$ , 3.7%), and wealthy ( $n = 17$ , 5.7%).

Descriptive statistics related to pathway and agency scores revealed internal consistency, structural validity, and normal distribution. Therefore, researchers were able to categorize participants based off of their hope scores "high hoppers: ( $n = 105$ ), "high agency thinkers" ( $n = 73$ ), "high pathway thinkers" ( $n = 57$ ), and "low hoppers" ( $n = 62$ ). Researchers found meaningful differences in hope clusters across grade level ( $\chi^2 [9] = 20.87, p = 0.013, V = 0.15$ ). However, no differences were detected across gender ( $\chi^2 [3] = 5.75, p = 0.124, V = 0.14$ ), or SES, ( $\chi^2 [6] = 5.84, p = 0.441, V = 0.10$ ). In agreement with previous research, high hope was determined an adaptive trait, high hoppers had above average scores on life chances, self-esteem, school belonging, self-concept, academic investment, and consideration of future chances (i.e.,  $d \geq |0.40|$ ). High hoppers had significantly lower scores on perceived stress and educational expectations. On the other hand, high agency thinkers reported the highest GPA and educational expectations. As expected, low hoppers reported the least adaptive profile in terms of GPA, educational expectations, and perceived stress. Researchers acknowledged that a larger sample size would permit a more robust analysis of data. Additionally, the hope clusters were not replicated with an additional data set, an appropriate procedure to increase generalizability of results. Nevertheless, researchers concluded that the results were consistent with theoretical

tenants of hope theory. Additionally, the results supported the concept that hope is positively associated with a range of adaptive factors including self-esteem, academic achievement, and consideration of future consequences and has a negative relationship with perceived stress.

Griggs and Crawford (2017) examined the relationship between hope, core self-evaluations, emotional well-being, health-risk behaviors, and academic performance in freshmen college students (ages 18- 24). Researchers hypothesized hope would predict emotional well-being, academic performance, and health-risk behaviors and cores self-evaluations (CSE) would mediate these relationships. Participants were college freshmen ( $N = 495$  mean age = 18.37;  $n = 331$  female,  $n = 161$  males) enrolled in a large public university in the Northeastern United States. All freshmen students were invited to participate in the study. Participants provided demographic information, first semester GPA and ratings of their satisfaction with their academic achievement. Assessments were the *Adult Dispositional Hope Scale* (Snyder et al., 1991), the *Core Self Evaluations Scale* (Judge, Erez, Bono, & Thoresen, 2003), the *Mental Health Inventory* (Ware & Sherbourne, 1992), and various health risk behavioral subscales. Pearson's correlation coefficients were used to examine the relationship of hope with substance use, emotional well-being, health-risk behaviors, and academic performance. To assess model fit, path analysis and structural equation modeling (SEM) were employed to obtain standardized coefficients and facilitate a bootstrapping test. A strong linear positive relationship was found between hope and emotional well-being ( $r = .52, p < .001$ ), sexual risk taking ( $r = .12, p = .008$ ) alcohol use ( $r = .136, p = .008$ ), GPA ( $r = .13, p = .006$ ) and satisfaction with academic performance ( $r = .21, p < .001$ ). There was no significant relationship between hope and drug use ( $r = .027, p = .56$ ). Path analysis revealed that CSE explained 44.2% of the variance in hope (VIF

= 1.8; tolerance = .56 and hope significantly predicted CSE ( $r = .67, p < .001; SE = .667$ ).

Therefore, CSE mediates the relationship between hope and emotional well-being ( $r = .71$ ), academic satisfaction ( $r = .31$ ), GPA ( $r = .20$ ), and alcohol use ( $r = .13$ ). These findings suggest that hope and CSE are factors that affect emotional well-being and academic performance. In opposition to the author's hypothesis and previous research, higher hope and positive CSE were linked with greater alcohol and sexual risk-taking behaviors. The authors concluded that Hope Theory provides more relevance in predicting and enhancing mental health versus health risk behaviors in this population.

Marques and colleagues (2011) conducted a three-year longitudinal study to investigate patterns of correlations between hope, life satisfaction, and self-worth with mental health and academic achievement. Participants were 367 middle school students (mean age = 11.78) from seven schools across Portugal. Questionnaires were administered to participants at three yearly data collection points. Measures consisted of *The Children's Hope Scale* (Snyder et al., 1997), *Students' Life Satisfaction Scale* (Huebner, 1991), *The Self-Worth Scale* (Harter, 1985) and the *Mental Health Inventory-5* (Ware & Sherburne, 1995). Additionally, academic achievement reports were obtained. Regression analyses were performed with mental health and academic achievement as criterion variables and hope, satisfaction with life, and self-worth as predictors. At time 3, life satisfaction scores significantly predicted mental health with hope scores adding a significant variance beyond life satisfaction scores ( $\Delta F(3, 198) = 2.84, p < .05, \Delta R^2 = .02, R^2 = .10$ ). Academic achievement at Time 1 was significantly predicted by hope scores at  $\Delta F(3, 363) = 56.12, p < .01, \Delta R^2 = .14, R^2 = .14$ , Time 2  $\Delta F(3, 211) = 31.67, p < .01, \Delta R^2 = .12, R^2 = .12$ , and Time 3  $\Delta F(3, 198) = 26.05, p < .01, \Delta R^2 = .11, R^2 = .11$ . These findings support Snyder's

premise that hope is intricately tied to goal obtainment. In this particular study, hope predicted academic achievement and was a significant contributor to mental health. Authors stated the importance of hope and life satisfaction in developing interventions aimed at increasing mental health and academic achievement.

In summary, hope acts as a protective factor for adolescents. Hope buffers against mental health disorders, predicts emotional well-being, and correlates with academic achievement and consideration of future consequences. Hope Theory, which emphasizes the value of motivation, multiple pathways, and goal-setting parallels the framework of MHL, which focuses on equipping individuals to overcome barriers to mental health and pursue positive coping. To this end, this study aimed to foster hope among adolescents by providing education regarding positive mental health, coping, and avenues of help-seeking. In the next section, the overarching framework of MHL is explained, and empirical support is provided.

### Mental Health Literacy

Given the impact of mental health concerns in childhood and adolescence, significant barriers to treatment, and importance of positive mental health, researchers have called for a paradigm shift in how the public views mental health. Specifically, the World Health Organization (2007) has called for preventative, comprehensive, and integrated mental health education. Accordingly, researchers have underscored studies centered on *mental health literacy* (MHL), the knowledge and beliefs about mental disorders which aid their recognition, management or prevention (Jorm et al., 1997, p. 166). Jorm and colleagues (2012) later

expanded this definition to include knowledge that benefits the mental health of a person, effective first aid strategies to help others, and self-help treatments for mild to moderate mental health concerns.

### Mental Health Literacy Interventions

MHL interventions aim to improve recognition and response to mental health distress. Systematic reviews highlight the variability in methodology, instrumentation, and format of MHL interventions, with interventions ranged from 45 minutes to six weeks. Researchers have utilized various curricula to implement MHL interventions ranging from a panel of guest speakers with mental illness (Spagnolo, Murphy, Libera, 2008) to a standardized evidence-based curriculum tailored to adolescents (McLuckie et al., 2016). Furthermore, outcomes measures vary considerably, with some research studies from focusing solely on mental health stigma (Spagnolo, et al., 2008), while others examine comprehensive definitions of MHL, also encompassing knowledge and attitudes towards help-seeking (Conrad, Dietrich, Heider, Blume, Angermeyer, Riedel-Heller, 2009; Hart, Mason, Kelly, Cvetkovski, & Jorm, 2016). Although researchers found significant improvements in mental health stigma (e.g., Conrad et al., 2009; Hart et al., 2016; McLuckie et al., 2016; Milan et al., 2014; Perry et al., 2014; Skre et al., 2012; Spagnolo et al., 2008), mental health knowledge (e.g., Hart et al., 2016; McLuckie et al., 2016; Milan et al., 2014; Patalay et al., 2017; Perry et al., 2014; Skre et al., 2012; Swartz et al., 2016), and attitudes towards help-seeking (e.g., Conrad et al., 2009; Hart et al., 2016; 2009; Skre et al., 2012; Swartz et al., 2016), the majority of MHL interventions failed to use published, psychometrically

normed instruments to measure outcome variables, limiting the validity of the findings. Taking into account risk of bias, lack of control for confounding factors, and high attrition, there is insufficient evidence to claim positive impact (Breslin et al., 2017; Gulliver et al., 2010; Wei, et al., 2013). Researchers have called for more robust research designs, attention to treatment fidelity, validated instruments and larger sample sizes with diverse populations to improve methodological issues (Salerno, 2016; Wei et al., 2012). Accordingly, the present research adds to the literature base by the implementation of a MHL intervention among a sample of economically vulnerable adolescents, predominantly from racial and ethnic minority backgrounds. Inclusion of validated instrumentation, increased treatment fidelity through comprehensive training and screening, and a one-month follow up further the significance of the study. Table 1 provides an overview of MHL interventions targeting the adolescent population.

Table 1

*Chronological Review of MHL Interventions: Seminal Research, 2008-2018*

Authors	Sample	Design	Intervention	Measured Variables	Limitations	Results
Spagnolo, Murphy, Libera, 2008	N= 426 high school students from USA	Controlled before and after study	One-hour intervention addressing MH and MH stigma delivered by individuals with MH diagnoses	MH stigma	No demographic data reported. Post-test was one hour after pre-test.	Authors found significant reduction of stigmatizing attitudes. Pre-test mean = 28.99, Post-test mean = 25.17, $t(506) = 4.86, p < .001$
Conrad, Dietrich, Heider, Blume, Angermeyer, Riedel-Heller, 2009	N= 210 9 <sup>th</sup> and 10 <sup>th</sup> grade students from Germany	Quasi-Experimental	One day intervention consisting of education, discussion, and contact with individuals with MH diagnoses	MH stigma, self-efficacy, help-seeking behavior	No demographic information on SES or ethnicity was reported, small sample size.	Researchers found significant reduction stigma immediately after intervention, not sustained at three months: Group x point in time post $t2 = -0.405, p < .001$ Group x point in time $t3$ (3 months) = 0.071, $p = .684$
Pinto-Foltz, Logsdon & Meyers, 2011	N= 156 high school girls from USA	Cluster-randomized trial	One-hour intervention consisting of education and electronic contact with individuals with MH diagnoses	MH stigma and MHL/knowledge	Low reliability of instrumentation, low response rate, small sample size	No significant changes were found for MH stigma at post-test, 4-week, and 8- week follow up. No significant changes were found for MHL at post-test However, significant changes were found for MH literacy at 4-week and 8-week follow up (95% CI= .71-3.52, $p = .03$ ).

Authors	Sample	Design	Intervention	Measured Variables	Limitations	Results
Skre, Friborg, Breivik, Johnsen, Arnesen, Wang, Arfwedson, 2013	N= 1,070 high school students aged 13-15 from Norway	Non-randomized cluster controlled trial	Three-day intervention based on Positive Psychology principals with aims of improving mental health, decreasing stigma, and increasing MH literacy	MHL/knowledge, MH stigma, knowledge of help seeking sources	Low internal consistency of measurements, did not factor in SES, low treatment fidelity	Researchers found significance between groups on mental health knowledge ( $p = .0001$ ) and stigma ( $p = .02$ ) Participants in the intervention group were significantly more likely to mention primary care ( $p < .001$ ) compared to control.
Hart, Mason, Kelly, Cvetkovski, & Jorm, 2016	N = 520 high school students from Australia	Quasi-experimental (pilot) study	Mental Health First Aid: Three to four hours across 5-8 school days focusing on mental health and how to help a friend with a MH crisis	MHL/Knowledge, confidence in providing MH first-aid to a friend, help-seeking intention, and student mental health, stigma	High attrition (46%), high non-response rate,	Researchers found significant differences in MHL ( $p < .001$ ), confidence in providing MH first aid to a friend, help-seeking intentions, and student mental health ( $p < .001$ ).
Perry, Petrie, Buckley, Cavanagh, Clarke, Winslade, Hadzi-Pavlovic, Manicavasagar, & Christensen, 2014	N= 380 high school students from Australia	Randomized controlled trial	Ten-hour, five to eight-week long intervention aimed to increase MHL and mental health	MHL/Knowledge, MH stigma	No demographic information on SES or ethnicity was reported, lack of validated instruments, high attrition (36%)	Participants in the HeadStrong group improved on measures of MHL more than control participants from pre- to post-intervention, $t(492) = 5.33, p < .05$ , and between pre- to follow-up, $t(494) = 2.87, p < .05$ . HeadStrong participants improved more on measures of stigma than participants in control from pre-intervention to follow-up, $t(522) = 2.67, p < .05$ .



Authors	Sample	Design	Intervention	Measured Variables	Limitations	Results
McLuckie, Kutcher, Wei, & Weaver, 2014	N= 265 high school students from Canada	Quasi-experimental	<i>The Guide</i> : Six to eight hours, six-week long, teacher implemented intervention aimed to increase MH knowledge and improve MH attitudes/decrease stigma	MHL/knowledge, MH attitudes (stigma)	No specific demographic information was reported, high attrition (35%)	Participant knowledge scores following the intervention were significantly higher than baseline student knowledge scores ( $t(408) = 18.22, p < 0.001, d = 0.90$ ). At two month follow-up knowledge scores remained higher than at ( $t(264) = 11.92, p < 0.001, d = 0.73$ ) Participants showed significant improvements in stigma between pretest and post-test surveys ( $t(347) = 4.78, p < 0.001, d = 0.25$ ). At 2 month follow-up stigma decreased but remained higher than base line $t(233) = 2.73, p < 0.007, d = .18$ .
Milin, Kutcher, Lewis, Walker, Wei, Ferrill, & Armstrong, 2016	N= 534 students in 11 <sup>th</sup> and 12 <sup>th</sup> grade from Canada	Randomized controlled trial	<i>The Guide</i> : Six to eight hours, four to eight-week long, teacher implemented intervention t to increase MH knowledge and improve attitudes/decrease stigma	MHL/knowledge, MH attitudes (stigma)	No demographic information on SES or ethnicity was reported	Intervention group scores significantly increased over time ( $F_{1,495.33} = 25.78, p < .001, b = 0.67$ ) compared to control group ( $F_{1,484.28} = 0.55, p = .459, b = -0.14$ ). Attitudinal scores for the intervention group significantly improved over time ( $F_{1,488.95} = 11.33, p < .01, b = 0.51$ ), whereas students receiving TAU did not have a significant change in

Authors	Sample	Design	Intervention	Measured Variables	Limitations	Results
Kutcher, Wei, & Morgan (2015)	N= 112 9 <sup>th</sup> and 10 <sup>th</sup> grade students from Canada	Quasi-experimental	<i>The Guide</i> : Six to eight hours, six-week long, teacher implemented intervention aimed to increase MH knowledge and improve MH attitudes/decrease stigma	MHL knowledge/MH attitudes (stigma)	No demographic information on SES or ethnicity was reported, low internal consistency of measure, quasi-experimental research design	attitudes over time ( $F_{1,475.47} = 1.58, p = .209, b = -0.27$ ) Participants' knowledge scores significantly improved from pre-test to pos-test ( $t = 12.83, df = 113, P < 0.001; d = 1.11$ ) and were maintained at two-month follow-up ( $t = 11.18, df = 113, p < 0.001; d = 0.91$ ). Participant attitude scores significantly improved from pre-test to post-test ( $t = 8.54, df = 111, p < 0.001; d = 0.66$ ), also maintained at two-month ( $t = 6.2, df = 111, p < 0.001; d = 0.52$ ) follow-up.
Swartz, Musci, Beaudry, Heley, Miller, Alfes, Townsend, Thornicroft, & Wilcox, 2016	N= 6679 9 <sup>th</sup> and 10 <sup>th</sup> grade students from USA	Randomized controlled trial	Three hours, two to three-day long teacher implemented depression awareness program	Depression literacy, MH Stigma, recipient of MH services (subset)	High attrition (30%)	Participants in the intervention group were significantly more likely to be depressive literate at the six-week post-assessment ( $p < .001$ ) and at four-month follow-up ( $p < .001$ ). The intervention did not show significant as a predictor of MH stigma at six-week post assessment ( $p = .1$ ) or at four month follow up ( $p = .7$ ). Additionally, 44% of participants who reported the need for MH services sought treatment.

Authors	Sample	Design	Intervention	Measured Variables	Limitations	Results
Patalay, Annis, Sharpe, Newman, Main, Ragunathan, Parkes, & Clarke, 2017	$N = 234$ high school students from UK	Quasi-experimental study	Two workshops (45 minutes each) over two weeks	MH stigma, knowledge, and helping attitudes	Limited psychometric validation of instruments	Significant effects were found in high school students' knowledge from pretest to post-test ( $d = -.28$ ), non-stigmatizing attitudes ( $d = -.29$ ), and helping attitudes ( $d = -.21$ ). However, social distance was not a statistically significant from pre-test to post-test ( $d = -.05$ )

Due to the various interpretations of MHL, some researchers have focused on MHL in general whereas others focused on distinct constructs: knowledge, attitudes, stigma, and help-seeking. In an article focused on the evolution of MHL Kutcher, Wei, & Coniglio (2016) highlighted the various interpretations of MHL as a significant limitation to drawing conclusions from outcome based research and called for future research to investigate which types of interventions most *comprehensively* improve MHL. Taking this into account, the specific components of MHL: mental health knowledge, mental health stigma, and help seeking attitudes are reviewed within the overarching MHL framework.

### Mental Health Knowledge

*Mental health knowledge*, within the structure of MHL, encompasses recognition of mental health disorders, including symptom specific disorder recognition as well as knowledge of how to seek treatment for mental health concerns (Jorm et al., 2012). In other words, individuals who are mental health literate can recognize the symptoms of major depressive disorder, identify the disorder as depression, and possess knowledge about different methods of coping and treatment, ranging from self-help approaches to professional help-seeking. Mental health knowledge is considered a precursor to reducing stigma and seeking help when appropriate (Gulliver, Griffiths, & Christensen, 2010; Rusch, Evans-Lacko, Henderson, & Flach, Thornicroft, 2011).

Several studies have identified mental health knowledge as a main contributor influencing individual's intention to seek help. For example, Rüscher and colleagues (2011) assessed knowledge about mental illness, attitudes towards people with mental illness, and level of contact with someone with mental illness among a sample of adults in England ( $N = 1,741$ ). Researchers assessed intention to seek help, "If you felt that you had a mental health problem, how likely

would you be to go to your general practitioner for help?” and comfortability disclosing mental illness, “In general, how comfortable would you feel talking to a friend or family member about your mental health?” Participants also completed a mental illness questionnaire (unpublished) to assess feelings of benevolence, tolerance, and support, the *Mental Health Knowledge Schedule* (Evans-Lacko, Little, Meltzer, & Thornicroft, 2010) to assess knowledge of mental health and treatments, and the *Reported and Intended Behavioral Scale* (Evans-Lacko, Rose, & Little, in press) to assess contact with individuals who have mental illness. Researchers analyzed data through linear regressions and found stronger attitudes of tolerance and support for community care, better knowledge about mental illness and available treatments, and older age significantly predicted intention to seek help ( $R^2 = .07$ ). Knowledge of mental illness and treatments was the strongest predictor of intent to seek help ( $\beta = .175, p < .001$ ) and disclosure ( $\beta = .114, p < .001$ ). Limitations of the study included only measuring one method of help seeking (general practitioner), and lack of consideration of other relevant measures including mental health distress and past experiences seeking mental health services. Regardless, this study underscores the importance of mental health education as a means of increasing help-seeking.

Although the connection between mental health knowledge and help-seeking has been less studied in the adolescent population, researchers identified general trends associated with mental health knowledge that are of relevance in the framework of MHL. For instance, girls consistently score higher on measures of MHL compared to boys (Burns & Rapee, 2006; Coles et al., 2016; Cotton, Wright, & Harris, 2006; Furnham, Annis, & Cleridou, 2014). Additionally, older individuals generally possess more knowledge of mental health compared to younger individuals (Reavley & Jorm, 2011; Skre et al., 2013). However, it is important to note that the field of MHL is still in its beginning and the majority of studies are implemented outside the United States and are

conducted with relatively homogenous samples. Notably, with the exception of one study (Olsson & Kennedy, 2010), demographic variables including SES, race, and geographical location have yet to be comparatively investigated. In fact, Salerno (2016) reports that a sizable percentage of studies fail to report demographic variables at all, resulting in a wide gap of knowledge related to the impact of MHL on diverse populations. Furthermore, the majority of research assessing mental health knowledge has utilized vignette-based questionnaires without evidence of psychometric validation (Wei et al., 2015). In short, further research is needed to understand how contextual, cultural, and demographic factors influence MHL.

Leighton (2010) was among the first to explore adolescents' understanding of mental health. In this study, British students aged 11-18 years ( $N = 208$ ) were presented with a vignette-based questionnaire depicting three scenarios of youth experiencing negative emotions and related behavior and two scenarios representing a mental health diagnosis (depression and psychosis). Students were asked to respond to the question, "What do you think is happening with X?" and rate the severity of the presented mental health problem on a scale of 1 (no problem) to 5 (serious problem) for each vignette. Content analysis was employed to assess level of understanding. Descriptive statistics revealed that 44.7% of participants were correctly able to identify depression and 37% were able to identify psychosis. Interestingly, students rated the scenarios depicting *externalizing* symptoms such as self-harm and heavy drinking more serious than *internalizing* symptoms such as suicidal thoughts ( $Z = 7.349, p < .0005$ ), leading the author to discuss the notion that youth may not understand depression as a potentially fatal illness. With less than 50% of participants correctly identifying depression, the author concluded that mental health education with an emphasis on depression and suicide awareness was needed in the adolescent population.

Wahl and colleagues (2012) examined knowledge and attitudes about mental illness among a sample of middle school students ( $N = 193$ ) from four different schools across the United States. Students completed a questionnaire with 17 items assessing attitudes towards mental illness and 17 items assessing knowledge of mental illness. Gaps in knowledge were identified; specifically, students had difficulty identifying symptomology of mental health disorders. For example, 72% ( $n = 139$ ) of students were unsure if schizophrenia involved multiple personalities and only 25% of students ( $n = 48$ ) knew overly energetic behavior was associated with bipolar disorder. Additionally, 47% ( $n = 90$ ) of respondents indicated that they were unsure if there was a difference between mental retardation and mental illness. Authors noted significant limitations of the study including social desirability bias of participants and a low test-retest reliability and internal consistency of the instrument. However, this study was important in that it assessed knowledge of younger adolescents, a population seldom investigated, and further articulated the misconceptions youth have regarding mental health.

A related study was conducted to assess mental health knowledge among middle and high school aged adolescents in a small town in Eastern US (Olsson and Kennedy 2010). Researchers presented students ( $N = 291$ ) with vignettes depicting diagnosable mental health disorders and common challenges associated with adolescence and related coping behaviors. In this study, 27.5% of participants correctly identified anxiety and 42.4% identified depression. Respondents who correctly identified the disorders were three to four times more likely to state that they would take a helping action such as reporting the situation to an adult compared to respondents who could not identify the disorders (depression: odds ratio 3.27; CI 1.43-7.46 anxiety: odds ratio: 4.43; CI 2.23-8.79). Thus, mental health knowledge is associated with increased help-seeking intention. This study also indicates that adolescents may recognize depression to a greater extent

compared to anxiety. Considering that anxiety is currently the most common mental health diagnosis in the adolescent population, these findings are somewhat surprising. However, the authors cautioned that a recent suicide in the small town may have influenced results. Considering that suicide is more prevalent in rural areas than urban areas, contextual factors may play a significant role in understanding adolescents' knowledge of mental health.

Adolescents' poor recognition of mental health concerns may prevent them from seeking help. Coles and colleagues (2016) sought to extend the work of Olsson and Kennedy (2010) by assessing high school students' knowledge and beliefs about depression and social anxiety disorder. Additionally, the researchers aimed to determine gender-based differences on mental health knowledge. Participants ( $N = 1,104$ ; ninth grade,  $n = 313$ , tenth grade,  $n = 271$ , eleventh grade,  $n = 251$  twelfth grade,  $n = 268$ ) were high school students in upstate New York. Participants completed *The Strengths and Difficulties Questionnaire* (Goodman, 2010), a 25-item mental health behavioral screening for youth and the *Friend in Need Questionnaire- Revised* (Burns & Rapee, 2006), which presents vignettes of peers with major depression, social anxiety disorder, and a common life stressor. Participants were asked to identify the problem in each vignette, rate their overall concern on a scale of 1 (not worried at all) to 4 (extremely worried), assess the chronicity of symptoms (measured by number of days needed to feel better), decide whether the affected person needed to seek help, and provide recommendations for the source of help. Descriptive and correlational statistical analysis revealed that, 40% ( $n = 441$ ) of participants identified depression correctly compared to 1% ( $n = 11$ ) correctly identifying social anxiety. Common identifiers for the social anxiety vignette included "shy" or "quiet" (33%,  $n = 364$ ) and "low self-esteem/confidence (24%,  $n = 264$ ). Additionally, girls in the study had higher overall mental health knowledge compared to boys for both the depression and social anxiety vignettes ( $t$



(1024) = 7.41,  $p < .001$  and  $t(1,037) = 5.30$ ,  $p < .001$ ). Post-hoc comparisons showed that participants reported more concern for the character with depression than with social anxiety ( $t = 17.63$ ,  $p < .001$ ,  $d = .49$ ) and females reported more worry compared to male participants ( $F(1, 1000) = 55.59$ ,  $p < .001$ ). Further, 68.8% of participants ( $n = 751$ ) recommended seeking treatment for depression compared to 59.2% for social anxiety ( $n = 563.05$ ). Finally, the number of days needed to recover from the problem were significantly longer for female characters than male characters across all three vignettes (depression:  $t(1,008) = 6.35$ ,  $p < .001$ ,  $r = .20$ ; coping:  $t(1,091) = 2.68$ ,  $p < .01$ ,  $r = .08$ ; and social anxiety disorder:  $t(1,041) = 5.67$ ,  $p < .001$ ,  $r = .17$ ), indicating that adolescents consider traditional gender roles when assessing the severity of mental health disorders

Limitations of this study include limited racial and ethnic diversity of participants ( $n = 828$ , or 75% Caucasian) and lack of psychometrically validated instrumentation. Despite limitations, the study has several important findings. First, adolescents recognize depression much more easily than social anxiety. Participants commonly misidentified social anxiety as “shy”, “quiet”, and “low self-esteem”. Thus, adolescents may view anxiety as a trait rather than symptomology of a larger mental health problem. Lastly, females had higher levels of disorder recognition and reported more concern compared to males in this study, further substantiating previous research findings (Burns & Rapee, 2006; Olsson & Kennedy, 2010). Notably, the number of days needed to recover from the problem presented in the vignette were significantly longer for female characters than male characters across all three vignettes, therefore adolescents may perceive females as less resilient in the face of mental health challenges compared to males. In sum, these findings further substantiate prior research indicating adolescents have limited knowledge about mental health and have difficulty differentiating mental health concerns from the common stressors associated with

adolescence. To this end, this study aimed to increase adolescents' mental health knowledge, including dispelling commonly held myths surrounding mental health. In the next section, a related but distinct construct, mental health stigma is reviewed.

### Mental Health Stigma

The most established definition of stigma is, “an attribute that is deeply discrediting, that reduces someone from a whole and usual person to a tainted discounted one” (Goffman, 1963, p.3). Goffman (1963) in his seminal work, *Stigma: Notes on the Management of Spoiled Identity*, proposes that stigma arises when the disparity between “virtual identity”, the socially constructed version of self that one is expected to be in public, conflicts with their “actual identity”, who the individual is in private. When a person does not fit the common expectations and attitudes in a social situation, social interaction breaks down. Goffman believed three factors underlie stigma. First, stigma is a result of the social context in which an attribute is displayed. Second, stigma is relational and comes about when a person or group can classify the undesirable behavior or attribute. Third, stigma is constructed over time with repeated incidents of feeling stigmatized. Goffman identified three types of stigma: stigma associated with physical differences (i.e., disability, obesity), stigma often associated with character (i.e., mental disorder, homosexuality, unemployment), and tribal stigma (nationality, religion, ethnicity).

Jones et al., (1984) expanded on the work of Goffman and proposed six dimensions of stigma: *concealability, course, disruptiveness, aesthetics, origin, and peril*. *Concealability* refers to how visible the stigmatizing characteristic is to others. Visible mental disorders such as psychosis carry more stigma compared to disorders that are more concealable, such as depression, which has more internalized symptomology. *Course*, refers to how permanent the disorder is or how likely

the person is to recover. *Disruptiveness*, describes how the problem will impact relationships and success in society. *Aesthetics* refers to the displeasing nature of mental disorders, associations society attributes to individuals with mental illness, including discomfort or abnormality. *Origin* describes the etiology of the disorder. Disorders often seen as controllable to society, such as addiction, are more stigmatized than those perceived as uncontrollable, such as Post Traumatic Stress Disorder (PTSD). Finally, *peril* describes how frightening or unpredictable the disorder is perceived by society. Individuals with mental health concerns that draw public attention and alarm others experience heightened stigma.

Adolescents both perpetuate mental health stigma and experience mental health stigma; at the same time, adolescents experience self-stigma as they internalize stigmatizing attitudes from their peers and society at large. The framework of MHL aims to dispel mental health stigma perpetuated by adolescents and subsequently impact adolescents' self-stigma.

### Mental Health Stigma in Adolescence

Adolescents experience heightened mental health stigma; however, the reasons behind stigmatizing attitudes are unique to the period of adolescence and youth's understanding of mental health. For example, Kaushik, Kostaki, and Kyriakopoulos (2016) conducted a systematic review of mental health stigma in children and adolescents ( $N=42$  studies) and found themes regarding the characteristics of stigmatizers and stigmatizees. For instance, while mental health labels did not significantly impact stigmatizing attitudes in youth, diagnoses associated with behavioral challenges (e.g., ADHD, schizophrenia) are more stigmatized than disorders with internalized symptomology (e.g., depression, anxiety). Additionally, males experience more stigmatizing interactions than females and endorse higher levels of stigmatizing attitudes towards others.

Moreover, stigmatizing attitudes increase with age among children and adolescents, suggesting that increased awareness of mental health through media and societal attitudes increases an individual's stigmatizing attitudes. Finally, research centered on stigma and its relationship to socioeconomic and cultural differences was not robust enough for researchers to generalize. Additional research is warranted on the influence of socioeconomic status and culture on mental health stigma.

Reasons for peer stigma reflect the social context of adolescence. For example, O'Driscoll, Heary, Hennessy, & McKeague (2015) found that youth were likely to endorse exclusion when they perceive a peer's mental health concern a result of reasons deemed not serious or if the peer in question would negatively impact group dynamics (i.e., "bring down everyone else.") However, young people were less likely to report exclusion if they had a strong friendship prior to the mental health diagnosis. Furthermore, participants noted the negative ramifications of social exclusion and contemplated if exclusion might make the mental health issue worse for their peer. Although the findings suggest that adolescents hold stigmatizing beliefs about mental health, their ability to grapple with the complexity of their peer's situation offers support that developmentally tailored mental health education would be valuable endeavors in decreasing mental health stigma.

Relatedly, Corrigan and colleagues (2001) proposed that perceived controllability of mental health concerns is linked to higher levels of mental health stigma. For example, if an individual perceives someone to be in control and responsible for their mental health problem they are likely to experience anger, whereas if they perceive the problem to be outside their personal control, they are likely to experience sympathy. Dolphin and Hennessey (2014) sought to assess this hypothesis by examining the relationship between personal control, responsibility, positive emotions, negative emotions, and peer acceptance using structural equation modeling. Participants

( $N = 403$ ; 188 males and 213 females) were adolescents between the ages of 14 and 17 years ( $M = 15.90$  years;  $SD = .403$  years) from 10 single-sex secondary schools in South East Ireland. Participants were provided with a vignette with either a male or female character experiencing clinical depression. Attributions of personal control were measured by *The Revised Causal Dimension Scale* (McAuley et al., 1997), *The Friendship Activity Scale* (Siperstein, 1980), which consisted of two questions assessing perceived responsibility and four items about their feelings towards the hypothetical peer's behavior. Both models (male and female characters) indicated acceptable fit however, for the male vignette, attributions of personal control over the cause of depressed behavior predicted responsibility ( $\beta = .40, p < .001$ ) which in turn predicted negative emotions of anger ( $\beta = .31, p < .001$ ) and negatively predicted sympathy ( $\beta = -.28, p < .05$ ). Positive emotions predicted social acceptance ( $\beta = .50, p < .05$ ). Similarly, for the female vignette character, personal control over behavior predicted responsibility ( $\beta = .40, p < .001$ ) and responsibility negatively predicted emotions of sympathy ( $\beta = .23, p < .005$ ). Positive emotion predicted acceptance ( $\beta = .43, p < .05$ ). Overall, participants endorsed greater acceptance of the female character than the male character ( $\beta = .20, p < .05$ ).

Although vignette-based research is not completely generalizable to actual conditions, this study provides important implications. Namely when causes of mental health concerns are perceived as uncontrollable, responsibility is not inferred, sympathy is felt, and exclusion is less likely. Additionally, the findings underscore the significance of gender as influential in stigmatization, as adolescents felt more anger and less acceptance towards male characters with a mental health concern. Moreover, males felt that male characters had more control over the onset of depression and females were more likely to socially accept female characters. Thus, the findings suggest that adolescent males with mental health concerns may be more stigmatized than their

female peers. Therefore, the intervention in this study aimed to dispel common myths associated with mental health (e.g., *Mental health disorders are a cause of personal weakness*).

A related study conducted by Moses (2014) examined select social and clinical factors that predicted stigma among American adolescents following a first psychiatric hospitalization ( $N = 80$ ). The researcher hypothesized that affiliation with higher status peers, severity of symptomology, and poorer social functioning would predict increased stigmatizing experiences whereas affiliation with lower social status peers and a larger, more supportive social network would predict fewer stigmatizing experiences. Participants ( $N = 50$ ) were adolescents aged 13-18 ( $M = 15.3$  years;  $SD = 1.6$ ) who were hospitalized in a child and adolescent program in Wisconsin, United States. Participants were diagnosed with depressive disorder (66.7%), anxiety disorder (32.4%), mood disorder NOS (18.6%), ADHD (13.7%), PTSD (8.8%), bipolar disorder (5.9%), substance use disorder (6.9%), obsessive compulsive disorder (2.9%), oppositional defiant disorder (6.9%), and a non-specified mental health diagnosis (7.8%). 54.9% of participants had co-occurring diagnoses. Interviews were conducted within seven days of discharge (Time 1) and six months later (Time 2). Interviews included open ended questions and quantitative measures including mental health functioning as measured by *The Family Assessment Device* (Miller, Epstein, Bishop, & Keitner, 1985), quality of relationships as measured by the *Inventory of Parent and Peer Attachment* (Armsden & Greenberg, 1987), and clinical severity as measured by the *Youth Self Report Scale* (Achenbach, 1991). Students were also asked questions regarding number of friends, friends with mental health problems, peer group identification, disciplinary problems, learning disability status, and school grades. 73.4% ( $n = 59$ ) of participants endorsed enacted stigma at Time 1 and 69.6% ( $n = 56$ ) of participants endorsed enacted stigma at Time 2. Students more commonly reported general feelings of being looked down upon (Time 1: 50%, Time 2:

45%) and disrespected (Time 1: 42.5%, Time 2: 41.3%) more so than specific rejection from friends (Time 1: 10%, Time 2: 12.5%) or friends purposefully hurting their feelings (Time 1: 25%; Time 2: 40%). Multivariate OLS regression analyses were employed to explore adolescents' factors and enacted stigma ratings. Of the baseline factors, four factors were significant predictors of enacted stigma ratings at six months: affiliating with more friends with mental health problems ( $r = .30, p < .007$ ), identifying with the popular peer group, higher internalizing symptomology, and self-reported disciplinary problems. Although the demographics of the sample was largely Caucasian and middle class, this study resulted in several important takeaways. Namely, adolescents' social context does affect their stigmatizing experiences. Identifying with a higher-status social group ("popular kids") and peers with mental health problems predicted increased stigma. The author suggested that this may be because psychiatric hospitalization is too incongruent with higher social group standards, leading to social rejection. Similarly, adolescents who associate with peers with mental health problems may be more stigmatized because of their associations. In summary, peer mental health stigma is pervasive in the adolescent population even among peers with a large support network and similar mental health struggles.

In summary, mental health stigma within the adolescent population is a significant area of concern. Researchers have identified adolescents' sociodemographic factors including gender and age as influencing stigmatizing experiences. Additionally, adolescents' perceptions of the origin and responsibility of mental health concerns impacts stigmatizing attitudes. Finally, adolescents have high levels of perceived stigma compared to adult populations, indicating an increased sensitivity to the feelings and opinions of others during this developmental stage. Considering these findings, MHL interventions should be tailored to the adolescent population, including

targeting older adolescents, addressing gender stereotypes and commonly held misconceptions surrounding mental health.

### Consequences of Mental Health Stigma in Adolescence

Erikson (1968) proposed that the main developmental task for adolescents is identity versus role development. Adolescents must construct their identity and navigate their social landscape, including forming meaningful relationships with peers. Accordingly, positive peer relationships serve as protective factors for mental health and well-being in adolescents and can protect against adversity (Walsh, Harel-Fisch, & Fogel-Grinvalds, 2010; Warren, Jackson, & Sifers, 2009). A wide range of research indicates that young people with mental health concerns commonly experience adverse peer relationships (Elkington et al., 2012; Moses, 2010). Considering the importance of peer relationships during adolescence, mental health stigma experienced by adolescents may have significant ramifications for youth with mental health concerns (Kaushik, Kostaki, and Kyriakopoulos, 2016).

Researchers have proposed a linear relationship between experiencing stigma and internalizing stigma. Self-stigma develops when an individual is aware of societal stereotypes associated with a stigmatized group, agrees with them, and internalizes the beliefs (Corrigan & Watson, 2009). Self-stigma results in lowered self-esteem and self-worth as individuals understand that they are perceived as socially unacceptable (Vogel et al., 2007). The consequences of self-stigma may have particularly adverse for adolescents; as low self-esteem is closely associated with behavioral problems (Manani & Sharma, 2013), depression, (Orth, Robins, Widaman, & Conger, 2014), and poor school performance (Orth & Robins, 2013). Conversely, high self-esteem is associated with resilience (Arslan, 2015), positive ego identity (Marcia, 2017), academic



achievement (Booth & Gerard, 2011), and positive peer relationships (Raboteg-Saric & Sakic, 2014). Thus, preventing threats to self-stigma may be imperative for adolescent well-being.

In efforts to further understand adolescents' experiences of self-stigma and their psychological processes for dealing with stigma, Elkington and colleagues (2012) explored the experiences of youth in psychiatric outpatient treatment in New York. Participants were adolescents and young adults ( $N = 24$ ) who were stratified according to gender ( $n = 14$  male,  $n = 10$  female, age (13-17, 18-24 years), and diagnostic group (psychotic or nonpsychotic). The sample was 58% male, 75% Hispanic, 8.3% White, 4.2% African American, and 12.5% mixed race/ethnicity. Participants were asked open ended questions about their individual experiences with stigma, stigma at the structural level (i.e., school, group membership), and their social and psychological processes (how they cope with stigma experiences). Thematic analysis was employed with validity checks throughout the analysis process.

Overall, 22 of the 23 participants articulated an understanding of mental health stigma. Participants believed people with mental health issues were seen as different. Males tended to perceive others as viewing them as dangerous whereas females tended to say that others viewed them as fragile or weak because of their diagnosis. Some participants specified that not *all* people held stigmatizing attitudes about mental illness. However, this specification was only made by those with non-psychotic disorders compared to psychotic disorders. Individual experiences of stigma included rejection by others ranging from subtle experiences (negative facial expressions of others) to more explicit forms of stigma (peer social rejection). Additionally, stigma and rejection from family members emerged as a salient theme. Several participants explained that their diagnoses reflected negatively upon their family members, while other participants reported positive, supportive experiences with family members. Likewise, ten participants reported

negative changes in their interpersonal relationships whereas 13 participants reported that some of their relationships positively changed, growing closer in their relationships because of the diagnosis. Participants did not report any institutional experiences of stigma. In fact, institutions tended to serve as a protective factor, allowing for the participants to balance education, school activities, and their appointments without having to disclose private medical information. Most participants ( $n = 22$ ) reported coping strategies to manage a stigmatizing identity. For example, participants distanced themselves from those they considered “more crazy” than themselves at the treatment facility. Youth also described themselves and their diagnoses as “normal” and “just like everyone else.” Many participants struggled with disclosure, choosing to stay silent about their diagnosis so they would not “scare people away.” However, others chose to share their diagnosis to those they trusted and were close to. Additionally, participants disclosed to online friends who they could remain anonymous with. It is also important to note that not all participants reported internalized stigma. Several rejected the label and did not see a reason to hide their diagnosis, believing that their ability to “get through it” was a sign of inner strength. Additionally, older participants explained their process of grappling with a new identity and need to “find their real self” despite the diagnosis label.

The sample in this study was predominately Latinx youth residing in an impoverished neighborhood in New York City. As a result, these findings may not be generalizable to other parts of the country. Moreover, the sample only included those who received mental health treatment and may not be generalizable to those who had mental health concerns but chose not to seek help. However, this study is important in that it is one of the few studies that explores the experiences of stigma from predominately Latinx, low SES youth. The results from this study have consequence for MHL interventions including the need for educators and mental health professionals to

empower youth to manage the effects of stigma and find positive coping in the midst of potentially difficult interpersonal relationships. Moreover, family based anti-stigma efforts may be particularly beneficial for families and communities that have high levels of shame and stigma surrounding mental illness.

In a related study, McKeague, Hennessy, O'Driscoll, and Heary (2015) investigated how self-stigma changes across the adolescent developmental period by examining retrospective accounts of self-stigma experienced by young people with mental health concerns. The sample consisted of adults diagnosed with ADHD or depression during childhood or adolescence ( $N = 16$ ; mean age = 22.58 years). The principal researcher conducted semi-structured interviews using open-ended questions to gather information pertaining to participants' experiences and responses relating to having a mental health diagnosis. The researcher did not explicitly mention stigma, instead asking questions centered around stigma experience (i.e., peer relationships, disclosure to peers, reactions to stigmatizing experiences). Thematic analysis with inductive and deductive coding was employed to identify salient themes. Additionally, interrater reliability analysis was conducted with 10% of the data and found to be acceptable ( $K = 0.72$ ,  $p < .001$ , 95% CI [0.66, 0.78]). Three main themes emerged from the data analysis: being different, experiences of peer-stigmatization, and a progression towards more openness. First, participants noted feelings of being different, especially in the context of adolescence. For example, Colm (age 22) said, "As a teenager, you don't want to be judged or classified or be thought of as in some way defective (pg. 161)." Participants used the words "strange," and "weird" to explain how their peers thought of them. Participants also described the consequences of peer stigmatization. Specifically, the experience of peer stigmatization led to feelings of being isolation and self-doubt. However, as participants grew up they become more accustomed to their mental health, developed positive

ways to cope, and felt more comfortable disclosing their mental health status. Although the sample in this study was relatively small and homogenous, understanding how stigma is experienced over time has important implications for the adolescent population. Authors concluded by noting the importance of anti-stigma campaigns in the childhood and adolescent years to mitigate the negative impact of stigma.

Three research studies (Moses, 2009a, 2009b, 2010a) provide initial insight into the factors influencing self-stigmatization in young people with mental health concerns. For example, younger age at first treatment and older participant age is associated with increased self-stigmatization. Furthermore, parental factors including secrecy over child's diagnosis, self-labeling, and explanation for the cause of mental health issues are associated with increased self-stigma. Conversely, factors relating to decreased self-stigmatization included having an externalizing disorder (e.g. conduct disorder) and parental factors such as optimism and belief in child's ability to control symptoms. These findings speak to the differences between public-stigma and self-stigma. Although externalizing symptoms are associated with increased public stigma (Leighton, 2010), public stigma associated with mental health disorders with externalizing symptomology may not translate to increased self-stigma. Additionally, family dynamics impact self-stigma, providing a rationale for interventions to address the influence of transgenerational transmission of stigmatizing attitudes (Kaushik, Kostaki, and Kyriakopoulos, 2016).

In summary, mental health stigma is a pervasive issue in society. Among young people, mental health stigma carries a heavy psychological burden, impacting school performance, relationships with peers, and heightening the risk of behavioral problems. Additionally, experiences of peer stigmatization impact adolescents' feelings of self-worth, disrupting the main developmental task of adolescence, identity formation (Erikson, 1968). The factors impacting

stigma are complex including diagnosis, gender, culture, family dynamics, and peer relationships. Although the issue of mental health stigma is multifaceted, there is wide consensus among researchers that anti-stigma initiatives must be targeted towards children and adolescents and include education on the misconceptions and stereotypes surrounding mental health. Moreover, coping strategies must be infused within mental health education to mitigate the negative impact of mental health stigma. Therefore, the present study aimed to reduce stigmatizing attitudes in adolescents and promote coping. In the next section, a related construct, help-seeking is reviewed and discussed within the framework of MHL.

### Help-Seeking

MHL has been proposed as a main factor in facilitating help-seeking among adolescents. If adolescents are knowledgeable about mental health including the various formal and informal sources of mental health support, there is greater likelihood that they will seek support when encountering mental health distress. The World Health Organization (2007) defines help-seeking as,

*Any action or activity carried out by an adolescent who perceives herself/himself as needing personal, psychological, affective assistance or health or social services, with the purpose of meeting this need in a positive way. This includes seeking help from formal services – for example, clinic services, counselors, psychologists, medical staff, traditional healers, religious leaders or youth programmers – as well as informal sources, which includes peer groups and friends, family members or kinship groups and/or other adults in the community (World Health Organization, 2007, p. 2).*

Barker (2007) argues that a broad definition of help-seeking, inclusive of both formal and informal help-seeking, is appropriate because of the range of psychosocial, affective, and health needs affecting young people. Although specific health needs may be most appropriately met through professional help seeking, developmental problem-oriented needs may be most suited by informal social support. Similarly, the framework of MHL includes knowledge and encouragement of formal help-seeking as well as informal means of coping including turning to trusted peers and family for emotional support.

The importance of help-seeking for the adolescent population cannot be understated. 75% of mental health concerns develop before the age of 24 (Kessler et al., 2012). When left untreated, mental health concerns in adolescence intensify and overall mental health steadily declines. For example, untreated children and adolescents with anxiety disorders have elevated risk of poor academic performance (Mazzone et al., 2007) and substance use problems (Gillen, Barry, & Bater, 2016) and lack of treatment for depressed children and adolescents is strongly associated with risk of suicide (Thapar, Collishaw, Pine, & Thapar, 2012). Moreover, untreated chronic mental health concerns are associated lack of stable housing, experiences of homelessness (Tsai, O'Toole, & Kearney, 2017), and increased likelihood of imprisonment (Barnert, Perry, & Morris, 2016). However, if mental health is prioritized and young people are provided with appropriate services, adverse outcomes can be mitigated. Researchers have underscored the importance of understanding barriers and facilitators of help-seeking as a step in addressing the disparity between mental health concerns and help-seeking.

## Barriers and Facilitators of Help-Seeking

Barriers to help-seeking involve personal and structural determinants that prevent help-seeking behavior (Barker, 2005). In a systematic review, researchers synthesized 22 research studies (15 qualitative, 7 quantitative) centered around the perceived barriers and facilitators to mental health help-seeking in young people (Gulliver, Griffiths, & Christensen, 2010). First, researchers reviewed previous systematic reviews that focused on cross-sectional correlation studies (Barker, 2005; Rickwood, Deane, Wilson, & Ciarrochi, 2005; Rickwood, Deane, & Wilson, 2007). Barker (2005) identified individual factors that predict help-seeking including gender norms, self-efficacy, and self-stigma as well as structural determinants including the healthcare system, accessibility of services, financial obstacles, and social support. Additionally, Rickwood and colleagues (2005, 2007) identified high reliance on self to solve problems, lack of emotional competence, and negative attitudes about mental health treatment as obstacles to seeking help. Gulliver and colleagues expanded these initial reviews by including both qualitative and quantitative literature focused on help-seeking around common mental health problems experienced by young people (i.e., depression, anxiety, general emotional distress). Researchers coded the studies and analyzed according to thematic analysis.

Of the 23 studies, 13 addressed barriers to help seeking and 3 assessed facilitators of help-seeking. Researchers identified public, perceived, and self-stigmatizing attitudes ( $n = 10$ ), concerns regarding confidentiality and trust ( $n = 6$ ), difficulty identifying mental health concerns ( $n = 5$ ), concerns regarding the characteristics of the provider ( $n = 5$ ), and reliance on self to solve problems ( $n = 5$ ) as primary obstacles to help-seeking. Additionally, lack of knowledge ( $n = 4$ ), fear or stress about the act of help-seeking ( $n = 4$ ), and lack of accessibility ( $n = 4$ ) were identified as barriers to help-seeking. On the other hand, positive past experiences ( $n = 3$ ), encouragement

from others ( $n = 2$ ), trust in service provider ( $n = 2$ ), positive relationships with service staff ( $n = 2$ ), and mental health education and awareness ( $n = 1$ ), were key facilitators to help-seeking among youth. Researchers concluded by proposing approaches to encourage help-seeking in young people including addressing the young person's desire for self-reliance, increasing overall MHL, and reducing the stigma surrounding mental health.

The different dimensions of stigma may have varying influence on help-seeking beliefs. Yap, Wright, and Jorm (2011) sought to examine the influence of stigma on young people's help seeking intentions and their beliefs about the helpfulness of various sources of formal and informal help among Australian youth aged 12-25 years ( $N = 2,925$ ) and their parents ( $N = 2,005$ , 68.9% mothers). Youth and parent participants were introduced to a vignette depicting a young person with a mental disorder and asked a series of questions covering sociodemographic factors, psychological distress, exposure to mental health problems and awareness campaigns. Help seeking intentions were examined by asking the respondent if they would seek help if they were encountering a similar problem and who they would seek help from. Beliefs about helpfulness of seeking help were assessed by providing a list of formal and informal sources of help and asking respondents to indicate if each source would be helpful, harmful, or neither for the character in the vignette. Stigma was assessed by a 19-item questionnaire that measured five components of stigma: social distance, dangerousness/unpredictability, 'weak not sick', stigma perceived in others, and reluctance to disclose.

Exploratory correlational analyses were utilized to analyze group differences which resulted in separately evaluating adolescents (age range = 12-17) and young adults (age range = 18-25). Logistical regressions were run for each age group and included vignette type, gender, age and four continuous measures of stigma as predictor variables. Dichotomized measures of help-



seeking and source helpfulness were each calculated by these logistical regression equations. Of the four stigma measures, "dangerousness/unpredictability", "weak not sick", and "social distance" contributed significantly to findings regarding help-seeking and perceived source helpfulness. For adolescents, those who preferred to distance themselves from those with mental health disorders (e.g., social distance) had decreased odds of going to a teacher for help if they had a problem similar to the character described in the vignette (0.58, 0.34-0.99,  $p = 0.008$ ). Additionally, adolescents who exhibited "social distance" had decreased odds of believing a friend (0.55, 0.36-0.83,  $p < 0.001$ ) or an informative website (0.74, 0.57-0.99,  $p = 0.002$ ) could provide help. Adolescents who perceived those with mental health disorders to be dangerous and/or unpredictable, were less likely to believe a friend could be helpful if they were experiencing a mental disorder (0.65, 0.46-0.92,  $p = 0.002$ ). Additionally, adolescents who held the belief that those with mental disorders were weak not sick ("weak not sick") had increased odds of believing self-help books could be helpful (1.24, 1.00-1.54,  $p = 0.009$ ) and decreased odds of believing a counselor would be helpful if they had a problem (0.74, 0.55-0.99,  $p = 0.007$ ).

Although authors call for longitudinal and experimental studies to evaluate causality, this study provides further suggestion that stigma directly influences help-seeking. Adolescents who endorsed stigmatizing beliefs and attitudes were significantly less likely to believe formal and informal help sources were beneficial. Authors noted the importance of anti-stigma efforts and highlighted how targeting stigma dimensions such as "weak not sick", "social distance" and "dangerousness/unpredictability" may allow for refinement of anti-stigma efforts and future research endeavors.

Additionally, researchers have examined the relationship between stigma and help-seeking decisions including individual's choices to seek information about mental health concerns and

treatment options. Lannin and colleagues (2016) examined whether self-stigma and attitudes predicted individual's willingness to seek information pertaining to mental health and counseling. Participants were 370 undergraduates ( $N = 370$ ; mean age = 19.4 years,  $SD = 1.77$ ; females = 61%) from a Midwestern university in the United States. Participants completed surveys including a demographic questionnaire, the *Self Stigma of Seeking Help Scale* (Vogel et al., 2006), *Attitudes Towards Professional Help Seeking* (Fisher & Farina, 1995) and *K6*, a psychological distress instrument (Kessler et al., 2002). After completing the survey items, participants were asked if they would like to be directed to a website where they could learn more about seeking help from a mental health professional and if they would like to be directed to a website that provides information relating to mental health concerns. If students responded affirmatively, they would be directed to the website.

Researchers employed a weighted least squares analysis with self-stigma as a predictor variable, distress and gender as covariates, and counseling information and mental health information as outcome variables. Researchers found that self-stigma was a significant predictor of decisions to seek mental health information ( $\beta = 0.33$ ,  $SE = 0.15$ ,  $p = .029$ , 95% CI for  $\beta = -0.63$ , -0.03) and was nearly significant as a predictor for decision to seek mental health information ( $\beta = 0.23$ ,  $SE = 0.14$ ,  $p = .097$ , 95% CI for  $\beta = -0.51$ , 0.04). Furthermore, among individuals who were high in psychological distress, the probability of seeking mental health information was 8.5% for individuals with high self-stigma compared to 17.1% for high distress individuals who had low self-stigma. Similarly, individuals with high distress and high self-stigma had an 8.4% likelihood for seeking counseling information compared to 15% for individuals with low self-stigma. This study includes a relatively homogenous sample (82% European American); thus, generalizability may be limited. Additionally, the anonymous nature of the website referral does not necessarily

reflect the actual process of seeking help. However, this study is important in that it substantiates the connection between self-stigma and help-seeking decisions. Considering the impact of stigma, an overall goal of MHL interventions must be to reduce self-stigma, paving the way for appropriate help-seeking.

In addition to stigma, demographic factors including age, gender, education, and ethnicity impact mental help-seeking (Gulliver et al., 2010; Payne, Swami, & Stanistreet 2008; Wilson & Deane, 2001). For example, Haavik, Joa, Hatloy, Stain, & Langeveld (2017) investigated the effect of gender and education type on perception of help-seeking, awareness of and use of services, and MHL. Participants were upper secondary students in Norway ( $N = 1,249$ ; mean age = 17.6; 56% female). Participants were purposively sampled in order to gain a representative sample from urban and rural areas and university preparatory studies and vocational studies. In general, Norwegian students enrolled in vocational studies have poorer academic achievement and parents with lower levels of educational attainment compared to adolescents from university preparatory studies (Ekren, 2014). Participants completed an online survey consisting of open-ended and closed questions in their classrooms. MHL was measured using four mental health vignettes and questions concerning possible explanations for each mental health scenario. Adolescents' perceptions of barriers for help seeking was measured by nine statements constructed from previous research studies presented on a 5-point Likert-type scale. Awareness and use of mental health services was measured by the *General Help-Seeking Questionnaire* (Wilson, Deane, Ciarrochi, 2005) adapted for the Norwegian context.

The most frequently cited perception of barriers included delay in making treatment contact (90.1%), poor MHL (81.4%) fear of receiving a diagnosis (80.7%), and fear of being treated differently (80.7%). Females were significantly more likely to perceive barriers to help

seeking including excessive waiting time (males = 41.4%, females, 53.4%,  $p < .0001$ ), financial concerns (males = 33.5%, females = 48.2%,  $p < .001$ ), fear of being seen differently (males = 88.8%, females = 93.3%,  $p = .007$ ) and fear of receiving a diagnosis (males = 77%; females = 83.5%,  $p = .005$ ) compared to their male counterparts. Analyses of educational differences revealed that university preparatory students perceived financial expense as a greater barrier than vocational preparatory students (university = 50.7%; vocational = 37.5%;  $p = .000$ ). However, vocational students perceived a lack of MHL as a greater barrier than university preparatory students (university = 74.4%; vocational = 83.9%,  $p < .001$ ). Vocational studies students reported more awareness of their general practitioner as a source of help (university = 84.6; vocational = 90.2%;  $p = .004$ ) whereas university preparatory students school based psychological services (university = 25.8%; vocational = 18.0%,  $p < .001$ ). Furthermore, university preparatory students reported significantly more use of all services compared to vocational studies students ( $p < .0001$ ). In line with previous research studies, researchers found that gender influences help-seeking. Females perceive more barriers than males. However, females are also more aware of potential sources of treatment and more likely to seek treatment compared to males. However, the influence of education was a greater determinant of help-seeking than gender. Students enrolled in university preparatory studies were more likely to use services despite vocational studies students possessing greater levels of MHL. Consequently, mental health promotion programs need to be incorporated in all high school programs and may be particularly beneficial for students with lower levels of academic achievement.

In addition to gender and education, racial and ethnic background may be a significant barrier to treatment utilization across adolescents with mental health concerns. Nestor, Cheek and Liu (2016) investigated ethnic and racial differences in mental health service utilization for

suicidal ideation and behavior treatment utilization across racial and ethnic differences using a nationally representative sample of adolescents ( $N = 4,176$ ) drawn from the National Survey on Drug Use and Health. A multi-stage area probability sampling design was employed to gain a representative sample. This study specifically looked at participants who were between the ages of 12-17 (mean age = 14.6,  $SE = .04$ ) and met criteria for major depressive disorder and suicidal ideation and behavior within the previous 12 months. Participants from ethnic and racial minority backgrounds were oversampled (0.7% non-Hispanic white, 12.2% non-Hispanic black, 21.1% Hispanic, 3.2% Asian, Hawaiian, and Pacific Islander, 0.7% Native American, and 2.2% multiracial). Participants answered survey items using computer assisted interviewing software intended to increase openness in responses. Participants were asked about suicidal ideation, plans, and attempts as well as mental health treatment utilization (i.e., psychiatric inpatient treatment or outpatient treatment).

Researchers analyzed data using multivariate logistic regression analyses. Considering the multitude of factors that influence help-seeking, health insurance status, family income, age, sex, and symptom severity were treated as covariates in the analysis. Across all racial/ethnic groups, treatment use was low (below 10% for individuals with suicidal ideation and below 50% for individuals with history of suicidal attempts). Racial/ethnic minority adolescents were less likely to receive outpatient treatment ( $OR_{\text{Black}} = .4$ ,  $OR_{\text{Native American}} = .2$ ,  $OR_{\text{Hispanic}} = .55$ ,  $OR_{\text{Asian/Pacific Islander}} < .01$ ,  $OR_{\text{multiracial}} = .3$ ) compared to non-Hispanic white adolescents ( $OR_{\text{white}} = 1.00$ ). Among adolescents with severe suicidal ideation and behavior, racial and ethnic differences persisted. Specifically, non-Hispanic black adolescents ( $OR_{\text{non-Hispanic}} = .40$ ) and Native American adolescents ( $OR_{\text{Native American}} = .06$ ) were significantly less likely to receive inpatient hospitalization compared to white non-Hispanic adolescents ( $OR_{\text{White}} = 1.0$ ). Collectively, these findings demonstrate a wider

service gap for ethnic and racial minority adolescents. Although these findings do not speak to the reasons behind this discrepancy including knowledge, stigma, and cultural differences, the findings lend support for the importance of providing inclusive, accessible mental health services.

Researchers conducted a related study to understand the unique factors that propel adolescents to seek mental health support in the school setting. Biolcati, Paaraeti, and Mameli (2018) examined demographic characteristics, risk behaviors, academic performance, and personal well-being among high school students in Italy with the overall goal of evaluating the efficacy of a school-based mental health program aimed at supporting at-risk youth. Although the aim of the study was to evaluate the program, the implications of the study provide insight into potential barriers of seeking help. Participants were high school students ( $N = 2,335$ , mean age = 16.26 years,  $SD = 1.66$ ) enrolled in 11 schools in Italy. Of the 2,235 students, 333 students (67%) had pursued individual counseling services. Students completed measures assessing their perception of the mental health services, frequency of risk behaviors, school well-being, and personal well-being.

There were no differences between the two groups on age (mean help seekers = 16.15 years, mean non-help-seekers=16.31 years,  $F = 2.553$ ). However, females were significantly more likely to seek help compared to males (73.87 vs. 63.333%,  $p < .001$ ). The two groups also differed on classroom wellbeing, with help-seekers reporting lower levels of classroom wellbeing compared to non-help seekers (help seeker mean = 24.98,  $SD = 8.25$ ; non-help seeker mean = 26.25,  $SD = 75.57$ ,  $F = 7.68$ ,  $p < .01$ ). Groups also differed on measures of personal wellbeing including self-esteem (help seeker mean = 15.24,  $SD = 4.71$ ; non help seeker mean=16.85,  $SD = 4.28$ ,  $F = 33.86$ ,  $p < .001$ ), psychological distress (help seeker mean = 12.11,  $SD = 4.94$ ; non help seeker mean=10.27,  $SD=4.28$ ,  $F = 49.36$ ,  $p < .001$ ) and family relationships (help seeker mean=

10.90,  $SD = 3.33$ ; non help seeker mean = 12.08,  $SD = 3.00$ ,  $F = 42.42$ ,  $p < .001$ ). Considering that the aim of the mental health program was to provide counseling services to the most vulnerable, at-risk youth, these results were encouraging. However, there were no significant differences between help-seekers and non-help-seekers on measures of school grades (help seeker mean = 6.81,  $SD = .88$ ; non-help seeker mean = 6.90,  $SD = .91$ ,  $F = 3.02$ ,  $p > .01$ ). and relationships with teachers (help seeker mean = 10.68,  $SD = .429$ ; non help seeker mean = 10.90,  $SD = 3.91$ ,  $F = .85$ ,  $p > .01$ ). This research is cross-sectional and relies on self-report, increasing the likelihood of threats to internal validity. However, the large sample size and breadth of measurements provides consequential findings. Namely, students who are struggling in school may be less likely to seek help, even when offered accessible and convenient school-based mental health services. Students who are at risk of dropping out of high school have heightened mental health needs. Thus, poor academic achievement may be a significant barrier to seeking help, even amidst heightened vulnerability. Considering teachers and school counselors often serve as a gateway to mental health professionals, relationships with educators and school personnel may play a key role in mental healthcare utilization.

Considering help-seeking varies considerably among demographic factors, the determinants of individuals belonging to groups less likely to seek help are important to consider. Young men are among the least likely demographic to seek mental health care when facing emotional distress (Rickwood & Thomas, 2012) and have lower rates of awareness of mental health services (Jorm & Oh 2009; Jorm, Wright, & Morgan, 2007). Rice and colleagues (2018) investigated the barriers and facilitators of community-based healthcare among young men seeking mental health care in Australia. Participants were 25 young males (mean = 18.80 years,  $SD = 3.56$ ) and four mental health service providers. A grounded theory design was employed

consisting of individual interviews and focus groups. While the traditional conceptualizations of masculinity prevented young men from receiving mental health care, connections among community organizations (e.g., hospitals, schools) and mental health services paved the way for young men to seek out treatment services. Additionally, having a male therapist encouraged the young men to speak openly and continue counseling services. Young men also spoke about the importance of targeted messaging and incorporating mental health promotion at schools, sports, organizations, and social media platforms that appeal to the male demographic. This study highlights several important takeaways relevant to the overarching framework of MHL. Namely, the importance of initial positive contact with mental health providers and fostering connections between community organizations and mental healthcare can serve as a catalyst for young people seeking help.

In summary, several unique factors contribute to the significant service gap experienced by young people with mental health concerns. Researchers have noted barriers to help seeking including stigma, gender roles, racial and ethnic background, education level, and poor academic functioning. Determinants of help-seeking among adolescents include mental health awareness, social support, positive relationships with mental health professionals, previous experience with mental health services, and connections to community organizations.

### Relationship Between Constructs

In 2013, President Obama called for increased understanding and awareness of mental health stating, “too many Americans who struggle with mental health illnesses are still suffering in silence rather than seeking help, and we need to see it that men and women who would never hesitate to go see a doctor if they had a broken arm or came down with the flu, that they have that



same attitude when it comes to their mental health.” The foundation of MHL addresses this exact premise; increasing help-seeking by fostering mental health knowledge, positive attitudes towards treatment, and tackling public and self-mental health stigma.

The four primary constructs in the present study: (a) mental health knowledge, (b) mental stigma, (c) attitudes towards help-seeking, and (e) hope are interconnected yet distinct. Mental health knowledge, including the common myths and misconceptions surrounding mental health predicts mental health stigma (Yap, Wright, & Jorm, 2011) which in turn predicts attitudes towards help-seeking (Olsson & Kennedy, 2010). Culture impacts each of these constructs as it filters the lens in which individuals view mental health and treatment. Furthermore, Hope Theory (Snyder et al., 1997) parallels the framework of MHL. Young people when faced with mental health crises necessitate personal agency to overcome challenges and must possess multiple pathways to reach optimal mental health, including coping skills, seeking social support, and treatment. The overall aim of this research study was to investigate an evidence- based MHL intervention designed to increase mental health awareness and positive attitudes towards seeking help, decrease mental health stigma, and foster hope in the adolescent population. Investigating adolescents from economically disadvantaged and racial and ethnic minority backgrounds furthers the research base of MHL and paves the way for culturally relevant MHL interventions.

## CHAPTER THREE: METHODOLOGY

Chapter three provides an overview for the present study including the research design, methods, and procedures to be utilized. The present research study investigated if a mental health literacy (MHL) intervention changed adolescents' (ages 11-18) mental health knowledge, mental health stigma, help-seeking attitudes, and hope over time. Specifically, the present investigation examined if individuals' self-reported measures of mental health knowledge, stigma, help-seeking attitudes, and hope change over time across pre-test (wave one) and post-test (wave two). Additionally, the researcher examined if changes in mental health knowledge, stigma, help-seeking attitudes, and hope were sustained at one-month follow-up by examining changes across wave one and wave three (follow-up). In chapter three, the researcher delineates the following components of the research study: (a) research design; (b) population and sampling, (c) recruitment procedures; (d) research setting; (e) intervention protocols; (f) screening and training procedures; (g) research questions; (h) data analysis method; (i) threats to validity and mechanisms to mitigate threats; (j) limitations; (k) ethical considerations.

### Research Design

This research study followed a quasi-experimental one-group pretest-posttest design to investigate the primary question guiding this investigation. The researcher analyzed the data using repeated-measures multivariate analysis of variance (RM-MANOVA) to examine if a MHL intervention changed dependent variables (mental health knowledge, mental health stigma, help-seeking attitude, and hope) across time. RM-MANOVA was selected based on the inclusion of multiple related dependent variables and ability to examine multiple measures over time.

Participants received a MHL intervention (*Mental Health and High School Curriculum Guide* (e.g., *The Guide*; Kutcher, 2009), facilitated by counselors-in-training at six Boys and Girls clubs across a southeastern state. The intervention consists of 75-minute psychoeducational sessions occurring at the same time and place for six consecutive weeks. There were three waves of data collection each club, (a) the first-class session (i.e., week one), (b), the last class session (i.e., week six), and (c) one-month after the intervention (i.e., week ten).

Prior to beginning this study, the researcher sought approval from the University of Central Florida's institutional review board (IRB). The IRB application includes pertinent information regarding the population, rationale for the investigation, data collection procedures, potential risks for participants, and data storage procedures. All supplemental materials such as the intervention manual, informed consents, and instruments were included in the IRB submission. Additionally, the researcher met with Boys and Girls Clubs staff prior to the intervention taking place to ensure ethical and logistical procedures (e.g., availability of space, minimum number of participants, informed consent) are considered in advance. Specifically, the researcher met twice with the regional program director of Boys and Girls Clubs to discuss the parameters of the study, *The Guide* curriculum, and determine which clubs were an appropriate fit for the intervention. Next, the researcher met with each of the six participating club directors to discuss the unique characteristics of each club, including the established after-school routine of members, and further ethical and logistical considerations.

### Population and Sampling

The researcher utilized purposeful sampling for the present study (Fraenkel & Wallen, 2011). The targeted population included adolescents (11-18 years old) from economically

disadvantaged backgrounds in a southeastern state. The accessible population for the present study is adolescents enrolled in six Boys and Girls Clubs across the central region of a southeastern state. Inclusion criterion includes: English proficiency; age (11-18 years); established attendance at Boys and Girls Clubs; and permission from parent or guardian, indicated by completed informed consent.

The statistical software, G\*Power was utilized to calculate an *a priori* analysis (Erdfelder, Faul, Lang, & Buchner, 2007). Previous research on MHL has indicated small to moderate effect sizes (e.g., (Kutcher, McLuckie, Weaver, and Wei, 2014). Given the parameters of a small (.25) effect size, power of 80%, and two observation points (pre-test and post-test), a sample size of 65 participants is required for adequate power. However, previous researchers have encountered substantial attrition in similar studies ranging from 28% to 48% (McLuckie et al., 2014; Kutcher, 2015; Swartz et al., 2016). Taking this limitation into account, the researcher recruited approximately 80 participants to participate in the intervention.

### Recruitment Procedures

Recruitment procedures followed culturally sensitive research methods including building relationships with key stakeholders and considering cultural and socioeconomic barriers that may impact participation. Potential barriers among racial and ethnic minority populations include mistrust of research and financial strain, including lack of transportation and unreliable communication sources (Awad, Patall, Rackley, & Reilly, 2016). Per recommendation from Boys and Girls Clubs administration, recruitment was approached collaboratively through face-to-face contact from Boys and Girls Clubs staff and visitations from the researcher to the individual clubs. Prior to recruitment, the researcher met with staff to explain the purpose of the study, the required

time commitment, and potential risks and benefits for the participants to the staff. Two of the six participating club directors expressed concern that mental health stigma would be a significant barrier to participation for youth and families. To mitigate this barrier, the researcher delivered an informal presentation to youth at each club approximately two weeks before the intervention began. During this presentation the researcher explained the purposes of the intervention and addressed potential questions or concerns regarding the study.

Additionally, staff members recruited participants via face-to-face contact. Interested club members were provided with an informed consent to take home for parent or guardian signature. The researcher and club staff worked together to remind participants and parents and guardians to return the informed consent forms in a timely manner. The researcher returned to the clubs one week later to collect signed informed consents.

Considerations were made to in attempt to mitigate common logistical barriers to participation. As recommended by Boys and Girls Clubs staff, the intervention was held on the highest attendance day for the organization. Timing of the groups varied from club to club, considering club events and the routine activities club members participate in (e.g., tutoring, sports, clubs, etc.). The researcher supplied light refreshments at each session and concluded the intervention with a celebration at each club to celebrate participants' accomplishments.

### Research Setting

Boys and Girls Clubs of America (2018) serves four million young people annually in 4,300 clubs throughout the United States. There are 1,594 school-based clubs, 481 clubs on military installations, 990 clubs in rural areas, 296 clubs in public housing, and 175 clubs on Native lands. Clubs serve young people ages 6-18 years of age. Nationwide, the demographic

breakdown of youth served is: 29% White, 27% African-American, 24% Hispanic, 6% two or more races, 5% Unknown, 3% Asian, 3% American Indian/Alaska Native, 2% another race, and 1% Native Hawaiian or Pacific Islander. 55% of members are male and 45% of members are female. 56% of club members nationwide qualify for a free or reduced-price school lunch (Boys and Girls Club of America, 2018).

The regional Boys and Girls Club where this study takes place serves 15,180 youth across seven counties and is ranked fourth in the nation for number of youths served. 72% of participating families in the region have an income of less than \$30,000 and 84% of members qualify for a free and reduced lunch. 60% of members live in a single parent household. The clubs participating in this research study were six clubs within a one-hour drive of the university. The group sessions took place in designated classroom or conference rooms with access to a projector screen, tables, and enough space to accommodate 15-25 students and two facilitators. Each session was attended by a Boys and Girls Club staff member who provided additional support (e.g., technology support, classroom management, etc.).

### Mental Health Literacy Psychoeducational Intervention

A manualized classroom curriculum was used to increase treatment fidelity. *The Mental Health and High School Curriculum Guide* (e.g., *The Guide*; Kutcher, 2009) is a mental health curriculum resource designed to enhance the MHL of adolescents. The primary goals of *The Guide* curriculum are (a) understand how to optimize and maintain good mental health; (b) understand mental health disorders and their treatments; (c) decrease mental health stigma; and (d) enhance help-seeking attitudes. *The Guide* is an interactive curriculum with several key features including PowerPoints and lesson plans, classroom discussion questions, and interactive activities. Each

lesson starts with a brief check-in with group members and a five-minute activity to promote mental health and wellness (e.g., box breathing, muscle relaxation). The remaining time is spent engaging in psychoeducation through lecture-based learning, discussions among group members, and activities. Examples of activities include engaging in narrative storytelling about mental health through YouTube videos; guessing which famous and influential person lived with a mental illness; generating personal coping skill cards; and discussing in groups ways to challenge irrational thoughts. All of these materials are accessible free of charge and available online at [teenmentalhealth.org](http://teenmentalhealth.org) and sample activities can be found in the Appendix.

In addition to the manualized treatment manual, additional counseling strategies were employed to further enhance the curriculum and build rapport between researchers and participants including open ended questioning, paraphrasing, facilitating discussions among classmates, and reflection. Further, group facilitators adapted the curriculum to be more culturally relevant and developmentally appropriate. For example, facilitators supplemented videos only featuring Caucasian youth with adolescents from racial and ethnic minority backgrounds and led discussions centered around culture and mental health. Table 2 details *The Guide's* six-week curriculum.

Table 2

*Summary of Teen Mental Health and High School Curriculum Guide (Washington Version)*

Week	Major Concepts
Week 1: <i>The stigma of mental illness</i>	<ul style="list-style-type: none"> <li>a. Stigma acts as a barrier to people seeking help for mental health problems and mental illness.</li> <li>b. Understanding mental illness and treatments can help dispel misconceptions and stigma.</li> <li>c. People's attitudes about mental health can be positively influenced by exposure to accurate information.</li> <li>d. We all have a responsibility to fight the mental health stigma.</li> </ul>

Week	Major Concepts
<p>Week 2: <i>Understanding mental health and mental illness</i></p>	<ul style="list-style-type: none"> <li>a. Everyone has mental health regardless of whether or not they have a mental health problem.</li> <li>b. The brain controls our thinking, perceptions, emotions, physical activities, behavior and provides us with cues about how to adapt to our environment.</li> <li>c. A mental illness is a condition arising from changes in brain functioning that causes that person substantial difficulty in functioning.</li> <li>d. Mental health problems have complex causes that include a biological basis and are therefore not that different from other illnesses.</li> <li>e. The stress response is a normal phenomenon that signals adaptation to changes in our environment is needed.</li> </ul>
<p>Week 3: <i>Information on specific mental illnesses</i></p>	<ul style="list-style-type: none"> <li>a. All mental illnesses reflect difficulties in: thinking, perception, emotions, physical activities, behavior and signaling.</li> <li>b. The exact cause of mental illnesses is not yet known, but complex interactions between a person's biology and their environment are involved.</li> <li>c. Like illnesses that affect other parts of the body, mental illnesses are treatable, and the sooner people receive proper treatment and support, the better the outcomes.</li> </ul>
<p>Week 4: <i>Experiences of mental illness</i></p>	<ul style="list-style-type: none"> <li>a. Mental illnesses are diseases that affect many aspects of a person's life.</li> <li>b. With appropriate support and receipt of evidence-based treatment, most people with a mental illness can function effectively in everyday life.</li> <li>c. Getting help early increases the chances that a person will make a full recovery from mental illness.</li> <li>d. Mental illnesses, like physical illnesses, can be effectively treated.</li> </ul>
<p>Week 5: <i>Seeking help and finding support</i></p>	<ul style="list-style-type: none"> <li>a. There are many ways of seeking help for mental health problems and mental illnesses, and resources are available within schools and within the community.</li> <li>b. Knowing the signs and symptoms of mental illness helps people know how to distinguish the normal ups and downs of life from something more serious.</li> </ul>



Week	Major Concepts
	<ul style="list-style-type: none"> <li>c. Recovery from mental illness is possible when a range of supports beyond formal treatment are available.</li> <li>d. Everyone has mental health that can be supported.</li> </ul>
Week 6: <i>The importance of positive mental health</i>	<ul style="list-style-type: none"> <li>a. Positive coping strategies can help everyone maintain and enhance their mental health.</li> <li>b. There are skills and strategies that we can learn to help us obtain and maintain good mental health.</li> </ul>

### Screening for Participants

Boys and Girls Clubs directors and staff screened participants to ensure eligibility and fit for the study. Criteria included (a) frequent attendance at the Boys and Girls Club; (b) being between the ages of 11 and 18; (c) parent or guardian permission; (d) ability to understand and read English; and (e) willingness to participate in the psychoeducational curriculum.

### Screening and Training for Group Facilitators

The Guide was intended for teacher-led implementation. For the purpose of this study, the manual was implemented by master's students in a Counselor Education program at university in a southeastern state. Group facilitators were recruited through a mass email sent to all master's students enrolled in the counselor education program. The recruitment email detailed the purpose of the psychoeducational group and the responsibilities of the group facilitator position. All interested individuals were asked to send a brief statement of interest and their resume to the researcher. A total of 20 students contacted the researcher to express their interest. After reviewing resumes, 15 of the 20 students were selected to interview for the position. Selection criteria

included: (a) previous experience working with adolescents; (b) previous experience working with diverse populations; (c) intention to work with youth in community settings; and (d) strong public speaking and presentation skills. Additionally, the researcher recruited students from ethnic and minority backgrounds to reflect the population of the research sample (Leong & Kalibatseva, 2012).

Thirteen students met with the researcher individually for approximately one hour to discuss their qualifications for the position, commitment required to participate, and procedural responsibilities (e.g., background check, appropriate data collection procedures, informed consent process). A template of the interview questions is provided in the Appendix of this document. Each student was introduced to *The Guide* curriculum and provided with an online link to review the curriculum materials. Of the 15 students, 12 were selected to co-facilitate the intervention based on their personal qualifications and time they could allocate to the intervention. After committing to the facilitator position and responsibilities, a follow up email was sent out by the researcher detailing the process of Collaborative Institutional Training Initiative (CITI training), the steps to obtain a background check, and a poll to schedule for *The Guide* training. During this time, one counselor-in-training decided not to participate.

### Training Procedures

Training consisted of a half-day meeting between the researcher and group facilitators. The first hour of the training procedure was spent reviewing *The Guide* curriculum. The researcher prepared a PowerPoint presentation highlighting the main objectives and lesson plans for each week. Next, a presentation surrounding working with diverse populations and youth in poverty was delivered. For this presentation, a counselor educator with extensive experience working with

disadvantaged youth spoke about their experiences and offered strategies to promote relationship building and connection among facilitators and participating youth. Next, a group facilitator and former high school teacher presented on relevant classroom management strategies and tools to engage the adolescent population in didactic instruction (e.g., think, pair and share, round robin, incorporating movement in instruction). Following this presentation, the researcher modeled a sample lesson of *The Guide* to facilitators. After the lesson ends, facilitators spoke in pairs about (a) their main take-aways from the lesson; (b) classroom management strategies they noticed during the sample lesson; (c) and potential ideas to enhance the curriculum further through their personal counseling framework. The researcher then discussed treatment fidelity and the importance of following learning objectives, while also incorporating strategies to build rapport and foster connection among group members (e.g., group counseling skills, encouraging discussion).

Next facilitators broke up in pairs and prepared one sample activity to teach from *The Guide* curriculum. Facilitators sampled the activity for the group and were provided peer feedback and feedback from the researcher. The last 30 minutes of the training procedure included a question and answer session for facilitators to raise any questions or concerns. Finally, a fidelity measure was administered to all counselors-in-training which consisted of 30 multiple choice questions covering *The Guide* curriculum. The fidelity test included five questions from each of the six modules. Each facilitator was required to score above an 80% to continue as a group facilitator. A copy of the fidelity test is included in the Appendix.

## Research Questions

The purpose of this study was to investigate if a mental health literacy intervention changed' adolescents (ages 11-18) measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes over time. The researcher examined individual scores over three waves of data collection points: pre-test (wave one), post-test (wave two), and follow-up (wave three). The following research questions were assessed:

### Primary Research Question

Do adolescents reported levels of mental health knowledge, mental health stigma, hope, and help-seeking attitudes change between pre-test (wave one) and post-test (wave two) during the course of a MHL intervention?

### Exploratory Research Question One

Is there a significant difference between participants who frequently attended the MHL intervention (< 5 weeks) compared to participants who infrequently attended (> 5 weeks) the MHL intervention on measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes from pre-test (wave one) to post-test (wave two)?

## Exploratory Research Question Two

Is there a significant difference between middle school and high school students' measures of mental health knowledge, stigma, hope, and help-seeking attitudes from pre-test (wave one) to post-test (wave two)?

## Secondary Research Question

Do adolescents reported levels of mental health knowledge, mental health stigma, hope, and help-seeking attitudes change between pre-test (wave one) and follow-up (wave three) over the course of a mental health literacy intervention?

## Data Analysis

The Statistical Package for Social Science (SPSS) Version 25 software was used to analyze the data. The dataset for this study included one independent variable (time) and four continuous dependent variables: (a) participants' mental health knowledge, (b) mental health stigma, (c) help-seeking attitudes, and (d) hope.

## Primary Analysis

The primary research question examined if a MHL intervention changed adolescents' measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes from wave one to wave two. The researcher examined this question by utilizing a repeated measures MANOVA (RM-MANOVA). The statistical procedure RM-MANOVA was selected because

there are multiple within-subject variables that are functionally related and appropriate to analyze collectively (Hahs-Vaughn, 2017). Prior to conducting the RM-MANOVA, the researcher assessed assumptions related to the statistical test including: (a) independence, (b) multivariate normality; (c) linearity, and (d) homogeneity of variance (Hahs-Vaughn, 2017).

### Exploratory Analyses

Exploratory research questions were assessed by RM-MANOVA. RM-MANOVA was selected to compare two groups (middle school students and high school students) on the four dependent variables from wave one to wave two. Similarly, RM-MANOVA was utilized to compare high attendance participants (attending five or more weeks) to low attendance participants (attending four or less weeks) on the four measures from wave one to wave two.

### Secondary Analysis

To determine if the changes from pre-test to post-test were sustained at one-month follow-up, the researcher implemented a RM-MANOVA to examine change in scores at wave one to scores at wave three on the four dependent measures.

### Instrumentation

Participants were provided with a data collection packet with four measures: (a) *Knowledge of Mental Health and Attitude Survey* (McLuckie, Weaver, & Wei, 2014), (b) *Self-Stigma of Mental Illness Scale- Short Form* (Corrigan et al., 2012), *The General Help Seeking Questionnaire* (Wilson, Deane, Ciarrochi, & Rickwood, 2005) and *The Children's Hope Scale*

(Snyder et al., 1997). Measures were administered to participants at first session (wave one), last session (wave two), and at one-month post intervention (wave three). A demographic questionnaire was collected at the beginning of the first session and at post-intervention.

### Demographic Questionnaire

A demographic questionnaire was administered to assess participant age, grade, gender, income level (through eligibility for free and reduced lunch), and race/ethnicity. Additionally, the researcher included items pertaining to perception of personal mental health, strength of family relationships, and previous counseling experience. The demographic questionnaire was submitted to the university IRB and to dissertation committee for feedback regarding readability.

### Mental Health Knowledge and Attitudes Survey

*The Mental Health Knowledge and Attitudes Survey* [MHKAS; Kutcher & Wei, 2013] consists of two subscales: a 28-item scale assessing mental health knowledge and an 8-item scale assessing attitudes. For the purpose of this study, the 28-item knowledge subscale was utilized corresponding to the six modules of *The Guide* curriculum. Participants are instructed to read each statement about mental health and select true, false, or do not know. Scores on the MHKAS range from 0 to 28 with higher scores indicating increased mental health knowledge. Examples from the MHKAS include, “*An anxiety disorder happens when a person’s brain detects the presence of danger – such as a dog attacking*” and “*The frontal lobes of a young person’s brain continue to grow and develop until about the age of 25 years.*” The MHKAS knowledge subscale takes approximately ten minutes to complete.

### Psychometric properties of the MHKAS

The MHKAS was created with consultation from a child and adolescent psychiatrist, a clinical psychologist, and a group of educators and students who provided feedback regarding face validity. There has not yet been comprehensive psychometric evaluation of the MHKAS. However, preliminary analysis speaks to the internal consistency of the instrument. Among a sample of Canadian students in grades nine and ten ( $N = 114$ ), the MHKAS knowledge subscale was .637 (Kutcher et al., 2014). Similarly, the knowledge subscale had an internal consistency of .71 among a sample of 265 Canadian youth (McLuckie et al., 2014).

### Empirical studies utilizing the MHKAS

McLuckie, Kutcher, and Weaver (2014) evaluated students MHL before, after, and two months following *The Guide* curriculum. Participants included 265 secondary students in Ontario Canada. Researchers used paired samples t-tests to evaluate change over time and found that students' knowledge significantly improved between pre- and post-tests ( $p < 0.001$ ;  $d = 0.90$ ) and was maintained at follow-up ( $p < 0.001$ ;  $d = 0.73$ ). In a similar study, Kutcher, Wei, and Morgan (2015) examined knowledge and attitude scores before implementation of *The Guide*, immediately after, and at two-month follow-up among Canadian secondary students ( $N = 175$ ;  $n = 89$  females,  $n = 49$  males;  $n = 37$  unidentified). At baseline, students responded correctly to an average of 55.18% ( $SD = 3.97$ ). Following *The Guide* curriculum, the average score increased to 69.64% ( $SD = 3.39$ ) showing statistically significant improvements ( $t = 12.83$ ,  $df = 113$ ,  $p < 0.001$ ;  $d = 1.11$ ).



Furthermore, knowledge scores remained significantly higher at follow-up ( $t = 11.18$ ,  $df = 113$ ,  $p < 0.001$ ;  $d = 0.91$ ) compared to baseline scores. Neither study included demographic information.

Ravindran and colleagues (2018) examined mental health literacy and coping in a sample of high school and university students (ages 14-25) in Nicaragua. Participants were split between treatment ( $n = 567$ ) and control groups ( $n = 346$ ). The treatment group received 12 weeks of *The Guide* curriculum. Mental health knowledge and stigma were measured by MHAKS at baseline and at 12 weeks (post-intervention). Mental health knowledge significantly improved for the intervention group compared to the control group ( $F = 46.25$ ;  $p < .0005$ ; partial  $\eta^2 = .07$ ). Further, intervention group participants reported lower stigma ( $MD = 1.78$ ), more adaptive coping ( $MD = 0.82$ ), better lifestyle choices ( $MD = 0.06$ ) and lower perceived stress ( $MD = -1.63$ ) ( $p < 0.05$ ) than controls.

In summary, limitations to the MHKAS include unknown factor structure and validity of the MHKAS. Furthermore, there is a lack of reported demographics in studies utilizing MHKAS; thus, the suitability for diverse populations (e.g., economically disadvantaged adolescents) is unknown. However, the advantages of using an instrument that is tailored to *The Guide* curriculum and is developmentally appropriate for adolescents outweighs the limitations.

### The General Help Seeking Questionnaire

The *General Help Seeking Questionnaire* [GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005) measures help-seeking intentions for both formal and informal sources. The GHSQ consists of two questions each corresponding to ten items presented on a Likert-type scale. The first question is, “*If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?*” The second question is, “*If you were experiencing suicidal*

*thoughts, how likely is it that you would seek help from the following people?*” Respondents rate the likelihood of seeking help from nine different sources on a seven-point Likert-type scale ranging from one (extremely unlikely) to seven (extremely likely). Sources of help include: partner; friend; parent; relative; mental health professional; phone hotline, doctor, religious leader; or other (fill in the blank). Respondents also can select “*I would not seek help from anyone.*”

Authors of the GHHS encourage researchers to consider the particular context and most relevant help seeking sources and change help-sources if applicable. Additionally, the instrument can be scored in one of two ways depending on the differences in help-seeking sources. When there are substantial differences between scores of different help-sources the items are analyzed individually whereas the total score can be analyzed when there is less variability across help-seeking sources.

#### Psychometric properties of the GHSQ

The various help-seeking sources included in the GHSQ were determined by consulting student welfare personnel and students. Reliability and validity were assessed using a sample of 218 high school students ( $n = 112$  males;  $n = 106$  females) aged 12 to 19 ( $M = 16.39$ ,  $SD = 1.49$ ) from New South Wales. Students were administered the GHSQ, the *Actual Help Seeking Questionnaire* [AHSQ; Rickwood & Braithwaite, 1994], a four-item scale used to measure experience seeking counseling, and a brief version of the *Barriers to Adolescents Seeking Help Scale* [BASH; Kuhl, Jarkon-Horlick & Morrissey, 1997], which measures beliefs that impede seeking professional psychological help. In general, students were more willing to seek informal help from family and friends rather than formal help for personal-emotional problems. However, students preferred source of help depended on the type of problem they were facing. There was a significant main effect for help source ( $F(10, 1460) = 67.53$ ,  $p < .001$ ) with a significant

interaction with problem type ( $F(10, 1460) = 17.46, p < .001$ ). Students were less likely to seek help for suicidal thoughts from informal sources and more likely to seek out mental health professionals or telephone help lines.

Researchers found that as a single scale, the GHSQ has a Cronbach alpha of .85 and a test-retest reliability of .92 (over three weeks), indicating strong internal validity and reliability. The suicidal problem subscale has a Cronbach's alpha of .82 and a test-retest reliability of .88 whereas the personal/emotional problems subscale has a Cronbach alpha of .70 and a test-retest reliability of .86. Validity of the scale was assessed by examining the relationship between overall help-seeking intentions and prospective help-seeking behaviors over a three-week span. Correlations were moderate for intention and help-seeking behaviors for informal sources (e.g.,  $r_s(181) = .48, p < .001$ , intimate partner;  $r_s(218) = .42, p < .001$ , non-parent family) as well as positive and significant for intention, despite a small number of students seeking mental health care during the three-week span ( $r_s(218) = .17, p < .05$ ). The perceived quality of previous mental health care was positively related to intentions to seek help from a mental health professional for personal-emotional problems ( $r_s(55) = .51, p < .001$ ) and suicidal thoughts, ( $r_s(54) = .57, p < .001$ ) Thus, positive past experience with mental health care is associated with increased intention to seek counseling in the future. Furthermore, a negative association was found between barriers and intentions to seek help from a mental health professional for suicidal thoughts ( $r_s(219) = -.22, p < .01$ ) but not for personal-emotional problems ( $r_s(219) = -.09, p = .21$ ). Overall, researchers concluded that the GHSQ offers a potential avenue for assessing mental health promotion initiatives.

## Empirical Studies Utilizing the GHSQ

Wilson, Deane, Marshall, and Dalley (2007) utilized the GHSQ to evaluate the effects of an intervention, *Building Bridges to General Practice*, a program designed to reduce barriers to treatment and increase intentions to consult a general practitioner for physical and psychological problems in students in three Australian high schools. Students in the treatment group ( $n = 173$ ,  $M = 16$  years) and comparison group ( $n = 118$ ,  $M = 15$  years) completed questionnaires of perceived barriers (measured by *Barriers to Engagement in Treatment Screen*; Deane, Wilson, & Russell, 2007; Wilson et al. 2002) help-seeking intentions (measured by GHSS; Wilson et al., 2005) and self-reported consultations with a GP (measured by self-report questionnaire) one week, before the intervention, five weeks post intervention, and ten weeks post intervention. Researchers reported Cronbach alpha for the GHSQ for psychological problems ranging from .70 to .90 across all time points and both groups. In the treatment group, there was a significant decrease in perceived barriers to treatment between Time 1 ( $M = 1.90$ ;  $SD = .49$ ) and 2 ( $M = .99$ ,  $SD = .50$ ,  $p < .01$  and between time 1 ( $M = 1.90$ ;  $SD = .49$ ) and 3 ( $M = 1.02$ ;  $SD = .53$ ,  $p < .05$ ). There was no significant change in the comparison groups for help-seeking intentions or barriers to treatment. Furthermore, the relationships between intentions for psychological problems and Time 1 and rates of consultation with a GP at Time 2 were not significant for the comparison group; however, the relationship between intentions at Time 1 and rates of Consultation with a GP at Time 2 was significant ( $r_s = .23$ ,  $p < .01$ ). Overall, this study lends support to the GHSQ as a suitable way to assess adolescents' help-seeking intention.

Taylor-Rodgers and Batterham (2014) conducted a randomized controlled trial with young adults in Australia ( $N = 67$ ). Participants in the intervention group received a three week long online psychoeducation curriculum ( $n = 33$ ) and participants in the control group ( $n = 34$ ) received

online information unrelated to mental health. Researchers assessed mental health literacy (as measured by 22 item anxiety literacy scale and 22 item depression literacy scale; Griffiths et al., 2004 and the *Literacy of Suicide Scale*; Batterham et al., 2013a), stigma (as measured by *Depression Stigma Scale*; Griffiths et al., 2004, *Generalized Anxiety Stigma Scale*; Griffiths et al., 2011, and *Stigma of Suicide Scale Short Form*; Batterham et al., 2013b) and help seeking (as measured by the ATSPHSF; Fischer & Farina, 1995 and the GHSQ (Wilson et al., 2005). Secondary outcome measures included anxiety and depression symptomology and satisfaction and adherence to the intervention. Linear mixed model repeated measures analysis was employed assess differences between groups across time (pre to post-test). Significant between-group differences were found for the pre- to post-test, including increased anxiety literacy ( $d = 0.65$ ), decreased depression stigma ( $d = 0.53$ ), and increased help seeking attitudes and intentions for the experimental group ( $d = 0.58$  and  $d = 0.53$ , respectively). Although the sample size in this study was homogenous and small, the suitability of the GHSS for mental health literacy interventions is further supported by this study.

### The Children's Hope Scale

*The Children's Hope Scale* [CHS (Snyder et al., 1997)] is a six-item, self-report assessment that measures youth's hopeful thinking. Three items assess pathway thinking (e.g., "*I can think of many ways to get the things in life that are most important to me*") and three items assess agency thinking (e.g., "*I think the things I have done in the past will help me in the future.*"). Items are presented alongside a six-point Likert-type responses ranging from none of the time to all of the time. The scale was originally intended to measure hope in children eight to sixteen years of age although researcher's evaluations have found it is appropriate for adolescents up to nineteen years

of age (Snyder et al., 1997; Valle, Huebner, & Suldo, 2004). Scores on the CHS can range from 6 to 36, with higher scores indicating greater perceived hope. The scale takes approximately four minutes to complete and may take less time among older adolescents (Bickman et al., 2010).

### Psychometric properties of CHS

The development of the CHS began with researchers generating a pool of items reflecting agency and pathway thinking. Twelve initial items were created and piloted to children aged eight through sixteen to obtain feedback regarding readability and clarity of meaning. Researchers then modified items and administered the 12-item assessment to a sample of children in fourth through sixth grade ( $n = 197$  boys;  $n = 175$  girls) enrolled in a public school in Oklahoma.

Initial psychometric analysis by Snyder and colleagues comprised of six separate data pools: the Oklahoma sample ( $N = 372$ ); a sample of children diagnosed with sickle cell anemia, arthritis, or cancer in Kansas City, MO ( $N = 91$ ); boys aged seven through thirteen in Pittsburgh, PA who had received a diagnosis of ADHD ( $N = 170$ ); boys without ADHD who were similar in age to the Pittsburgh sample ( $N = 75$ ); children who had received treatment for cancer at a cancer center in Texas ( $N = 143$ ); and children enrolled in public schools in Kansas ( $N = 322$ ). Means and standard deviations from these samples on CHS ranged from a low of 25.41 to a high of 27.03 (median of 25.89). No significant differences were found between gender, racial, and age differences among the six samples. Cronbach alphas ranged from .71 to .86 (median of .77), demonstrating appropriate internal consistency among all samples. The one-month test-retest reliability was positive and significant, ( $r(359) = .71, p < .001$ ) among the OK sample as well as at one-week test-retest ( $r(89) = .73, p < .001$ ) among the MO sample.

Several steps were taken to examine convergent validity of the CHS. Researchers examined whether parents' judgements of their children's hope would correlate scores on the CHS. Among the OK sample, parents' ratings of their children's hope correlated significantly and positively ( $r(264) = .38, p < .01$ , and 1 month later,  $r(257) = .37, p < .01$ ). Additionally, children's hope scores (among four separate samples) were found to correlate significantly and positively (with one exception of 20 correlations) with the five subscales of the *Self-Perception Profile for Children* [SPP-C; (Harter, 1985)] which measures perceived competence in school, social popularity, performance in sports/games, physical appearance, and behavioral conduct. Correlations ranged from .22 to .59 among the four samples ( $p < .01-.001$ ), indicating that hope is associated with perceived competence. Furthermore, the global self-worth index of the SPP-C predicted positive correlations in the four samples: OK Pre  $r(359) = .52, p < .001$ ; PA1 K164) = .23,  $p < .01$ ; PA2  $r(72) = .37, p < .01$ ; KS  $r(320) = .55, p < .001$ . Thus, higher levels of hope are correlated with elevated levels of self-worth for children. Finally, levels of hope were negatively correlated with depression measured by the *Child Depression Inventory* (CDI: OK Pre,  $r(345) = -.48, p < .001$ ; PA1  $r(162) = -.27, p < .001$ ; PA2  $r(71) = -.40, p < .001$ ; Kovacs, 1985), consistent with the premise that hope protects against depressive symptomology.

Snyder and colleagues determined that the CHS meets the appropriate theoretical, psychometric, and validation criteria appropriate for self-report instruments. Since this analysis, several other researchers have examined the psychometric properties of the CHS. More recent psychometric evaluation has yielded a Cronbach's alpha of .84, supporting satisfactory internal consistency (Bickman et al., 2010).

### Empirical studies using the CHS

Numerous correlational studies have utilized the CHS. For example, Valle et al., (2006) examined if higher levels of hope in children would predict increased life satisfaction and decreased psychopathology. Participants were children ages 10-18 from three public middle schools and two public high schools from a rural community in a southeastern state of the US ( $N = 860$ ; 60% low SES). Participants were evaluated at two time points, baseline and one year later. At baseline, there were no mean differences among SES  $t(697) = -0.66$ , and gender,  $t(697) = -2.29$ ;  $t(397) = -0.62$ . However, African-American students reported higher levels of hope ( $M = 29.48$ ,  $SD = 4.82$ ) than Caucasians ( $M = 27.82$ ,  $SD = 6.01$ ), contrasting previous research which found no significant differences between gender, race, and family income on measures of hope ( $N = 2,263$ , Snyder et al., 1999). Hierarchical multiple regression analyses found that hope scores at Time 1 significantly predicted Time 2 life satisfaction scores ( $\Delta F(1, 693) = 16.57$ ,  $p < 0.01$ ,  $\Delta R^2 = 0.02$ ,  $R^2 = 0.40$ ). Furthermore, time 1 hope scores predicted time 2 levels of internalizing behavior ( $\Delta F(1, 689) = 11.05$ ,  $p < 0.01$ ,  $\Delta R^2 = 0.01$ ,  $R^2 = 0.39$ ). However, Time 1 hope scores did not account for a significant amount of variance in Time 2 externalizing behaviors ( $\Delta F(1, 686) = 0.59$ ,  $p > 0.05$ ,  $\Delta R^2 = 0.00$ ,  $R^2 = 0.48$ ). Thus, in general hope scores predict important adolescent mental health outcomes. Additionally, researchers noted that the test-retest of CHS was .47, implicating that hope demonstrates some trait-like properties across a one year period (Valle et al., 2006).

Woods and colleagues (2012) evaluated hope-related quality of life and hope in children participating in a week long summer camp for children with chronic medical conditions ( $N = 102$ ; mean age = 13.10 years,  $SD = 2.37$ ). Children were administered measures before and after camp. Researchers employed paired samples t-tests; results indicated significant increases in hope scores



from pre-test ( $M = 25.01$ ,  $SD = 6.37$ ) to post-camp ( $M = 26.49$ ,  $SD = 6.17$ ),  $t(83) = -2.74$ ,  $p = .007$ ,  $d = 0.24$ ). There was a significant increase in mean pathway scores ( $M = 12.07$ ,  $SD = 3.49$ ) and post-camp ( $M = 12.91$ ,  $SD = 3.38$ ;  $t(83) = -2.76$ ,  $p = .007$ ,  $d = 0.24$ ), but no significant difference between pre-test ( $M = 12.94$ ,  $SD = 3.31$ ) and post-camp ( $M = 13.57$ ,  $SD = 3.33$ ) scores on the Agency scale of the CHS ( $t(83) = -1.86$ ,  $p = .063$ ,  $d = 0.19$ ). Furthermore, agency was a significant predictor of total health related quality of life ( $t(79) = 1.94$ ,  $p = .05$ ,  $\beta = 0.27$ ), while the pathways dimension of hope was not a significant predictor of HRQOL ( $t(79) = 1.72$ ,  $p = .09$ ,  $\beta = 0.24$ ). The internal consistency for CHS was .87 at pre-camp and .86 at post-camp, further demonstrating stability of the CHS.

Although the CHS has been cross-validated with samples including children diagnosed with sickle-cell anemia, arthritis, and cancer, children with attention deficit hyperactivity disorder, elementary school students, and adolescents (Savahl, Casas, & Adams, 2016; Snyder et al., 1999; Valle et al., 2004); the demographic data for the children in the initial studies was fairly homogenous or missing from the data. However, more recent analysis has been conducted with Spanish adolescents (Lopez-Safra, Pulido-Martos, & Ruiz, 2014), South African Adolescents (Savahl, Adams, & Casas, 2016), and Native American adolescents (Shadlow, Boles, Roberts, & Winston, 2015) underscoring the versatility of the instrument with diverse populations. A copy of the CHS can be found in the appendix.

#### Self-Stigma of Mental Illness Scale- Short Form

*The Self-Stigma of Mental Illness Scale-Short Form* [SSMIS-SF] (Corrigan et al., 2012) is a 20-item instrument that measures attitudinal stigma associated with mental illness. The scale comprises four subscales each comprising five items: (a) awareness of public stigma; (b)

agreement with stigma; (c) application to self; and (d) harm to self-esteem. Items on the SMIS-SF are presented alongside a 9-point Likert-type ranging from one (I strongly disagree) to nine (I strongly agree). Examples items from the SSMIS-SF include “*I think most people with mental illnesses will not recover or get better.*” and “*I think most people with mental illnesses cannot be trusted.*” For the purpose of this study, the agreement with public stigma sub-scales will be utilized to measure personal mental health stigma. A copy of the SSMIS-SF is found in the appendix.

### Psychometric properties of the SSMIS-SF

The original 40-item scale SSMIS was created through participatory action research involving researchers asking individuals with a serious mental illness and their families to generate a comprehensive list of stereotypes associated with those labeled with a psychiatric disorder. The stereotypes were then generated into items and categorized into the four subscales. Next, research participants diagnosed with a psychiatric disability ( $N = 54$ ) were asked to respond to each item using the nine-point Likert-type scale. Original Cronbach’s alphas associated with each subscale were:  $\alpha = .85$  (awareness);  $\alpha = .64$  (agreement);  $\alpha = .71$  (application to self); and  $\alpha = .87$  (harm to self-esteem). Test-retest ranged from .62 (stereotype agreement) to .75 (harm to self-esteem). In order to maximize internal consistency and reliability, five items were omitted from the instrument. Subsequent analysis revealed improved internal consistency ranging from  $\alpha = .68$  (agreement) to  $\alpha = .91$  (awareness).

Subsequent studies demonstrated strong psychometric properties of the original assessment (Fung et al., 2006; Fung et al., 2006; Schomerus et al., 2011). However, the instrument was commonly critiqued as offensive and too long from a researcher and participant lens (Corrigan et al., 2012). Taking these criticisms into account, researchers revised the scale to the short form by

removing offensive items and re-examined the psychometric data from three previous studies (e.g., Corrigan et al., 2006; Corrigan et al., 2011; Rusch et al., 2006a; Rusch et al., 2006b) using the twenty remaining items. Participant populations included 71 adults (mean age = 44.5 years; 55% female; Corrigan et al., 2006); 60 young adult females diagnosed with borderline personality disorder (mean age = 27.8 years; Rusch et al., 2006a); 30 adults with social phobia (mean age = 35.1 years; Rusch et al., 2006b); and 85 individuals with psychiatric diagnoses (mean age = 44.5 years; 32% female; Corrigan et al., 2011). Among the three data sets, internal consistencies ranged from  $\alpha = .67$  to  $\alpha = .87$  for the three subscales with the exception of the application scale with an internal consistency of  $\alpha = .22$ . Accordingly, one way within subject ANOVA across the SSMIS-SF subscales were highly significant with  $\eta^2$  ranging from 0.56 to 0.79. Both internal consistency and effect sizes were comparable to the original SSMIS, indicating that the shortened version was a suitable alternative.

Construct validity was assessed through re-examining the outcome measures in the Corrigan et al., (2006) study. As researchers expected, SSMIS-SF harm subscale was shown to be inversely associated with self-esteem ( $r = .55$ ), self-efficacy ( $r = .44$ ) and empowerment ( $r = .24$ ) while SSMIS-SF awareness scale scores were not significantly associated with the three measurements ( $r = .01$ ,  $.05$ , and  $.01$ , respectively). In summary, re-examining these three studies provides excellent support for the psychometric validity and reliability for the SSMIS-SF.

Corrigan and colleagues (2012) recommend researchers examine subscale scores of the SSMIS-SF individually as intervention research may target stigma in different ways (increasing awareness, decreasing harm). Furthermore, using the SSMIS-SF overall score may dilute the results of each subscale. Thus, for this study, agreement with stigma, the second subscale, was

utilized to measure participants' personal agreement with commonly held negative beliefs about mental illness.

#### Empirical studies utilizing the SSMIS-SF

Researchers have utilized the SSMIS-SF in correlational research studies examining mental health stigma and sociodemographic influences (e.g., Kalisova et al., 2018; Flett et al., 2018) and intervention research aimed to decrease stigma (e.g., Kosyluk et al., 2016; Mulfinger et al., 2018). The SSMIS-SF has been used within a broad range of populations including Haitian Americans (Dieujuste, 2016), individuals with schizophrenia living in Taiwan (Hsien Wu, 2014), and Swedish residents diagnosed with a severe mental illness (Hansson, 2017). Among the adolescent population, the SSMIS-SF application sub-scale has been used as a measure of self-stigma. Mulfinger and colleagues (2018) conducted a study which examined the efficacy of *Honest, Open, Proud*, a peer-led group aimed to support adolescents through their decision regarding disclosing their mental health diagnosis. Participants ( $N = 98$ ) aged 13-18 years who has a self-reported mental health (ICD-10) diagnosis were randomized into treatment or control groups. Measures were administered prior to intervention, post-intervention, and at three-week and six-week follow up. Participants in the intervention group significantly reduced stigma stress at T1 ( $d = .92, p < .001$ ) and increased quality of life at T2 ( $d = .60, p = .004$ ). The intervention also demonstrated significant positive effects on self-stigma ( $d = -3.61; d = .60; p = .004$ ) at six week follow up. Internal consistency of the SSMIS-SF for the sample was .70 at pre-test, .75 at post-test, and .81 at follow-up, suggesting that the SSMIS\_SF may be an appropriate measure to utilize within adolescent intervention research.

### Mitigating Threats to Validity

The methodological rigor of quasi-experimental research designs is contingent on the researcher's ability to account for and mitigate threats to validity (Handley, Lyles, McCulloch, & Cattamanchi, 2018). The following threats to validity were explored: (a) statistical conclusion validity; (b) treatment fidelity (c) construct validity; (d) internal validity; (e) and generalizability of results. The researcher also provides avenues to mitigate these threats and strengthen the research design.

#### Statistical Conclusion Validity

Threats to statistical conclusion validity include: (a) low statistical power, (b) inadequate effect size calculation, (c) violated statistical assumptions, (d) unreliability of treatment implementation, (e) unreliability of measures, (f) fishing, and (d) restriction of range (Gall et al., 2007). In order to control for power and adequate effect size, an *a priori* power analysis was conducted using the software G\*Power. The calculation was conducted with the parameters of two observation points, a power of 80%, and alpha of .05, and a moderate (.25) effect size. Given these measurements, a minimum requirement of 65 participants is required for sufficient power. Previous MHL studies have cited significant attrition, therefore the researcher recruited approximately 80 participants to account for attrition (McLuckie et al., 2015).

#### Treatment Fidelity

The researcher made efforts to increase treatment fidelity including implementing a comprehensive training procedure for counselors-in-training. At this training, the researcher

introduced the purpose of the study, reviewed the content of the curriculum and instrumentation, demonstrated a sample lesson from *The Guide* curriculum, and discussed teaching strategies tailored to engaging the adolescent population and cultural considerations when working with economically disadvantaged youth. Counselors-in-training completed a multiple-choice test at the end of this training to ensure that the information was retained, and they are equipped to implement the intervention. Additionally, the researcher conducted reliability checks throughout the intervention and took notes regarding differences between the facilitator's individual styles of teaching, engagement of the students, and any other extraneous factors that may have impacted treatment fidelity (e.g., classroom interruptions, later start time, behavior challenges). Furthermore, group facilitators completed case notes after each session detailing: (a) attendance of group members; (b) specific content of lesson; and (c) activities completed during session. Additionally, each facilitator completed an assessment measuring the perceived success of the session. Sample items include: *On a scale of 1 (not at all successful) to 5 (extremely successful) how would you rate participants overall engagement?* and *On a scale of 1 (not at all successful) to 5 (extremely successful) how would you rate participants' understanding of the curriculum?* Facilitators also indicated any changes that were made to the curriculum and any confounding factors that may have influenced implementation. A sample copy of the progress notes can be found in the appendix. Finally, counselors-in-training were under the supervision of the researcher. Each pair of co-facilitators met once per week with the researcher for approximately 15-30 minutes to process their experiences co-facilitating, their use of group counseling skills, problem solve any potential challenges they were facing at Boys and Girls Club and prepare for the upcoming week. Supervision sessions took place immediately after the session, over the phone, or at the university.

Although strategies were taken to increase treatment fidelity throughout the intervention, limitations of *The Guide* curriculum posed challenges in terms of developmental and cultural appropriateness. *Flexibility within fidelity* refers to making appropriate adaptations to treatment protocols based on previous research, clinical expertise, and client characteristics (Kendall & Frank, 2018). Considering that *The Guide* has not been thoroughly examined for cultural appropriateness and the sample in the present study was younger than previous research samples, the researcher and facilitators made adaptations to the curriculum (e.g., discussions surrounding culture and mental health, incorporating physical movement in activities, adding images to the Powerpoint slides, etc.). The potential benefits of employing flexible fidelity include strengthening the therapeutic alliance, increasing cultural relevance, and the ability to developmentally tailor the intervention (Kendall & Frank, 2018). However, flexible fidelity also introduces an inherent threat to internal validity.

### Construct Validity

Inadequate labeling of constructs, mono-operational bias, interaction of different treatments, and experimenter expectancies are concerns that may have posed threats to construct validity for the present study. The researcher took steps to minimize threats to construct validity including operationally defining constructs, selecting a curriculum reviewed by multiple content experts (e.g., child psychiatrist, clinical psychologist), implementing the intervention at multiple settings, and critically examining the match between test measures and construct. The researcher chose to measure each construct with one instrument, risking the threat of mono-operational bias. Furthermore, the researcher has selected psychometrically sound instruments, minimizing the threat of mono-operational bias (Gall et al., 2007). Moreover, each instrument was examined for

internal validity associated at pre-test, post-test, and follow-up to further understand the suitability of the assessments for the research sample.

### Internal Validity

Threats to internal validity that for this study included: (a) selection bias; (b) mortality; (c) data collector bias; (d) the observer effect; (f) and implementation threat. Selection bias is of particular relevance for this study because previous research has indicated differences in mental health literacy related to gender, age, ethnicity, and academic proclivity. Although the setting posed constraints that prevented implementation of a randomized controlled experimental design, the researcher collected demographic data and assessed the differences between demographic variables and dependent variables prior to primary analysis.

Participant absences, relocation, and failure to complete instruments are threats to mortality in this setting. Attrition is regarded as the most difficult threat to internal validity because it not easily controllable (Fraenkel & Wallen, 2006). The researcher recruited more than the required number of participants to reduce the effects of attrition (Creswell, 2014). Additionally, the data of any participant who dropped out of the study was not analyzed.

As is the case with most research, there was missing data. The researcher utilized SPSS Missing Values Analysis to determine if data is missing completely at random (MCAR) or missing at random (MAR). Because less than 5% of data was missing and randomly distributed across all observations, the researcher determined that data was MCAR and used mean imputation to allow for inclusion of participants' data in the main analyses (Tabachnick & Fidell, 2013).



The observer effect, also referred to as the Hawthorne effect, refers to the tendency of individuals to modify their behavior when they are being observed (Fraenkel & Wallen 2006). In this study, participants were fully aware of the scope of the intervention and the primary goals associated with *The Guide* curriculum. Therefore, the observer effect may have posed a significant issue of concern. Further, the research study disrupted the established routine at Boys and Girls Clubs and posed a novelty to participants and in turn, may have impacted behavior regardless of the intervention.

Finally, the present study occurred at multiple locations and was implemented by counselors-in-training with different theoretical counseling frameworks. Therefore, implementation threat was a concern (Fraenkel & Wallen 2006). Participants' perceptions of the counselors-in-training may have affected their motivation and engagement in the curriculum. In order to minimize this threat, a detailed manual and comprehensive training was provided to counselors-in-training, with the intention of increasing treatment fidelity. However, the unique environment of each club (e.g., age and number of participants, energy level, etc.) and the personalities of the group facilitators may have posed additional uncontrollable implementation threats. Additionally, unforeseen events (e.g., weather, field trips) disrupted implementation. Significant threats to implementation are also discussed in the limitations section.

### External Validity

A multitude of factors impact external validity including the geographical region of the study, the specific Boys and Girls clubs, and the population being studied. Boys and Girls Clubs of America serves a high percentage of youth living at the poverty level and are intentionally located in areas of low socioeconomic status. The organization's mission is to serve at-risk, vulnerable

youth (Boys and Girls Clubs of America, 2018). Therefore, the results of this study may not be generalizable to other geographical regions and more affluent communities. Furthermore, contextual factors such as recent incidents of school violence and statewide initiatives to promote mental health may have impacted participation rates and the organization's willingness to host a novel mental health literacy intervention into the existing Boys and Girls Club programming. As such, future studies that explore the influence of MHL on economically disadvantaged youth are needed to increase population validity.

### Ecological Validity

In ecological validity, treatment integrity is in question, or the extent to which the intervention was implemented as intended (Gall, 2007). In order to minimize threats to ecological validity, the researcher selected a standardized mental health literacy intervention with specific learning objectives and corresponding lesson plans. However, the specific club environment may have influenced results. For example, two clubs had consistent noise interferences because the conference room was surrounded by a large recreation room. Further, adaptations were made to the curriculum to increase cultural relevance and developmental appropriateness. To increase fidelity, the researcher provided a detailed description of implementation procedures to facilitators, a procedure check list to increase clarity and consistency, and visited the clubs several times throughout the intervention to report any unforeseen threats to ecological validity.

## Ethical Considerations

Ethical considerations were throughout the research process to ensure the study was compliant with legal, institutional, and ethical standards. The following safeguards were put in place to ensure the investigation is conducted in an ethical manner:

1. All study materials including the *The Guide* curriculum, informed consent, and assessments were approved by the university IRB, dissertation co-chairs, and committee members prior to implementation of the intervention. A copy of the informed consent is provided in the appendix.
2. Caregivers/Parents were fully informed of their rights regarding involvement in the study including the ability of their child to withdraw from the study at any time without penalty.
3. Participants were informed of their rights including the voluntary nature of the intervention and allowance to leave the study at any time without consequence. Informed consent was approached in accordance to Parsons, Sherwood, and Abbott's (2016) recommendations for informed consent with minor populations. Considerations include establishing rapport, tailoring language to the developmental level of the adolescent, and revisiting informed consent throughout the research process. Additionally, all participants were informed that facilitators are mandated reporters and disclosure of suicidality, harm to another individual, or knowledge of abuse to a protected population would be reported to appropriate authorities.
4. Although the study posed no more than minimal risks to participants, mental health referrals were given to participants who expressed emotional distress or disclosed trauma in response to the MHL curriculum.

5. Although anonymity cannot be guaranteed; data was kept confidential. After data collection, data was stored in latch-lock filing boxes and transferred to a locked filing cabinet in the researcher's locked office.

### Limitations

As with all research, limitations exist for the present study. First, this study took place in multiple Boys and Girls Clubs across a metropolitan region in a southeastern state and was implemented by graduate level counselors-in-training with different theoretical counseling frameworks and personal styles of teaching. The unique characteristics of each club environment may have impacted outcomes. Additionally, the personal recruitment strategy proposed by the organization presented selection bias, as a few staff members stated that they recruited adolescents who had expressed mental health concerns in the past and in turn may benefit the most from a mental health literacy intervention. Further, the present study relied on self-report measures, introducing the threat of social desirability bias. Although no population is immune to social desirability bias, previous research has indicated that the adolescent population experiences lower levels of social desirability compared to younger children and the impact of social desirability is relatively small (Crandall, Crandall, & Katkovski, 1965; Oerke & Bogner, 2011; Tilgner, Wetheim, Paxton; 2004).

Additional limitations include the novelty of the intervention in the setting, which may have posed threats to validity and the observer effect, the notion that adolescents may change their behavior simply because they are being observed. The present study took place in a metropolitan region in a southeastern state. Further, the clubs were located in economically disadvantaged areas. As a result, results of this study may not be generalizable to other geographical regions and

dissimilar populations. Finally, the present study is quasi-experimental in nature. Therefore, causal claims cannot be inferred.

### Chapter Three Summary

This chapter reviewed the research methods that were used to investigate the influence of a six-week MHL intervention for the adolescents on (a) mental health knowledge, (b) mental health stigma, (c) hope, and (d) help-seeking attitudes. This chapter provided information on the research design, procedures, population, and curriculum. Additionally, research questions, methods of analysis, and details on instrumentation were presented. Finally, ethical considerations and limitations of the study were discussed.

## CHAPTER FOUR: RESULTS

In chapter four, the researcher presents the results of the research hypothesis and exploratory questions of this investigation. The primary aim of this study was to examine the influence of a mental health literacy (MHL) curriculum on adolescents' levels of mental health knowledge, mental health stigma, help-seeking attitudes, and hope. The researcher utilized a repeated measures MANOVA (RM-MANOVA) to measure the change in scores over time across pre-test (wave one) and post-test (wave two) and to test if changes were sustained at one-month follow-up (wave three). The following areas of the study are reviewed: (a) research design; (b) sampling and data collection methods; (c) participants' descriptive data; (d) reliability of instruments; (d) preliminary data analysis procedures and assumption testing; (e) data analyses for main and secondary research questions; and (f) results of the exploratory research question.

The primary research question investigated if adolescents' measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes changed from wave one to wave two over the course of a mental health literacy intervention. The secondary research question examined if adolescents' measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes significantly changed from wave one to wave three, indicating changes were sustained at follow-up. Further, the researcher assessed whether the amount of dosage received of the intervention, (measured by frequency of participants' attendance) and grade level of participants (middle school versus high school populations) influenced participant change.

## Research Design

This study utilized a quasi-experimental research methodology. Experimental designs are the most robust method of determining the relationship between independent and dependent variables (Gall et al., 2006). Due to the ethical concern of withholding educational opportunities to an at-risk adolescent group, the researcher utilized a one group quasi-experimental design (Shadish et al., 2002). Although causal inferences cannot be made without a randomized control group, the inclusion of multiple measurement points (pre-test, post-test, and one-month follow-up) and the presence of several intervention sites increases the methodological rigor of quasi-experimental designs (Handley, Lyles, McCulloch, & Cattamanchi, 2018).

Characteristics for inclusion to participate in the investigation included: (a) being between the ages of 11 and 18; (b) frequent attendance at a Boys and Girls Club; (c) parental permission to participate in the investigation; and (d) English language proficiency. The researcher recruited participants through collaboration with Boys and Girls Club staff and in-person visits to the six participating Boys and Girls Clubs. During these visits, the primary researcher and group facilitators explained the details of the study including the inclusion criteria, purpose of the study, and potential benefits and risks associated with participating. Potential participants were provided an opportunity to ask questions about the study and were provided detailed informed consents to be taken home for review and guardian signature.

## Data Collection

The researcher received Institutional Review Board (IRB) approval in September of 2018. Data collection took place between October and December of 2018. Data was collected from

participants in three waves: (a) immediately before the intervention (i.e. week one or “wave one”); (b) immediately after the intervention (i.e. week six or “wave two”); and (c) at one-month follow-up (i.e. week ten or “wave three”). Assessments took approximately 25 minutes to complete. At each measurement point, participants identified themselves by writing their first names on the assessment packet. Within one week of each data collection point, the principal investigator de-identified data by matching names with randomly assigned participant identification numbers (Gall et al., 2007). All physical data was stored in the researcher’s locked office in a locked filing cabinet. Digital data was stored on the researcher’s password-protected computer in a password-protected file.

### Sampling

The population for this investigation included youth between the ages of 11 and 18 years of age who were members of the six participating Boys and Girls Club sites in a southeastern state. For recruitment, the principal investigator and several group facilitators visited the six sites and spoke with potential participants. Additionally, the principal investigator emailed detailed information to Boys and Girls Club staff members who in turn approached their club members about participating in the research study. Those interested were provided an informed consent and guardian permission form.

### Response Rates

The researcher visited six Boys and Girls Club sites during recruitment. A total of 103 individuals inquired about participating in the study (indicated by signed parental informed



consents). However, many students had conflicting extracurricular activities occurring at the same time as the sessions and ultimately did not participate. From the 78 participants in wave one, 18 dropped out due to: (a) conflicting extracurricular activities; (b) family situations; (c) illness; or (d) unknown reasons. Researchers recommend removing all participants who drop out of the study to more accurately describe the analyzed sample and mitigate having large sets of missing data (Dumville, Torgerson, & Hewitt, 2006). In summary, in wave one of data collection, 78 students completed the first assessment packet and 60 of these same students participated in wave two which reflected a 76.9% retention rate from wave one to wave two. Thus, a total of 60 participants completed the study, slightly lower than the recommended G\*Power analysis ( $n = 65$ ). However, observed power ranged from .612 to 1.000, with the exception of the measure of hope (observed power = .053), indicating the sample was adequate.

### Summary of Intervention

The intervention consisted of six 75-minute lessons based on the curriculum specified by *The Guide* (Kutcher, 2009). The six modules include: (1) stigma of mental health, (2) understanding mental health, (3) specific mental health disorders, (4) experiences of mental illness, (5) seeking mental health help, and (6) the importance of positive mental health. Each module of *The Guide* included PowerPoints which covered the content of the curriculum, activities to generate discourse, and supplemental materials such as videos and worksheets. Group facilitators used *The Guide* PowerPoints as templates and modified materials to increase overall engagement and adapt to the particular group. Facilitators were instructed to adhere the curriculum strictly to the learning objectives as they adapted the curriculum. Further, group facilitators uploaded a progress note each week which dictated activities completed, modifications made to

the curriculum, perceived levels of engagement and understanding of participants, and any confounding variables that may have impacted the session.

### Reliability of Data Instruments

Data collection packets were collected in three waves with each packet including (a) *Mental Health Knowledge and Attitude Survey* [MHKAS; Kutcher, McLuckie, & Weaver, 2014], (b) *Self-Stigma of Mental Illness Scale Short Form* [SSMIS-SF; Corrigan et al., 2012]; (c) *The Children's Hope Scale* [CHS; Snyder et al., 1997], and (d) *The General Help Seeking Questionnaire* [GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005]. Demographic information was collected at wave one and wave two alongside items pertaining to participants' perception of their personal mental health and strength of familial relationships. Internal consistency for the MHKAS (Kutcher et al., 2014) ranged from acceptable to poor across the three waves ( $\alpha_{\text{pre}} = .714$ ;  $\alpha_{\text{post}} = .634$ ;  $\alpha_{\text{follow-up}} = .588$ ). The CHS (Snyder et al., 1997) exhibited acceptable to good levels of internal consistency across all three waves ( $\alpha_{\text{pre}} = .759$ ;  $\alpha_{\text{post}} = .834$ ;  $\alpha_{\text{follow-up}} = .809$ ). Further, the *General Help Seeking Questionnaire* maintained good consistency across all three waves ( $\alpha_{\text{pre}} = .883$ ;  $\alpha_{\text{post}} = .879$ ;  $\alpha_{\text{follow-up}} = .890$ ). Finally, the *Self Stigma of Mental Illness Scale- SF* had acceptable to questionable levels of internal consistency across the three time points. ( $\alpha_{\text{pre}} = .731$ ;  $\alpha_{\text{post}} = .713$ ;  $\alpha_{\text{follow-up}} = .689$ ). Table 3 presents the Cronbach's Alpha values at wave one, wave two, and wave three for each of the four instruments.

Table 3

*Cronbach's Alpha: Reliability of Instruments*

	Pretest <i>n</i> = 78	Posttest <i>n</i> = 60	Follow-Up <i>n</i> = 31
MHKAS	0.714 (acceptable)	0.634 (questionable)	0.588 (questionable)
CHS	0.759 (acceptable)	0.834 (good)	0.809 (good)
GHSQ	0.883 (good)	0.879 (good)	0.890 (good)
SSMIS-SF	0.731 (acceptable)	0.713 (acceptable)	0.689 (questionable)

Demographic Statistics

Sixty students (76.9%) were retained throughout the six weeks, spanning six different Boys and Girls Clubs. Two Boys and Girls clubs were located inside middle schools and four clubs were freestanding locations. Group sizes ranged from four to sixteen participants. As a whole, participants were all students between the ages of 11 and 17 years of age ( $M = 13.5$   $SD = 1.73$   $MDN = 13$   $Mode = 12$ ). Participants reported being in sixth ( $n = 12$ , 15.4%), seventh ( $n = 16$ ; 20.5%), eighth ( $n = 9$ ; 15.4%), ninth ( $n = 7$ ; 9.0%), tenth ( $n = 9$ ; 11.5%), and eleventh grades ( $n = 7$ ; 9.0%). Table 4 presents the participants' age and grade while Table 3 presents age and grade by specific branch. Specific clubs are indicated by letters A-F to protect the privacy of participants.

Table 4

*Descriptive statistics for age and grade of participants by club*

Branch	Quantitative Demographics	<i>M</i>	<i>SD</i>	<i>Median</i>
Overall ( <i>N</i> =60)	<i>Age</i>	13.50	1.73	13.00
	<i>Grade</i>	8.10	1.69	8.00
A ( <i>n</i> =10)	<i>Age</i>	14.00	1.63	13.00
	<i>Grade</i>	9.00	1.78	7.00
B ( <i>n</i> = 4)	<i>Age</i>	14.00	0.82	14.00
	<i>Grade</i>	9.00	1.29	8.50
C* ( <i>n</i> = 8)	<i>Age</i>	13.00	0.71	13.00
	<i>Grade</i>	7.00	0.74	7.50
D* ( <i>n</i> = 14)	<i>Age</i>	12.00	0.61	12.00
	<i>Grade</i>	6.00	0.65	6.00
E ( <i>n</i> = 8)	<i>Age</i>	15.00	1.06	15.50
	<i>Grade</i>	10.00	1.17	10.00
F ( <i>n</i> =16)	<i>Age</i>	14.00	1.81	15.00
	<i>Grade</i>	9.00	1.69	9.00

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\*club was located in a middle school

Table 5 presents the participants' additional demographic data. Regarding ethnicity, 47 participants identified as Black/African American (60.3%), one student identified as Asian/Pacific Islander (1.3%), three students identified as bi-racial (3.8%), six students identified as multi-racial (7.7%) and three students identified as another racial identity (3.8%). Eleven students identified as Hispanic/Latinx (14.1%) and 49 students identified as Non-Hispanic/Latinx (81.7%). No students identified as White/Caucasian. Concerning gender, most participants identified as female (*n* =37; 61.6%) and 23 students identified as male (38.3%).

Eligibility for a free or reduced lunch is commonly used as a metric of family income level. A student from a household with an income at or below 130 percent of the poverty income threshold is eligible for free lunch while a student from a household with an income between 130 percent and up to 185 percent of the poverty threshold is eligible for reduced-price lunch (USDA, 2018). For the present study, 51 participants reported qualifying for a free or reduced lunch (85.0%). Four students reported that they did not qualify for a free and reduced lunch (6.7%) and five students reported “I do not know” (8.3%). Regarding previous exposure to counseling services, 24 students reported having previously attended counseling services (40.0%), 20 students said they had not attended counseling (33.3%), and 16 students reported as “I do not know” (26.7%). Numerous students expressed not knowing what counseling services were prior to the intervention; thus, this figure should be interpreted with caution.

Students were also asked to rate their own mental health ranging from “very good” to “very poor.” Most students indicated having “very good” mental health ( $n = 25$ ; 41.7%) or “quite good” mental health ( $n = 24$ , 40.0%). Eight students indicated their mental health was “neither good nor poor” (13.3%); two students indicated “quite poor” mental health (3.3%); and one student reported having “very poor” mental health (1.7%). Finally, students were asked to rate their relationship with their family ranging from “very good” to “very poor.” Most participants reported “very good” ( $n = 30$ ; 50.8%) or “quite good” familial relationships ( $n = 18$ ; 30.5%). Eight students reported “neither good nor poor” familial relationships (13.6%) and three students reported “quite poor” familial relationships (5.1%). No students chose “very poor.” One student chose not to answer the question and wrote, “I do not want to answer this question.”

Table 5

*Descriptive statistics of participants on various demographic variables*

Demographics	<i>n</i>	%
<i>Gender</i>		
Female	37	61.7%
Male	23	38.3%
Transgender	0	0.0%
Non-binary	0	0.0%
<i>Race/Ethnicity</i>		
African American	47	78.3%
Asian/Pacific Islander	1	1.7%
Caucasian	0	0.0%
Biracial	3	5.0%
Multiracial	6	10.0%
Other	3	5.0%
<i>Hispanic/Latinx</i>		
Yes	11	18.3%
No	49	81.7%
I Don't Know	0	0.0%
<i>Free/Reduced Lunch?</i>		
Yes	51	85.0%
No	4	6.7%
I Don't Know	5	8.3%
<i>Attended Counseling?</i>		
Yes	24	40.0%
No	20	33.3%
I Don't Know	16	26.7%

Demographics	<i>n</i>	%
<i>Mental Health Rating</i>		
Very Good	25	41.7%
Quite Good	24	40.0%
Neither Good nor Poor	8	13.3%
Quite Poor	2	3.3%
Very Poor	1	1.7%
<i>Family Relationship Rating</i>		
Very Good	30	50.0%
Quite Good	18	30.0%
Neither Good nor Poor	8	13.3%
Quite Poor	3	5.0%
Very Poor	0	0.0%
[Missing]	1	1.7%

### Data Screening and Assumptions for Repeated Measures MANOVA

To investigate the primary research question and exploratory questions, the researcher used Repeated Measures Multivariate Analysis of Variance (RM-MANOVA) as the primary data analysis procedure. It should be noted, in order to run a RM-MANOVA, participants must be measured at all time points (wave one, wave two, and wave three). However, substantial attrition (51%) occurred between wave two ( $N = 60$ ) and wave three ( $N = 31$ ). Therefore, the researcher conducted a RM-MANOVA between wave one and wave two ( $N = 60$ ) and a separate RM-MANOVA between wave one and wave three ( $N = 31$ ). Prior to data analysis, the researcher cleaned the data, examined the dataset for missing values, and tested the assumptions associated with RM-MANOVA. In the following section, the researcher presents the results of these analyses.

## Missing Values Analysis

The researcher conducted a Missing Value Analysis in SPSS to determine the percentage and distribution of missing data. All missing data was randomly distributed across all observations, with less than 3.5% of data missing overall. Thus, the missing data was determined as missing completely at random (MCAR; Tabachnick & Fidell, 2013). For the 3.2% of missing values, the researcher replaced missing data using mean imputation on an item-by-item basis with the average input for a given item replacing the missing value. While imputing average inputs for missing values decreases variability between responses, it allows for otherwise valuable participant responses to be assessed in subsequent analyses (Lambie & Vacarro, 2012; Tabachnick & Fidell, 2013).

## Assumption Testing for RM-MANOVA

Assumption testing helps to ensure that you are not drawing false conclusions from a statistical analysis. Repeated Measures MANOVA has seven statistical assumptions that must be checked prior to data analysis. If a given dataset fails to meet these assumptions, corrective procedures are required, and assumptions must be re-tested (Pallant, 2016). The researcher examined each assumption associated with RM-MANOVA, clarified below.

Assumption One: All dependent variables must be measured at continuous levels (Laerd Statistics, 2015). The dependent values for the present study were sum scores derived from Likert scales (i.e., *The General Help Seeking Questionnaire*, *Children's Hope Scale*, and by *Self-Stigma of Mental Illness Scale- Short Form*) or from scores of exam performance, treated as continuous variables (*Mental Health Knowledge and Attitude Survey*).



Assumption Two: Independent variables should consist of two or more categorical, related groups. Groups are considered related when participants are measured at all time points (Laerd Statistics, 2015). In the present study, participants are grouped at waves one, two, and three and are considered to be related.

Assumption Three: At minimum, a RM-MANOVA requires more cases than number of dependent variables (Pallant, 2016). However, Tabachnick and Fidell (2013) recommend that the sample size for MANOVA must be at least ten plus the number of dependent variables. For the present study, there were sixty participants and four dependent variables, exceeding both Pallant (2016) and Tabachnick and Fidell's (2013) recommendations.

Assumption Four: MANOVA is sensitive to outliers (Pallant, 2016). To examine the presence of multivariate outliers, the researcher evaluated Mahalanobis Distances at each time point and assessed if these values were statistically significant at  $p < 0.001$  (Tabachnick & Fidell, 2007). No multivariate outliers were found. Univariate outliers were evaluated by computing z-scores for each item at each time point. Per Tabachnick and Fidell (2013), z-scores of a magnitude greater than 3.29 are considered univariate outliers and should likely be removed. No univariate outliers were found. Thus, this assumption was met.

Assumption Five: There is multivariate normality (Laerd Statistics, 2015). As a precursor to evaluating multivariate normality, the researcher first visually assessed histograms of participant data for each assessment at each time-point. Visual inspection yielded no notable cause for concern. Further, values for skewness and kurtosis were evaluated to ensure univariate normality. All values for skewness and kurtosis, including standard errors for each measure, fell within the acceptable range for assuming univariate normality (George & Mallery, 2010). The researcher then examined multivariate normality through normal Q-Q Plots. Visual inspection of the Q-Q

plots resulted in apparent normality for all subscales. Therefore, the assumption for normality was met. Histograms and Q-Q plots are presented in figures 2 and 3.

Assumption Six: There should be a linear relationship between dependent and independent variables (Laerd Statistics, 2015). The researcher analyzed linearity by plotting a scatterplot matrix for each related group of the independent variable. The plots did not show any obvious evidence of non-linearity; therefore, the assumption of linearity was considered to be satisfied. Scatterplot matrices can be found in figures 4, 5, 6 and 7.

Assumption Seven: Dependent values for MANOVA should be moderately correlated. The researcher assessed multicollinearity and singularity by running correlations between each assessment at pre-test. No correlations breached the threshold value of greater than .800 (Pallant, 2016). Thus, this assumption was upheld. Table 6 presents correlations for the four instruments.

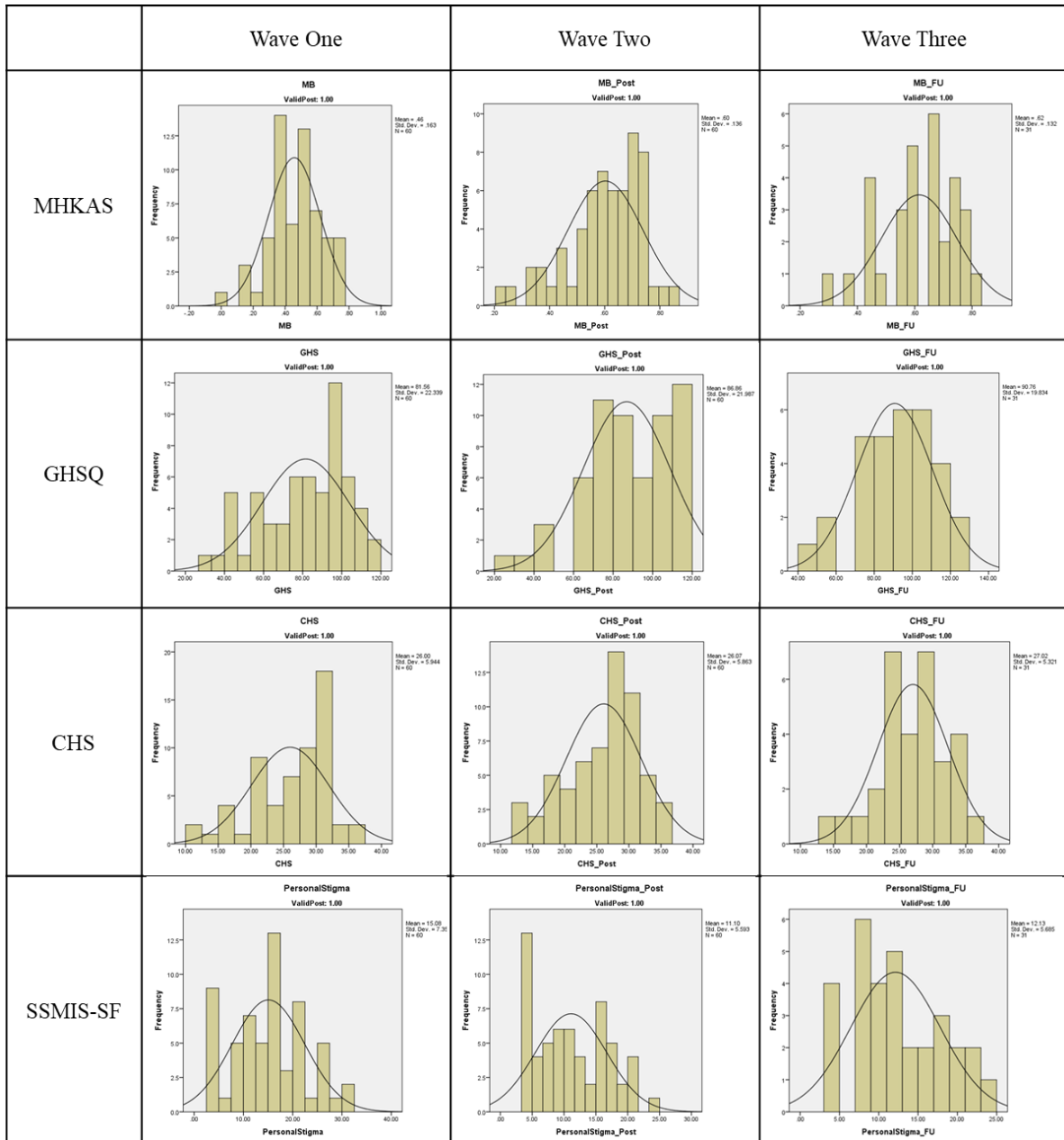


Figure 2: Histograms

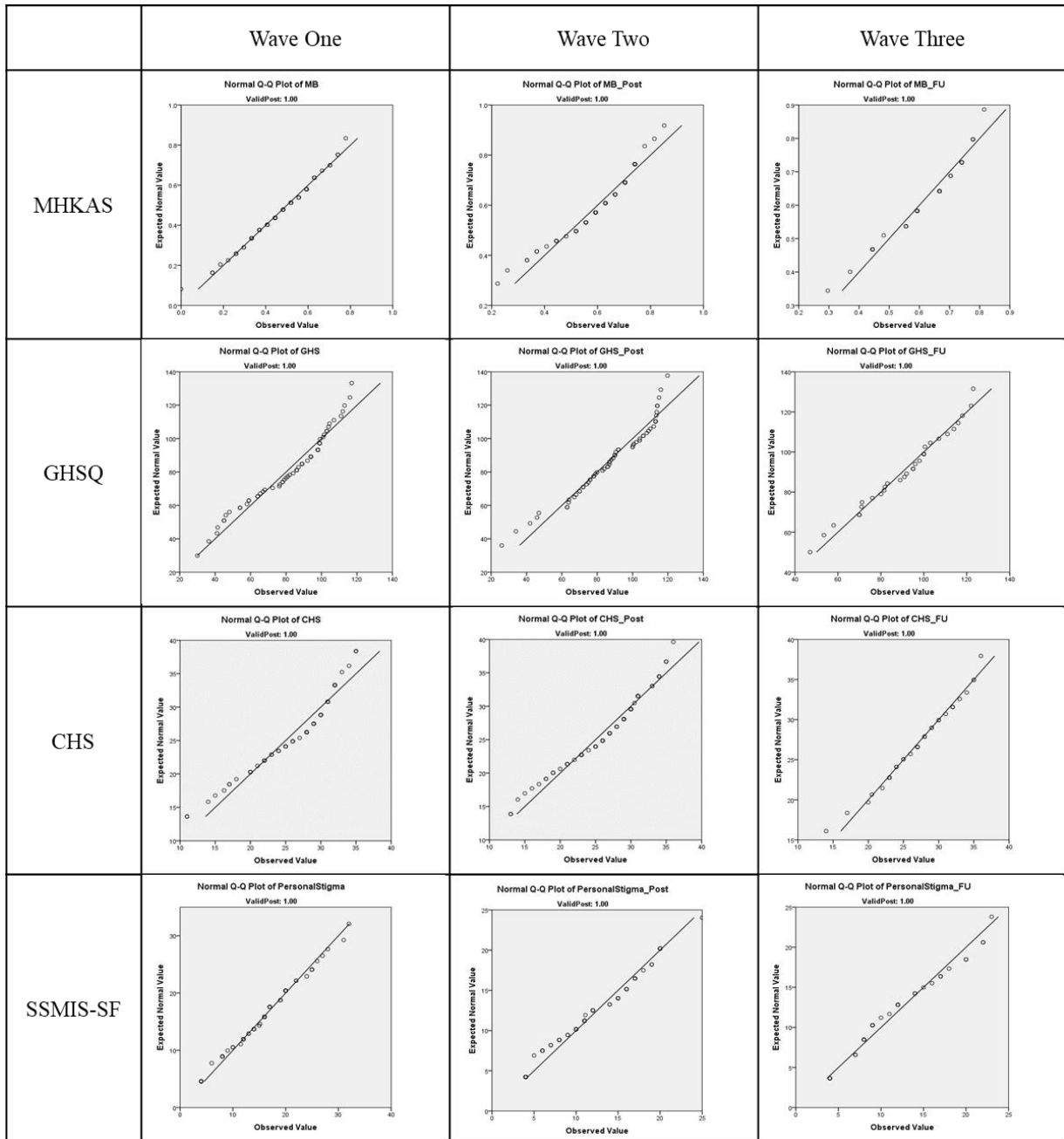


Figure 3: Q-Q Plots

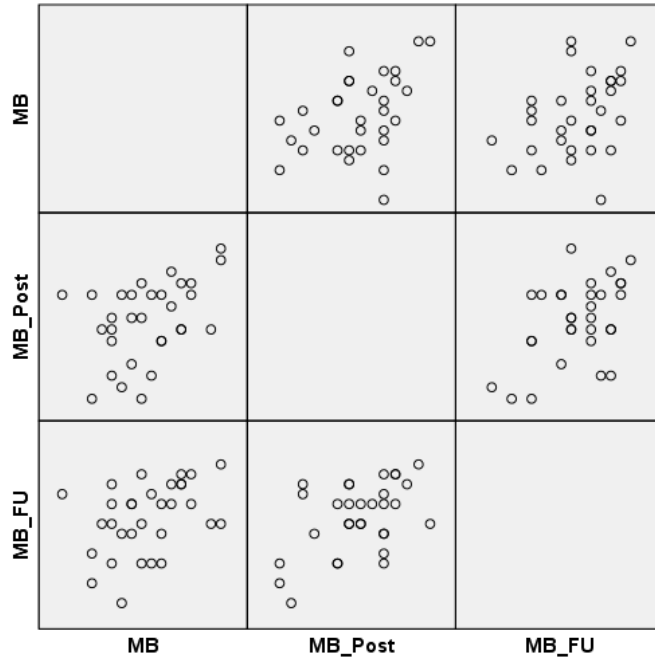


Figure 4: MKHAS Scatterplot Matrices

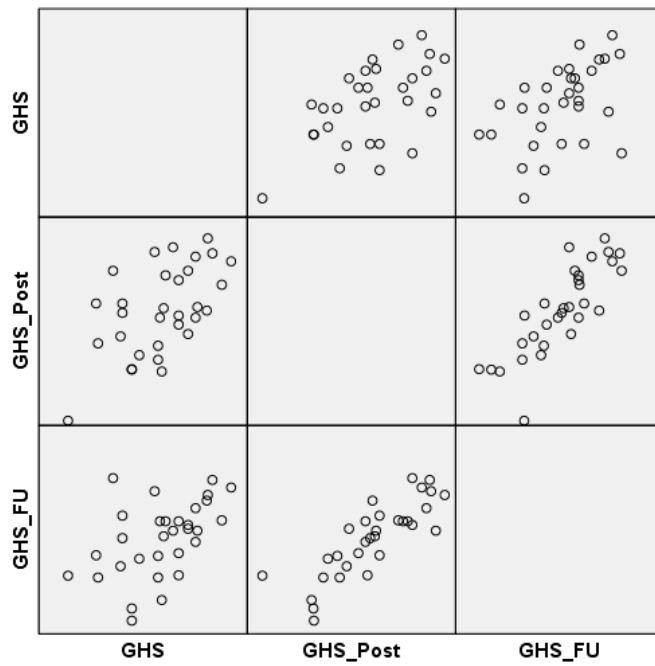


Figure 5: GHSQ Scatterplot Matrices

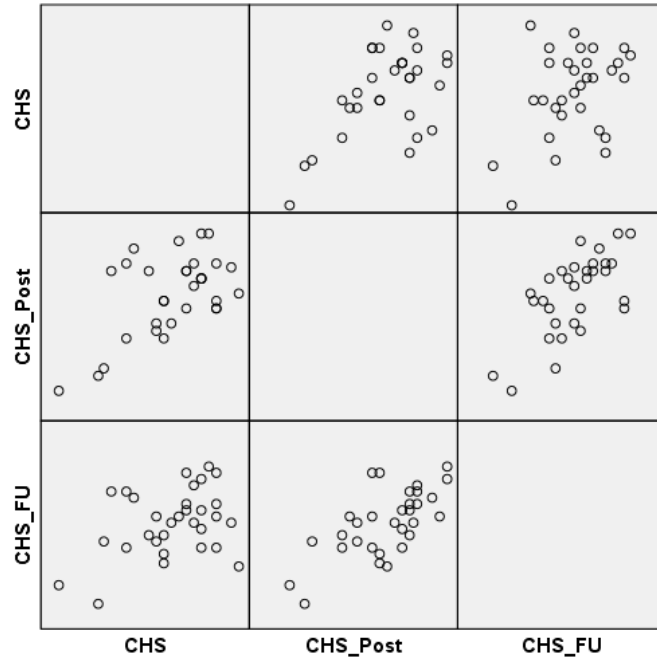


Figure 6: CHS Scatterplot Matrices

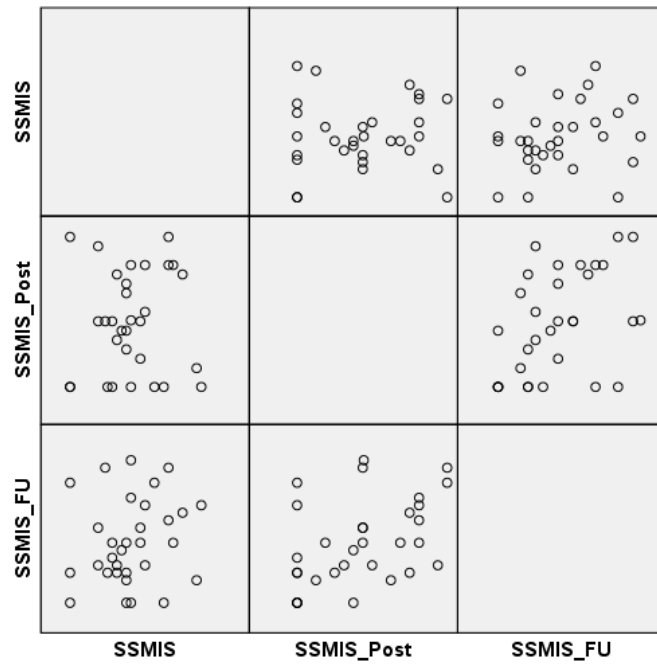


Figure 7: SSMIS-SF Scatterplot Matrices

Table 6

*Correlations Among Instruments*

		MHKAS	CHS	GHSQ	SSMIS-SF
MHKAS	Pearson Correlation	1	0.222	-0.061	-0.104
CHS	Pearson Correlation	0.222	1	.426	-.277
GHS	Pearson Correlation	-0.061	.426	1	0.073
SSMIS-SF	Pearson Correlation	-0.104	-.277	0.073	1

Primary Analysis (Wave One to Wave Two)

The primary research question guiding this study was: do adolescents reported levels of mental health knowledge, mental health stigma, hope, and help-seeking attitudes change between wave one and wave two during the course of a MHL intervention? The researcher implemented a RM-MANOVA to determine whether there were significant differences in mean scores across wave one and wave two in adolescents' ( $N = 60$ ) measures of mental health knowledge, help-seeking attitudes, personal stigma, and hope. Analysis yielded a significant difference for multivariate analysis between wave one and wave two (Pillai's Trace = .546,  $F_{(4, 56)} = 16.816$ ,  $p < .001$ , partial  $\eta^2 = .546$ ), with an observed power of 1.000 at  $\alpha = 0.05$ . There was a statistically significant positive change in measures of mental health knowledge ( $F_{(1, 59)} = 58.481$ ,  $p < .001$ , partial  $\eta^2 = .498$ ; obs. power = 1.000), with large effects ( $d = 1.992$ ; Cohen, 1988). Moreover, there was a statistically significant positive change in measures of help-seeking attitudes ( $F_{(1, 59)} = 4.995$ ,  $p = .029$ , partial  $\eta^2 = .078$ ; obs. power = .592), with large effects ( $d = .934$ ; Cohen, 1998). The researcher identified a statistically significant negative change in personal mental health stigma ( $F_{(1, 59)} = 12.867$ ,  $p = .001$ , partial  $\eta^2 = .179$ ; obs. power = .594), with medium effects ( $d =$

.582; Cohen, 1998). Measures of hope did not significantly change ( $F_{(1, 59)} = .015, p = .904$ , partial  $\eta^2 = .000$ ; obs. power = .052) from wave one to wave two; also indicated by non-existent effects ( $d = .000$ ; Cohen, 1988). Table 7 presents specific information regarding calculated effect sizes from wave one to wave two. It should be noted that the researcher performed post-hoc analyses to examine potential differences between the six intervention sites and found no significant differences between sites on the four measures.

Table 7

*Effect Size for Measures (Wave One to Wave Two)*

Estimates of Effect Size ( $n = 60$ )	Cohen's $d$
MHKAS	1.992
CHS	0.000
GHSQ	0.582
SSMIS-SF (Personal Stigma)	0.934

Exploratory Research Question One Analysis

Exploratory research question one examined if the dosage of the MHL intervention, measured by attendance, influenced change from wave one to wave two on measures of mental health knowledge, stigma, hope, and help-seeking attitudes. The researcher utilized a RM-MANOVA to determine how the dosage of intervention influenced changes from wave one to wave two. To explore this, the researcher coded participants into two groups: (a) participants who attended at least five of the six group sessions ( $n = 33$ ) and (b) participants who attended four or less group sessions ( $n = 27$ ). Comparing the two groups, there was not a significant difference in



multivariate analysis between high attendance and low attendance (Pillai's Trace = .112,  $F_{(4, 55)} = 1.742$ ,  $p = .154$ , partial  $\eta^2 = .112$ , power = .499). It should be noted that the Box's Test for Equality indicated no violation of the assumption of covariance matrices are equivalent. While there was not a statistically significant difference in the multivariate assessment of these groups, there was a significant difference in personal stigma. In this case, the overall reduction in personal stigma for those that categorized as high attendance was significantly larger than that of those considered low attendance ( $F_{(1, 58)} = 5.208$ ,  $p = .026$ , partial  $\eta^2 = .082$ ; obs. power = .612), with medium effects ( $d = .598$ ) indicating that increased exposure of the intervention significantly influenced stigmatizing beliefs. Figure 8 illustrates personal stigma across time for the high attendance group and the low attendance group.

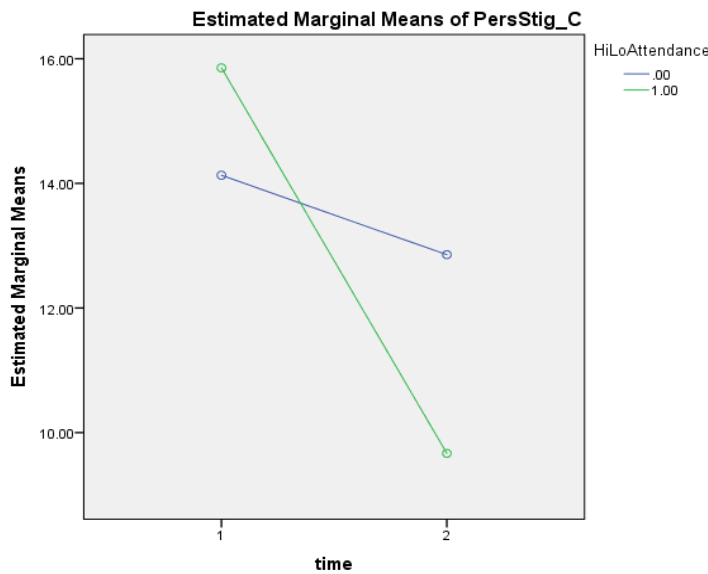


Figure 8: Personal Stigma for High and Low Attendance Participants

### Exploratory Research Question Two Analysis

The present study included participants in both middle and high school, representing grades sixth through twelfth. The researcher utilized a RM-MANOVA to determine how the intervention may have influenced participants in middle or high school differently. To explore this, the researcher coded participants into two groups: (a) participants in grades 6 through 8 ( $n = 33$ ) and (b) participants in grades 9 through 12 ( $n = 27$ ). Comparing the two groups, there was no significant difference in multivariate analysis between middle and high school students (Pillai's Trace = .060,  $F_{(4, 55)} = .870$ ,  $p = .488$ , partial  $\eta^2 = .060$ ; obs. power = .259). It should be noted that the Box's Test for Equality indicated no violation of the assumption of covariance matrices are equivalent. There was not a statistically significant difference in the multivariate assessment of these groups, nor was there a significant difference from wave one to wave two. However, there was a significant difference in baseline scores for MHKAS ( $F_{(1, 58)} = 6.927$ ,  $p = .011$ , partial  $\eta^2 = .107$ ; obs. power = .735), and GHS ( $F_{(1, 58)} = 7.844$ ,  $p = .007$ , partial  $\eta^2 = .119$ ; obs. power = .786), each with medium effects ( $d = .692$ ;  $d = .735$ , respectively). Thus, high school students at baseline report *higher* mental health knowledge but *lower* help-seeking attitudes compared to middle school students. However, regardless of baseline value or age group, those that participated in this intervention experienced significant increases in mental health knowledge and likelihood to seek help in the event of a mental health concern. Figure 9 presents change in mental health knowledge across wave one and wave two for middle school and high school participants. Figure 10 illustrates change in help-seeking attitudes across wave one and wave two for middle school and high school participants.

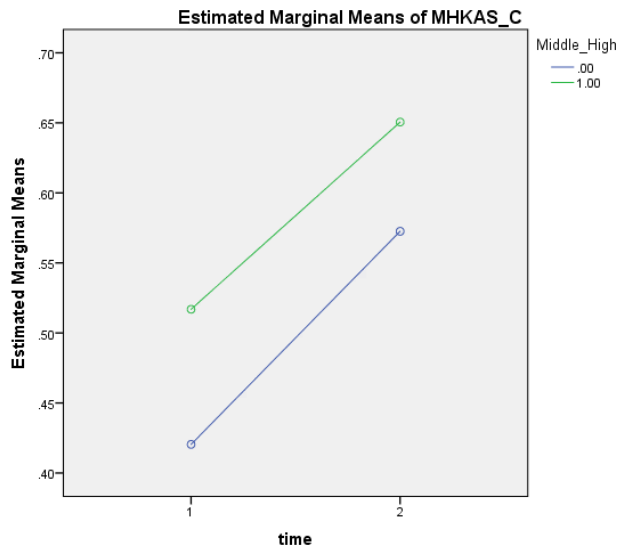


Figure 9: Mental Health Knowledge by Grade Level

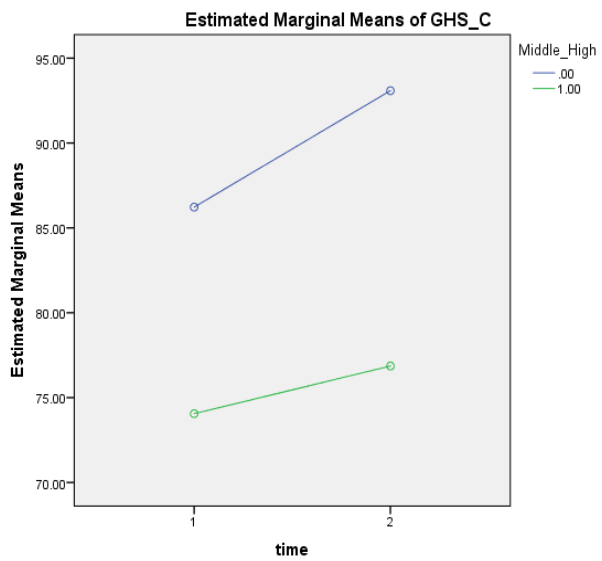


Figure 10: Help-Seeking Attitudes by Grade Level

### Secondary Research Question Analysis (Wave One to Wave Three)

In order to examine the sustainability of the intervention influence over time, the researcher utilized a RM-MANOVA to measure if there were significant changes from wave one to wave three. When comparing wave one scores to wave three scores, there was a significant change for multivariate within-subjects analysis (Pillai's Trace = .604,  $F_{(4, 27)} = 10.297$ ,  $p < .001$ , partial  $\eta^2 = .604$ ), with an observed power of .999 at  $\alpha = 0.05$ , indicating that significant changes were sustained at one-month follow-up. There was a statistically significant positive change in measures of mental health knowledge ( $F_{(1, 59)} = 28.804$ ,  $p < .000$ , partial  $\eta^2 = .490$ ; obs. power = .999) with large effects ( $d = 1.960$ ; Cohen, 1988) and help-seeking attitudes ( $F_{(1, 59)} = 8.240$ ,  $p = .007$ , partial  $\eta^2 = .215$ ; obs. power = .793) also with large effects ( $d = 1.047$ ) from wave one to wave three. Moreover, there was a statistically significant negative change in personal mental health stigma ( $F_{(1, 59)} = 10.996$ ,  $p = .002$ , partial  $\eta^2 = .215$ ; obs. power = .894) with large effects ( $d = 1.210$ ). However, measures of hope did not significantly change ( $F_{(1, 59)} = .543$ ,  $p = .467$ , partial  $\eta^2 = .018$ ; obs. power = .110) from wave one to wave three, indicated by small effects ( $d = .271$ ; Cohen, 1988). Thus, the influence of the intervention was sustained at one-month follow-up, also evidenced by no statistically significant multivariate change from wave two to wave three (Pillai's Trace = .064,  $F_{(4, 27)} = .462$ ,  $p = .763$ , partial  $\eta^2 = .064$ ). Figures 11, 12, 13, and 14 further illustrate estimate mean changes across waves one, two and three for each of the four measures while Table 8 displays effect sizes from wave one to wave three.

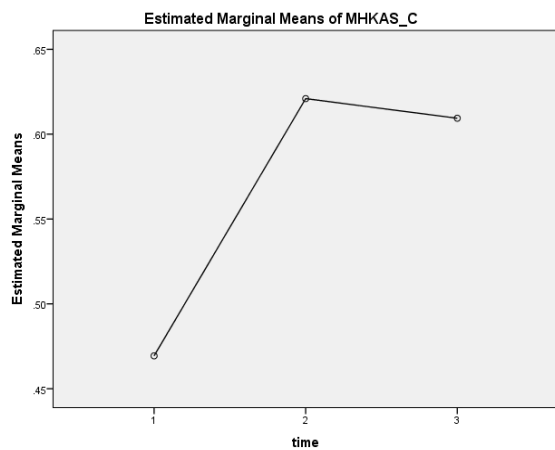


Figure 11: Mental Health Knowledge Across Time

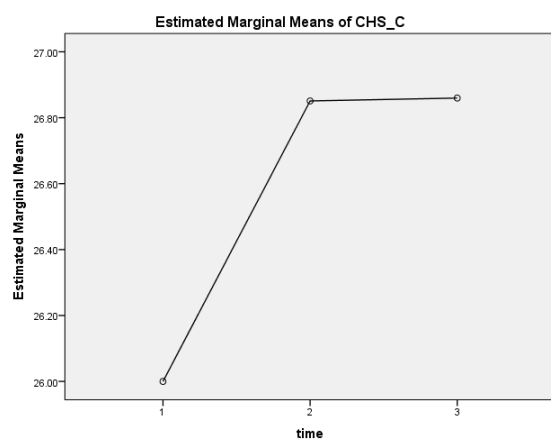


Figure 12: Hope Across Time

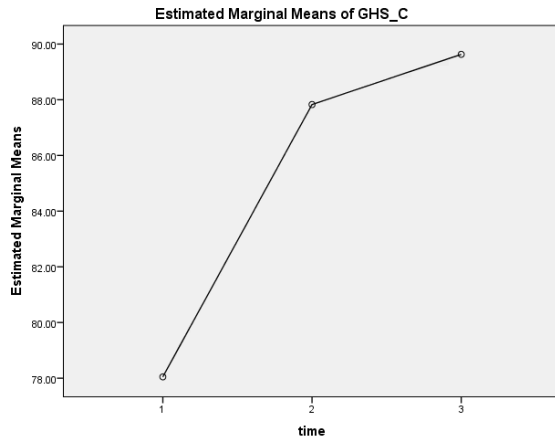


Figure 13: Help-Seeking Attitudes Across Time

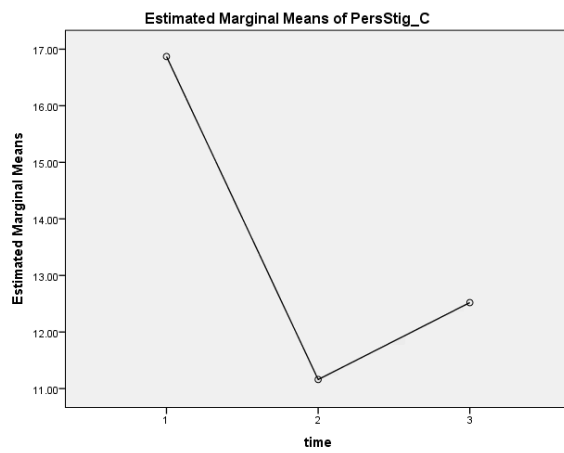


Figure 14: Personal Stigma Across Time

Table 8

*Effect Size for Measures (Wave One to Wave Three)*

Estimates of Effect Size ( $n = 31$ )	Cohen's $d$
	(calculated from partial $\eta^2$ )
MHKAS	1.960
CHS	0.271
GHSQ	1.047
SSMIS-SF (Personal Stigma)	1.210

## Chapter Four Summary

In Chapter four, the researcher presented detailed results for the statistical analyses conducted. The main findings included: (a) significant differences from wave one to wave two and wave one to wave three on measures of mental health knowledge, mental health stigma, and help-seeking attitudes; and (b) no significant differences in measures of hope from wave one to wave two or wave two to wave three. Further analysis revealed a significant difference in measures of personal mental health stigma across participants who attended five or more sessions compared to four or less sessions. Finally, participants made significant changes in mental health knowledge, mental health stigma, and help-seeking attitudes regardless of grade level. However, high school students began the intervention with higher levels of mental health knowledge and lower reported help-seeking attitudes compared to middle school students. Chapter five provides a discussion of these results including implications for counseling and counselor education, limitations of the study, and future directions for research.

## CHAPTER FIVE: DISCUSSION

Chapter Five provides an overview of the study and discussion of the results. Specifically, this chapter includes: (a) interpretation of results; (b) comparison of results to previous studies; (c) limitations of the study, (d) implications of the findings for counselor education, counseling, and public policy; and (e) research implications and recommendations for future research.

### Overview

Adolescence is a critical period of human development, characterized by rapid changes in physical, psychological, and neurodevelopmental development. During this life stage, biological maturity precedes psychosocial and cognitive development, resulting in increased mental health vulnerabilities for adolescents (World Health Organization, 2019). The Center for Disease Control and Prevention reports that one in five adolescents have a diagnosable mental health condition and rates of depression and anxiety in adolescents have been steadily increasing in recent years (2018). As such, educators, researchers, and public policy officials are demanding more attention and resources directed towards adolescent mental health, including preventative and educational initiatives (Bluestein, 2019; Kaufman, 2018; Mojtabai, Olfson, & Han, 2016). These efforts have culminated in changes to public policy including mandated mental health education in New York and Virginia public schools (Kaufman, 2018).

Mental health literacy (MHL) is a framework for increasing awareness, decreasing mental health-stigma, and promoting positive mental health and coping (Jorm, 1997; Skre et al., 2013). MHL programs in school and community settings have increased individuals' mental health knowledge, promoted help-seeking, and decreased stigmatizing attitudes (McLuckie et al., 2014;



Milan et al., 2013; 2016; Perry et al., 2014; Swartz et al., 2016). However, previous research has methodological limitations and has primarily been conducted on homogenous samples of racial and ethnic majority youth. Therefore, the purpose of this study was to examine the influence of a mental health literacy intervention on a sample of economically disadvantaged youth from ethnic and racial minority backgrounds.

### Study Summary

The purpose of this investigation was to identify the influence of a six-week MHL intervention on adolescents' levels of mental health knowledge, mental health stigma, help-seeking attitudes, and hope. Additionally, the researcher investigated relationships between grade level (middle vs. high school) and attendance rate (low vs. high) from pre-test (wave one) to post-test (wave two). Finally, sustained influence of the intervention was examined through comparison of baseline scores (wave one) to follow-up scores (wave three), one-month post intervention. A total of 60 participants participated in the study. All participants completed the following assessments: (a) MHKAS (McLuckie et al., 2014); (b) GHSQ (Wilson et al., 2005); (c) CHS (Snyder et al., 1997); and (d) SSMIS-SF (Corrigan et al., 2012) at data waves one and two. At wave three, 31 students completed the same four assessments.

### Constructs of Interest

This study focused on four primary constructs that serve as the foundation for MHL: (a) mental health knowledge; (b) mental health stigma, (c) help-seeking; and (d) hope, as it relates to adolescent populations. The following section provides an overview of each construct.

## Mental Health Knowledge

Mental health knowledge encompasses recognition of mental health disorders and awareness of treatment options (Jorm et al., 2012). Adolescents' knowledge regarding mental health is important because higher levels of mental health knowledge are correlated with higher levels of help-seeking (Evans-Lacko et al., 2010; Rüsch et al., 2011). However, adolescents generally score low on measures of mental health knowledge. For example, researchers report 44.7% of youth correctly identify depression, 37% are able to identify psychosis, and only 27.5% of adolescents can identify anxiety, the most common mental health challenge experienced by the adolescent population (Leighton, 2010; Olsson & Kennedy, 2010). Additionally, adolescents find externalizing symptoms of mental health (e.g., self-harm) more serious and in need of intervention compared to internalizing symptoms (e.g., suicidal thoughts) (Leighton, 2010). Gender roles influence perception of severity, with adolescents reporting that females suffering from mental health issues need more days to recover compared to males (Coles et al., 2016).

Moreover, researchers examined the relationship between demographic variables and mental health knowledge and concluded that girls tend to have higher levels of knowledge compared to boys (Burns & Rapee, 2016; Coles et al., 2016; Cotton et al., 2006; Furnham et al., 2014) and that older adolescents tend to possess higher levels of knowledge compared to younger adolescents (Reavley & Jorm, 2011; Skre et al., 2013). Additional demographic variables including geographical region, socioeconomic status, and race have yet to be investigated. Considering the correlation of mental health knowledge to help-seeking and the relatively low levels of mental health knowledge in the adolescent population, this study sought to measure participants levels of mental health knowledge and compare levels of knowledge at pre-test, post-test, and follow-up.

## Mental Health Stigma

Mental health stigma involves lacking knowledge, holding negative attitudes, and engaging in behavior that disadvantages those with mental health challenges (Goffman 1963; Thornicroft, Hassam, & Sartorius, 2007). Mental health stigma is a primary deterrent from individual help-seeking (Sartorius, 2007). Mental health stigma has important ramifications for adolescents, as the period of adolescence is characterized by heightened sensitivity to the thoughts and opinions of others (Elkind, 1967). Moreover, positive peer relationships are a primary protective factor against adversity (Walsh, Harel-Fisch, & Fogel-Grinvalds, 2010; Warren, Jackson, & Sifers, 2009). Therefore, the effects of peer stigma can have particularly negative consequences for adolescents (Elkington et al., 2012; McKeague et al., 2015).

Adolescents both experience and perpetuate mental health stigma. Adolescents tend to judge peers with mental health challenges negatively, especially if the mental illness has behavioral consequences, such as ADHD or Schizophrenia (Kaushik et al., 2016). Similarly, if a peer's mental health disrupts group norms, adolescents are more likely to believe excluding the peer would be an appropriate course of action (O'Driscoll et al., 2015). Further, if peers believe that the individual has control over their mental health diagnosis, they are more likely to experience anger or frustration rather than empathy (Corrigan et al., 2001). Older adolescents tend to hold more stigmatizing beliefs compared to younger children and males tend to hold more stigmatizing beliefs than females (Moher et al., 2009). Adolescents with mental health challenges report feeling isolated, different, and strange compared to their peers without mental health challenges and sometimes opt to hide their mental health diagnosis from peers (Elkington et al., 2015; McKeague et al., 2015). Considering the important ramifications of mental health stigma, this study aimed to reduce stigmatizing mental health beliefs in the adolescent population.

## Help-Seeking

Despite the prevalence of mental health concerns in adolescence, only one third of adolescents diagnosed with a mental health disorder seek professional help (CDC, 2014). The ramifications of mental health disorders going untreated include increased severity, substance abuse, housing instability or homelessness, and increased risk of suicide (Tsai, O'Toole, & Kearney, 2018). The discrepancy between diagnosis and treatment has led the World Health Organization (2018) to call for increased attention to adolescent help-seeking, including research and programs aimed at increasing help-seeking for youth populations.

Adolescents have varying degrees of willingness to seek help. Generally, adolescents tend to prefer informal help-seeking, such as asking friends and family members for help over formal help seeking (Cakar & Savi, 2014; D'Avanzo et al., 2012; Rickwood et al., 2007). Adolescent boys are less likely to seek help than adolescent girls (Haavik et al., 2017). Mental health stigma also influences help-seeking. Individuals who believe that those with mental health disorders are “weak not sick” are far less likely to ask for help (Yap et al., 2011). Further, ethnicity and culture act as moderating variables to help-seeking (Guo et al., 2015; Turner et al., 2015). Youth from racial and ethnic minority backgrounds are less likely to receive appropriate health-care due to lack of accessible treatment options, increased mental health stigma, a reliance on self-sufficiency and belief that mental health tends to get better on its own (Barker, 2005; Nestor et al., 2016). Therefore, this intervention focused on increasing help-seeking for adolescent participants from racial and ethnic minority backgrounds.

## Hope

Hope is defined as “the perceived capability to derive pathways to desired goals and motivate oneself via agency thinking to use those pathways” (Snyder, 2002, p. 249). Hope can be divided into four categories: goals, pathway thoughts (routes taken to achieve goals), agency thoughts (motivation to undertake pathways), and barriers (potential roadblocks to goals). Hope is a burgeoning theory in positive psychology and has been found to predict mental health and well-being and protect against adversity and mental health challenges (Dixson et al., 2017; Venning et al., 2011). Among youth, those with higher levels of hope had above average scores on perceived life chances, self-esteem, school belonging, self-concept, academic investment, and consideration of future chances (Dixson et al., 2017). Further, individuals with higher levels of hope tend to have increased intention to seek help from informal services when faced with a mental health challenge (McDermott et al., 2016). Considering the framework of MHL and emphasis on positive coping and well-being, this research study aimed to foster hope in adolescents and investigate changes in hope across the three data collection waves.

## Participants

Participants were all members of Boys and Girls Club of America, a non-profit organization dedicated to serving at-risk youth. Participants included middle and high school students, between the ages of 11 and 17, attending one of six Boys and Girls Club branches (i.e. clubs) in a Southeastern state. A total of 103 participants expressed interest in participating in the study, indicated by signed parental informed consents. However, 78 participants began the study and participated in the first wave of data collection. The 25 students who chose not to participate

had scheduling conflicts, such as alternative extracurricular activities. At wave two, 60 of the 78 students remained in the study (77% retention rate). The 18 students who dropped out of the study did so because of (a) conflicting extracurricular activities; (b) family situations; (c) illness; or (d) unknown reasons. However, six participants who left the study were members of Club B and dropped between week one and two, indicating that group dynamics may have also impacted attrition. At wave three, 31 participants completed follow-up assessments.

### Intervention

The intervention (*The Guide*) consisted of six 75-minute sessions covering: (a) stigma of mental health; (b) understanding mental health; (c) specific mental health disorders; (d) seeking mental health support; and (e) positive mental health. Counselors-in-training facilitated the mental health literacy groups including lecturing about mental health using PowerPoint presentations, generating discussion questions, and leading psychoeducational activities. Facilitators made adaptations to the curriculum (i.e., adding pictures to PowerPoints, incorporating relevant media); however, all materials were aligned to the learning objectives of *The Guide* curriculum.

### Data Collection

Data collection occurred during the Fall in 2018. The sessions occurred once per week for six consecutive weeks; however, for two clubs the six sessions were spread through eight weeks due to unforeseen circumstances that resulted in rescheduling (e.g., holiday parties, weather related closures, field trips). Nevertheless, six sessions were held at each participating club. Data collection occurred at three waves (pre-test, post-test, and follow-up). All assessments were

administered at pre-test, immediately before the intervention (wave one); at post-test, immediately after the intervention; (wave two) and at follow-up, after a brief check-in with participants (wave three). Although monetary incentives were not provided to participants, light refreshments were provided at each session and a raffle was held at the end the second data collection wave. Raffle prizes included college paraphernalia, gift baskets of food, and games.

### Demographics

Data collection consisted of wave one: ( $n = 78$ ), wave two ( $n = 60$ ), and wave three ( $n = 31$ ). 60 participants were eligible to be included in the primary analysis that assessed change over time. The demographic breakdown of participants diverged from previous MHL studies in terms of age, race and ethnicity, and socioeconomic status. Previous studies have primarily focused on high school populations (e.g., Conrad et al., 2009; Pinto-Foltz et al., 2011; Skre et al., 2013; Spagnolo et al., 2008). Age and grade level are important predictors of mental health knowledge, stigma, and help-seeking attitudes (e.g., Reavley & Jorm, 2011; Skre et al., 2013). Thus, the researcher included both middle school students ( $n = 33$ ) and high school students ( $n = 27$ ), in order to compare populations. The mean age for the present study was 13.50 years of age, younger than previous MHL studies. For example: (a) Pinto-Foltz et al. (2011) reported a mean age of 15; (b) Perry et al., (2014) reported a mean age of 14.75; (d) Milin et al., (2016) reported a mean age of 16.5. Further, previous MHL research has primarily been conducted on homogenous samples of youth from ethnic and racial majority backgrounds (Salerno, 2016). This research study included participants from racial and ethnic minority backgrounds who identified as Black/African American ( $n = 47$ ; 60.3%), Asian/Pacific Islander ( $n = 1$ ; 1.3%), bi-racial ( $n = 3$ ; 3.8%); and multi-racial ( $n = 6$ ; 7.7%). 18.3% of participants identified as Latinx/Hispanic ( $n = 11$ ). Moreover, there

are no MHL intervention studies which included a high percentage of youth from economically vulnerable backgrounds, with most studies failing to report any indicator of socioeconomic status (e.g., McLuckie et al., 2014; Milin et al., 2016; Perry et al., 2014). For the present study, 51 participants reported qualifying for a free or reduced lunch (85.0%). Four students reported that they did not qualify for a free and reduced lunch (6.7%) and five students reported “I do not know” (8.3%). 61.6% of the participants in the present study identified as female ( $n = 37$ ), while 38.3% identified as male ( $n = 23$ ). Higher levels of mental health stigma (Moher et al., 2009), alongside increased reluctance to seek help in the adolescent male population (Haavik et al., 2017) may explain the reasons behind more females choosing to participate in the present study. Finally, 40% of participants reported having previously received counseling services, 33% of students said they did not attend counseling and 26.7% said “I do not know.” The U.S. Substance Abuse and Mental Health Administration (2009) reports that 12.9% of youth in the United States receive mental health services in a given year. Further, Milin et al., (2006) in a similar study, reported 11% of students ( $N = 534$ ) reported receiving mental health services prior to *The Guide* implementation. Although this sample reports a much higher percentage, participants interpreted counseling to include individual or group contact with their school counselor. Further, many participants expressed at the end of the curriculum that they did not know what counseling was prior to the MHL intervention.

Group facilitators took attendance each week. The average number of weeks participants attended was 4.38 ( $SD = 5.00$ ). Lapses in attendance were a result of (a) sickness; (b) extracurricular activities (e.g., athletic team try-outs); (c) weather-related events; and (d) unknown reasons. Facilitators began each week with a review of the previous week to re-orient students who were absent the previous week.



## Instrument Descriptive Statistics

### Mental Health Knowledge and Attitude Survey

The Mental Health Knowledge and Attitude Survey (MHKAS) consists of a 28-item scale assessing mental health knowledge and an 8-item scale assessing attitudes (McLuckie et al., 2014). The MHKAS has gone through multiple revisions and has been tailored to each adaptation of *The Guide* curriculum. The authors of *The Guide* encourage educators to adapt the scale to most closely measure intent of the curriculum. For the present study, the 28-item knowledge subscale was utilized, corresponding to the six modules of *The Guide* curriculum. All items were presented alongside True/False/I Don't Know options for participants to select. Scores on the MHKAS range from 0 to 28 with higher scores indicating increased mental health knowledge. Each correct answer accounts for 1/28<sup>th</sup> of the total score. At baseline, participants had a mean score of 45.74 ( $SD = 16.3$ ), at post-test participants had a mean score of 60.3 ( $SD = 13.6$ ), and at follow-up participants had a mean score of 61.53 ( $SD = 13.2$ ). It should be noted that one item was removed (#13: *Vitamins and meditation are good treatments for most mental illnesses*) due to a reporting error. Table 9 reports descriptive data for wave one wave two, and wave three.

Previous studies using the MHKAS has indicated an internal consistency ranging from .637 among a sample of 114 Canadian youth (Kutcher et al., 2014) and .71 among a sample of 265 Canadian youth (McLuckie et al., 2014). Cronbach Alphas were calculated at wave one ( $\alpha = .714$ ), wave two ( $\alpha = .634$ ), and wave three ( $\alpha = .588$ ) for the present study. At pre-test and post-test, internal consistency was considered acceptable and on par with previous studies while at follow-up internal consistency was poor. This may be due to the substantial attrition between post-test and follow-up.

The current study reported slightly lower MHKAS scores for youth compared to previous studies. For example, McLuckie et al. 2014 report an average (percentile) pre-test score of 53 ( $N=409$ ;  $M=14.91$ ;  $SD=4.02$ ), average post-test score of 64 ( $N=409$ ;  $M=18.55$ ;  $SD=4.18$ ), and average two-month follow-up score of 64 ( $N=265$ ;  $M=18.22$ ;  $SD=4.2$ ). Further, Kutcher et al. (2015) report an average pre-test score of 55 ( $N=112$ ;  $M=15.45$ ;  $SD=3.97$ ), post-test score of 69 ( $M=19.50$ ;  $SD=3.39$ ), and two-month follow-up score of 68 ( $M=19.11$ ;  $SD=4.04$ ). The lower average MHKAS scores in the present study ( $M_{\text{pretest}}=45.74$ ;  $M_{\text{post-test}}=60.3$ ;  $M_{\text{follow-up}}=61.53$ ) may be contributed to a younger average age of participant. Although neither study reports mean age, McLuckie et al. states that *The Guide* was implemented in ninth grade while Kutcher et al. reports that *The Guide* was implemented in ninth and tenth grades. Thus, the average age was likely higher than 13.50. Further, previous studies were conducted in classroom school settings, as a standard part of the class curriculum. As such, the after-school setting may pose unique challenges for students regarding concentration and interferences.

### General Help Seeking Questionnaire

The General Help Seeking Questionnaire (GHSQ) measures help-seeking intentions for both formal and informal sources (Wilson et al., 2005). The scale consists of two questions corresponding to eight help-seeking options each presented on a Likert-type scale. The first question assesses help-seeking intention for emotional/personal problems and the second question assesses help-seeking intention for suicidal thoughts. Each help-seeking option is presented alongside a 7-point Likert type scale ranging from “extremely unlikely to seek help” to “extremely likely to seek help.” Authors of the GHSQ encourage researchers to consider the particular context and most relevant help seeking sources and change help-sources if applicable. Therefore, for the

present study, the researcher added “Boys and Girls Club Staff” as an option for help-seeking. The researcher scored the scale by adding the likelihood of seeking help for each help-seeking option together and reverse coded item 9: “*I would not seek help from anyone*”. Therefore, the scores could range from 16 to 112, with higher scores indicating increased likelihood to seek help from formal and informal sources. At wave one, the mean score for the GHSQ was 81.6 ( $SD = 22.3$ ), at wave two the mean score was 86.9 ( $SD = 22.0$ ) and at wave three the mean score was 90.8 ( $SD = 19.8$ ).

Researchers found that as a single scale, the GHSQ has a Cronbach alpha of .85 and a test-retest reliability of .92 (over three weeks), indicating strong internal validity and reliability with a sample of 218 high school students. Further, the suicidal problem subscale has a Cronbach’s alpha of .82 and a test-retest reliability of .88 whereas the personal/emotional problems subscale has a Cronbach alpha of .70 and a test-retest reliability of .86 (Wilson et al., 2005). For the present study, Cronbach alphas for the total scale were calculated at wave one ( $\alpha = .883$ ), wave two ( $\alpha = .879$ ) and at wave three ( $\alpha = .890$ ), indicating good internal consistency. Moreover, Cronbach alphas for the suicidal problem subscale ranged from wave one ( $\alpha = .829$ ), wave two ( $\alpha = .74$ ) and at wave three ( $\alpha = .82$ ) while the emotional problem subscale ranged from wave one ( $\alpha = .76$ ), wave two ( $\alpha = .71$ ) and at wave three ( $\alpha = .79$ ) Therefore, the psychometric properties remained similar to the authors original psychometric evaluation.

For the present study, the mean scores on the GHSQ were higher than previous studies. For example, Wilson, Deane, Marshall, and Daley (2008) utilized the GHSQ to measure the impact of a program, to reduce barriers to seeking help and increase help-seeking intention. The authors calculated each psychological intention item as a mean and used the scale to represent intentions to seek help for psychological problems. At pre-test they reported a mean response of 2.92 ( $SD =$

1.3), at post-test following the curriculum they reported a mean response of 3.11 ( $SD = 1.41$ ); and at five-week follow-up a mean response of 3.13 ( $SD = 1.52$ ) among a sample of 173 youth ( $M = 16$  years). For the present study, the mean response was higher at wave one 4.53 ( $SD = 1.24$ ), wave two 4.82 ( $SD = 1.22$ ), and wave three 5.04 ( $SD = 1.10$ ). The Wilson et al. (2008) study was conducted in high schools in New South Wales, Australia and was implemented by a general practitioner. The differences in Australian and United States culture may account for these differences as well as the average age of participants. In the current study, middle school students reported higher levels of help-seeking compared to high school students GHS ( $F_{(1, 58)} = 7.844, p = .007$ , partial  $\eta^2 = .119, d = .735$ , power = .786). Thus, GSSQ scores may have been more in line with the Wilson et al., (2008) if the sample was a similar mean age.

Previously, researchers have found adolescents tend to prefer informal help-seeking from friends and family members rather than formal help-seeking (Cakar & Savi, 2014; D'Avanzo et al., 2012; Rickwood et al., 2007).). In the present study, adolescents at wave one ( $N = 60$ ) most frequently endorsed parents or caregiver ( $M = 5.441$ ), another relative or family member ( $M = 4.781$ ), or a friend ( $M = 4.44$ ) as the person they would seek help from if facing an emotional or personal problem. At wave two, participants endorsed parents ( $M = 5.81$ ), other relative or family member ( $M = 5.169$ ), or a mental health professional ( $M = 5.15$ ), as those they would seek help from. At wave three, mean scores for participants ( $N = 31$ ) increased for parent ( $M = 6.47$ ), other relative or family member ( $M = 5.565$ ), or mental health professional ( $M = 5.63$ ) and remained the three most likely help-seeking sources. These findings deviate from previous studies which indicate that friends are the most likely informal help-seeking source (Burns & Rapee, 2006). Further, the increase in likelihood to seek help from a mental health professional at waves one and

two are promising, supporting the notion that MHL interventions impact help-seeking for mental healthcare.

### Children's Hope Scale

The Children's Hope Scale (CHS) is a six-item assessment that measures hopeful thinking (Snyder et al., 1997). Items are presented alongside six-point Likert-type responses ranging from "none of the time" to "all of the time". The scale was developed specifically for children and adolescents and developmentally appropriate for youth ages eight to nineteen (Bickman et al., 2010; Snyder et al., 1997; Valle, Huebner, & Suldo, 2004). Scores on the CHS are calculated by adding the total item scores, ranging from 6 to 36 with higher scores indicating greater levels of hopeful thinking (Snyder et al., 1997). At baseline, participants had a mean hope score of 26.0 ( $SD = 5.9$ ), at post-test participants had a mean score of 26.1% ( $SD = 5.9$ ), and at follow-up participants had a mean score of 27.0 ( $SD = 5.3$ ).

For the present study, Cronbach alphas for the total scale were calculated at wave one ( $\alpha = .759$ ), wave two ( $\alpha = .834$ ) and at wave three ( $\alpha = .809$ ), indicating fair to good internal consistency. These findings are similar to previous studies measuring children's hope. For example, Snyder and colleagues (1997) reported Cronbach alphas ranging from of .71 to .86 (median of .77) across five samples of child and adolescent participants. Further, Woods and colleagues (2012) report an internal consistency of .87 (pre-test) and .86 (post-test) among a sample of 102 children.

Mean hope scores were similar to previous research studies. Snyder and colleagues (1997) reported mean scores ranging from 25.41 at pre-test ( $SD = 4.99$ ) to 27.03 at post-test ( $SD = 4.51$ )

among 175 youth. Moreover, Woods and colleagues (2012) reported a mean score of 25.01 ( $SD = 6.37$ ) at pre-test and mean score of 26.49 ( $SD = 7.17$ ) at post-test ( $N=102$ ). In comparison, mean scores for the present study range from 26 to 27. Further, Snyder and colleagues found no differences between gender, race, and family income on measures of hope ( $N= 2,263$ , Snyder et al., 1999); Valle et al. (2006) found significantly higher scores among African American youth ( $M = 29.48$ ,  $SD = 4.82$ ) compared to Caucasian youth ( $M = 27.82$ ,  $SD = 6.01$ ). Although the present study does not have the within group diversity to compare racial demographics (76% African American/Black), the mean score is more closely aligned with Snyder's (1997) original findings, indicating that a sample of adolescents from racial and ethnic minority and economically disadvantaged backgrounds have similar scores on measure of hope compared to ethnic and racial majority youth.

#### Self-Stigma of Mental Illness Scale- Short Form

The Self Stigma of Mental Illness Scale-Short Form [SSMIS-SF] (Corrigan et al., 2011) consists of 20 items measuring attitudinal stigma associated with mental illness. The scale consists of four subscales: (a) awareness of stigma; (b) agreement with stigma; (c) application to self; and (d) harm to self-esteem. Each subscale consists of five questions and is presented alongside a nine-point Likert-type scale ranging from one (I strongly disagree) to nine (I strongly agree). Because this study aimed to improve personal perceptions of mental health and decrease stigmatizing attitudes, the agreement with stigma subscale was utilized to measure personal mental health stigma. Personal stigma mean scores ranged from 15.1 at pre-test ( $SD= 7.1$ ) to 11.1 at post-test ( $SD=5.6$ ) to 12.1 ( $SD = 5.7$ ) at follow-up.

For the present study, Cronbach alphas for the agreement subscale of SSMIS-SF were calculated at wave one ( $\alpha = .731$ ), wave two ( $\alpha = .713$ ) and wave three ( $\alpha = .689$ ), indicating fair to good internal consistency. These scores were slightly lower than previous studies. For example: Corrigan et al., (2006) reported an alpha of .75 ( $N = 71$ ); Rüsch et al. (2006a,b), reported an alpha of .72 ( $N = 90$ ); and Corrigan (2011) reported an alpha of .79 ( $N = 85$ ). However, these samples deviated from the present study and all included adult participants with mental health diagnoses. Although internal consistency was still fair for the present study, the internal consistency scores may reflect this difference.

With the exception of Mufinger et al. (2018) study which utilized the application to self sub-scale, the SSMIS-SF has not been utilized with child and adolescent populations, making it difficult to compare descriptive data to similar samples. However, when comparing to studies of adult populations, scores on the SSMIS-SF are lower compared to previous research studies. For example, Hansson, Lexén, & Homén (2017) report means of 18.83 ( $SD = 5.71$ ) at pre-test and 14.60 ( $SD = 8.74$ ) at post-test among a sample of 87 adults. Further, Corrigan (2006) reports an average of 18.6 ( $SD = 8.5$ ) among a sample of 71 adult participants and Corrigan (2011) reports a mean score of 16.8 ( $SD = 8.2$ ) of 85 adult participants. This may speak to the notion that adolescents have less stigmatizing attitudes compared to adult populations.

#### Primary Research Question (Wave One to Wave Two)

The purpose of the current investigation was to determine whether adolescents who participated in a six-week mental health literacy curriculum would have significant increases in mental health knowledge, hope, and help-seeking attitudes and significant decreases in mental health stigma. The primary statistical procedure selected was RM-MANOVA. RM-MANOVA

tests if there are differences in multiple dependent variables over time (Laerd Statistics, 2018). In order to run a RM-MANOVA, participants must be measured at all time-points. However, substantial attrition (51%) occurred between post-test ( $N = 60$ ) and follow-up ( $N = 31$ ). Therefore, the researcher conducted a run a RM-MANOVA between wave one and wave two ( $N = 60$ ) and a separate RM-MANOVA between wave one and wave three ( $N = 31$ ).

The primary research question analyzed changes between wave one and wave two on the MHKAS, GHSQ, CHS, and SSMIS-SF. Multivariate analysis yielded statistically significant differences between wave one and wave two (Pillai's Trace = .546,  $F(4, 56) = 16.816$ ,  $p < .001$ , partial  $\eta^2 = .546$ ), indicating a large magnitude of change from wave one to wave two and substantiating the practical significance of the MHL intervention. Further, this analysis indicated an observed power of 1.00, demonstrating the likelihood of a Type II error is miniscule. In sum, the results indicate strong support for the influence of intervention on the participants mental health knowledge, help-seeking attitude, hope, and personal mental health stigma.

Furthermore, univariate analysis yielded statistically significant differences between wave one and wave two for measures of mental health knowledge, help-seeking attitude, and mental health stigma. Regarding mental health knowledge, there was a statistically significant positive change ( $F_{(1, 59)} = 58.481$ ,  $p < .001$ , partial  $\eta^2 = .498$ ) with an observed power of 1.00, indicating a large effect from wave one to wave two ( $d = 1.992$ ) and high likelihood that statistically significant differences actually exist. There was also a statistically significant positive change in help-seeking attitude ( $F_{(1, 59)} = 4.995$ ,  $p = .029$ ; partial  $\eta^2 = .078$ ) with an observed power of .594 and an effect size of  $d = .582$ , demonstrating a medium effect across wave one and wave two. Further, there was a statistically significant negative change in personal mental health stigma ( $F_{(1, 59)} = 12.867$ ,  $p = .001$ , partial  $\eta^2 = .179$ ) with an observed power of .942 and large effect size ( $d =$



.934). Finally, there were no significant changes in hope from wave one to wave two ( $F_{(1, 59)} = .015, p = .904$ , partial  $\eta^2 = .000; d < .001$ ). Thus, these results indicate practical support for the intervention in terms of increasing mental health knowledge and help-seeking attitudes and decreasing mental health stigma; although causal results cannot be inferred without a control group.

The present study most closely resembles: (a) McLuckie, Kutcher, Wei, & Weaver (2014); (b) Kutcher, Wei, & Morgan (2015); and (c) Milin, Kutcher, Lewis, Walker, Wei, Ferrill and Armstrong (2016) studies, all of which investigate the influence on *The Guide* curriculum on high school students' MHL. McLuckie et al. (2014) also utilized a quasi-experimental design with three time points to measure changes in mental health knowledge and attitudes/mental health stigma among 265 Canadian youth. Researchers found a statistically significant improvement on measures of knowledge ( $p < .001; d = .90$ ) which was maintained at follow-up ( $p < .001; d = .73$ ). Similarly, attitude scores significantly improved between pre-test and post-test ( $p < .001; d = .25$ ) and remained significantly higher at follow-up ( $p < .007; d = .18$ ). These results parallel the present study, with both studies indicating large positive changes in mental health knowledge from pre-test to post-test and pre-test to follow-up. However, attitude scores changed at a marginal significance ( $d = .25$  at post-test) compared to stigma scores in the present study ( $d = 1.210$  at wave two). Although the current investigation implemented a different instrument to measure stigma (MHKAS vs. SSMIS-SF), both studies demonstrate support for *The Guide* curriculum in increasing mental health knowledge and confronting mental health stigma.

Kutcher and colleagues (2015) also found statistically significant change from pre-test to post-test on mental health knowledge ( $t = 12.83, df = 113, p < 0.001; d = 1.11$ ) and pre-test to two-month follow-up ( $t = 11.18, df = 113, p < 0.001; d = 0.91$ ) among a sample of 175 Canadian youth.

Moreover, attitudes significantly improved from pre-test to post-test ( $t = 8.54$ ,  $df = 111$ ,  $p < 0.001$ ;  $d = 0.66$ ) and was maintained at two-month follow-up ( $t = 6.2$ ,  $df = 111$ ,  $p < 0.001$ ;  $d = 0.52$ ). These results further substantiate the efficacy of *The Guide* curriculum and the notion that knowledge increases at a higher rate than stigma, a finding that is consistent across McLuckie et al. (2015) Kutcher et al. (2015) and the present study.

Milin and colleagues (2016) also implemented *The Guide* curriculum within a randomized controlled trial spanning 24 Canadian secondary schools ( $N = 534$ ;  $M = 15.6$  years). Although the MHKAS assessment was used as the primary measurement tool, it was shortened to a 15-item knowledge scale and an 8 item attitudes scale. Schools were randomly stratified, and *The Guide* curriculum was delivered to approximately half of the participants by health teachers. Researchers found a significant increase in knowledge from pre to post ( $F_{1,495.33} = 25.78$ ,  $p < .001$ ,  $\beta = 0.67$ ) for the curriculum condition and a nonsignificant change in knowledge over time ( $F_{1,484.28} = 0.55$ ,  $p = .459$ ,  $\beta = -0.14$ ) for the TAU condition. Further, there were significant improvements in attitudes over time ( $F_{1,488.95} = 11.33$ ,  $p < .01$ ,  $\beta = 0.51$ ) for students in the curriculum group, whereas students receiving TAU did not have a significant change in attitudes over time ( $F_{1,475.47} = 1.58$ ,  $p = .209$ ,  $\beta = -0.27$ ). Thus, when implementing *The Guide* within a randomized controlled trial, similar results persist including significant increases in mental health knowledge and positive mental health attitudes.

However, the present study also diverges from these three studies. First, demographic information was not provided regarding racial and ethnic backgrounds and socioeconomic status of participants and with the exception of Milin et al. (2016), mean age of participants was not provided. The present sample consists of middle and high school youth from ethnic and racial minority backgrounds and the majority of participants qualify for a free or reduced lunch (85%),

an indicator of low family income. Consequently, the present study supports *The Guide* as a means of increasing MHL of participants from diverse backgrounds in the United States. Further, each of the previous studies took place in school and classroom settings, contrasting with the present study which occurred in a community setting. Therefore, despite a vast difference in age, family income level, racial and ethnic background, and location, the MHL intervention yielded similar findings in terms of knowledge gains.

### Exploratory Research Question One

Previous MHL interventions have ranged from a one-hour curriculum (e.g., Pinto-Foltz, Logsdon & Meyers, 2011) to a ten-hour curriculum spanning six to eight days (e.g., Perry et al., 2014). Further, *The Guide* curriculum has been implemented across four to eight weeks, dependent on the time needed to cover the six modules (Kutcher et al., 2015; Milin et al., 2016). Considering the time and resources needed to implement mental health education, the present study analyzed how much exposure to *The Guide* curriculum was necessary to achieve positive outcomes. To analyze this, the researcher coded participants into two groups: (a) participants who attended at least five of the six group sessions ( $n = 33$ ) and (b) participants who attended four or less group sessions ( $n = 27$ ) and analyzed differences using a RM-MANOVA. Comparing high attendance to low attendance, there was no significant difference in multivariate analysis between high attendance and low attendance (Pillai's Trace = .112,  $F_{(4, 55)} = 1.742$ ,  $p = .154$ , partial  $\eta^2 = .112$ ). However, there was a significant univariate difference between the two groups on measures of mental health stigma, with the difference between wave one and wave two of high attenders significantly larger than low attenders  $F_{(1, 58)} = 5.208$ ,  $p = .026$ , partial  $\eta^2 = .082$ ,  $d = .598$ ).

Although there are no previous MHL research studies that specifically analyze dosage of intervention to compare these findings to, the results may further support the concept that mental health stigma is a more persistent construct and less likely to change across time. Thus, while a shorter intervention may impact knowledge and help-seeking; increased exposure is necessary to influence stigma. Pinto-Foltz et al. (2011) and Swartz et al. (2016) further support this notion, with mental health stigma scores not significantly changing after a brief anti-stigma intervention (one to four hours). Further, Conrad et al. (2008) found that after a one-day intervention, stigma scores significantly changed from pre-test to post-test but were not sustained at three-month follow-up. Thus, with the exception of Spagnolo et al. (2008) who found significant change in stigmatizing attitudes after a one-hour intervention ( $t(506) = 4.86, p < .001$ ), longer interventions are associated with an increased change in mental health stigma.

Regarding mental health knowledge, help-seeking attitude, and hope there was not a significant difference among high and low attenders. These results also align with previous research. Brief interventions (e.g., Hart et al., 2016; Pinto-Foltz et al., 2011; Skre et al., 2013) have been successful at yielding significant changes in young people's mental health knowledge and help-seeking intentions. These findings indicate that even a brief MHL intervention can make a difference in terms of mental health knowledge and help-seeking; however, mental health stigma necessitates increased exposure.

### Exploratory Research Question Two

*The Guide* curriculum is intended for students in grades nine and ten. Due to the ethical concerns of withholding the intervention from interested Boys and Girls Club members, this study included participants spanning sixth through twelfth grades. Previous literature has indicated a

difference between younger adolescents and older adolescents in knowledge, help-seeking attitudes, and stigma (e.g., Reavley & Jorm, 2011; Rüsch et al., 2011; Skre et al., 2013). Therefore, the present study examined how the mental health literacy intervention influenced middle school ( $n = 33$ ) and high school ( $n = 27$ ) participants differently. Contrary to expectation, there was not a significant difference in multivariate analysis between middle and high school students (Pillai's Trace = .060,  $F_{(4, 55)} = .870$ ,  $p = .488$ , partial  $\eta^2 = .060$ ). However, high school students reported higher levels of mental health knowledge compared to middle school students ( $F_{(1, 58)} = 6.927$ ,  $p = .011$ , partial  $\eta^2 = .107$ ,  $d = .692$ ), while middle school students reported higher levels of help-seeking attitudes compared to high school students ( $F_{(1, 58)} = 7.844$ ,  $p = .007$ , partial  $\eta^2 = .119$ ,  $d = .735$ ).

Although research studies have seldom compared the MHL of middle school and high school populations; older age is associated with higher levels of mental health knowledge (Reavley & Jorm, 2011; Skre et al., 2013) in adolescent populations and increased help-seeking intention in adult populations (Rüsch et al., 2011). The findings in the present study support previous findings that indicate older age is associated with increased levels of mental health knowledge. However, middle school students reporting higher levels of help-seeking attitudes compared to high school students, diverges from previous research which indicates older age is correlated with increased propensity to seek help (Rüsch et al., 2011). Further, the underlying premise of MHL is that increased exposure and knowledge of mental health aids help-seeking behavior (Jorm et al., 1997). These findings may speak to the developmental stage of adolescence as a period characterized by increasing independence and self-sufficiency (Erikson, 1968). While older adolescents may have increased levels of knowledge, they may be less likely to seek help and instead rely on their own ability to cope with a mental health problem. This propensity to rely

on self is consistent with previous studies that indicate adolescents have a high reliance on self to solve problems (Rickwood et al., 2005, 2007) and tend to believe “getting through it” on their own is a sign of inner strength (Elkington et al., 2012). Overall, these findings support the need for mental health literacy interventions among adolescent populations. However, interventions in the high school setting may demand a heightened emphasis on the importance of seeking help.

### Secondary Research Question (Wave One to Wave Three)

Follow-up procedures are an important part of intervention studies, increasing the overall rigor of the research design and providing information on how participants were influenced after the intervention ends (Gall et al., 2007). The secondary research question in the present study examined the sustainability of the intervention at one-month follow-up. The researcher implemented a RM-MANOVA to measure if there were significant changes from wave one to wave three (one-month follow-up). Multivariate within subjects analysis yielded a significant change between wave one to wave three (Pillai's Trace = .604,  $F_{(4, 27)} = 10.297$ ,  $p < .001$ , partial  $\eta^2 = .604$ ). there was a statistically significant change in mental health knowledge ( $F_{(1, 59)} = 28.804$ ,  $p < .000$ , partial  $\eta^2 = .490$ ), help-seeking attitudes ( $F_{(1, 59)} = 8.240$ ,  $p = .007$ , partial  $\eta^2 = .215$ ), and personal mental health stigma ( $F_{(1, 59)} = 10.996$ ,  $p = .002$ , partial  $\eta^2 = .215$ ) from wave one to wave three. Each of these measures yielded large effect sizes ( $d = 1.96$ ,  $1.04$ , and  $1.21$  respectively), indicating large effects from wave one to wave two, sustained scores at one-month follow-up. Further, hope did not significantly change from wave one to wave three ( $F_{(1, 59)} = .543$ ,  $p = .467$ , partial  $\eta^2 = .018$ ). These results parallel the findings from wave one to wave two, demonstrating significant, sustained change in mental health knowledge, help-seeking attitudes, and personal mental health stigma and no significant changes in measures of hope. It should be noted that there

was no statistically significant multivariate change from wave two to wave three on the four measures (Pillai's Trace = .064,  $F_{(4, 27)} = .462$ ,  $p = .763$ , partial  $\eta^2 = .064$ ). There is one previous study that investigates the sustainability of *The Guide* curriculum on adolescents' measures of mental health knowledge and mental health stigma. McLuckie et al. (2014) examined scores at 3-month follow-up ( $N = 265$ ) after implementation of *The Guide* curriculum. Regarding knowledge, researchers found that knowledge scores remained significantly higher than at baseline ( $p < 0.001$ ,  $d = 0.73$ ). Similarly, attitude (stigma) measurements decreased but remained statistically significant at follow-up ( $p < 0.07$ ,  $d = 0.18$ ). Researchers did not measure help-seeking. The results of the present study further support the claim by McLuckie et al. (2014) that *The Guide* curriculum produces sustained improvements in adolescent MHL. However, for the present sample, effect sizes were larger for both mental health knowledge ( $d = 1.96$ ) and mental health stigma ( $d = 1.04$ ) compared to the McLuckie study. Lower baseline scores may explain this; McLuckie et al. (2014) reports an average score of 53% on the MHKAS compared to the present study with an average score of 45% at baseline. The lower baseline score may be reflective of the cultural and educational differences between the United States and Canada, age and developmental level of participants, and setting (school versus community organization). However, it is also important to note that sample size impacts effect size.

Additional studies have examined the sustainability of alternative MHL interventions with mixed results. In contrast to the present study, Conrad et al. (2009) did not find sustained change at three-month follow-up on measures of mental health stigma after a brief one-day mental health education program ( $p = .684$ ), despite finding significance at post-test ( $p < .001$ ). Similarly, Pinto-Foltz et al. (2011) investigated a one-hour mental health literacy intervention and found no significant changes in mental health stigma at post-test, four-week follow-up, and eight-week

follow-up. However, researchers did find significant changes at follow-up on measures of mental health knowledge ( $p = .03$ ).

Longer interventions may be more advantageous for sustained results. For example, Skre and colleagues (2013) implemented a three-day MHL intervention and found sustained results at three-month follow-up on measures of mental health knowledge ( $p_{\text{intervention}} < .001$ ;  $p_{\text{control}} = .27$ ) and mental health stigma for the intervention group compared to the control group ( $p_{\text{intervention}} < .001$ ;  $p_{\text{control}} = .02$ ) among a sample of 1,070 Norwegian high school students. Further, Perry et al. (2014) implemented a five to eight week long intervention and found students in the intervention groups improved significantly more on measures of mental health knowledge ( $t(494) = 2.87$ ,  $p < .05$ ) and mental health stigma ( $t(522) = 2.67$ ,  $p < .05$ ) compared the control conditions. Thus, interventions spanning three or more days may be more likely to produce sustainable change at follow-up compared to brief interventions.

### Limitations

Several limitations warrant consideration when interpreting the results of the present investigation and informing future research. Specifically, limitations regarding: (a) research design; (b) sampling; (c) instrumentation; and (d) treatment are explored below.

### Research Design

Quasi-experimental designs pose inherent limitations in terms of internal and external validity. The lack of control group poses concerns, as change across time cannot specifically be interpreted as direct effect of the mental health literacy intervention. Further, due to



the ethical concerns of withholding a psychoeducational intervention from an at-risk group (ACA, 2014), all participants who expressed interest and were eligible for the study were able to participate. This lack of non-random assignment poses threats to statistical conclusion validity.

The MHL groups were implemented by eleven different group facilitators. Although considerations were taken to increase treatment fidelity (e.g., training, standardized curriculum, and record keeping), the individual characteristics of the group facilitators may have had an effect on group outcomes. Additionally, each club had unique group dynamics and developmental needs. The group facilitators adapted the curriculum as needed to fit the needs of the participants (e.g., incorporating more physical movement, tailoring vocabulary to younger adolescents, allowing for more discussion on sensitive topics, etc.). Several of the sessions extended past the allotted 75 minutes or ended early to accommodate participants and individual club events (e.g., field trips, transportation issues, holiday parties). When a session ended early due to a conflicting event, the facilitators extended the next session to cover all material that was missed. The researcher was present approximately three to four times at each individual club to provide direct supervision to counselors-in-training. The researcher's presence may have biased results and impacted the behavior of participants. Moreover, the novelty effect is of particular relevance to this study, as this intervention was outside the norm for Boys and Girls Club. Several participants expressed an eagerness to be involved because the researcher was affiliated with a large local university. Thus, the novelty of the research may have influenced participation and response. Finally, the present study occurred over the course of ten weeks; therefore, maturation of participants could have influenced results. Specifically, if any participants were exposed to additional mental health education (e.g., movies, classroom curriculum, outside counseling), it could potentially influence findings.

## Sampling

The present study purposefully partnered with Boys and Girls Clubs of America, an organization dedicated to serving marginalized, at-risk youth. Therefore, the sample does not generalize to the population at large. Further, the six participating clubs were conveniently chosen after club directors expressed a willingness to host the intervention. Consequently, these clubs may have differed in comparison to other clubs whose directors did not wish to participate in the study. Participant attrition was an issue in this study. A total of 78 participants completed pre-test measures; 60 participants completed post-test measures; and 31 participants completed follow-up measures. From wave one to wave two participants dropped out of the study due to a) conflicting extracurricular activities; (b) family situations; (c) illness; or (d) unknown reasons. However, six of the 18 participants who left the study were members of Club B and left the study after the first group session. In this regard, group dynamics may have influenced attrition, with participants choosing to drop out because their friends were electing to leave the study. From wave two to wave three, a significant number of participants were absent due to close proximity of data collection to the end of the academic semester and holiday break. The sizable attrition and small sample make it difficult to generalize the results of the study.

## Instrumentation

This investigation relied on four self-report measures. Although each instrument yielded adequate internal consistency, self-report assessments have inherent limitations, including the possibility of social desirability bias and lack of self-awareness. Further, the SSMIS-SF and GHSQ are not specifically tailored towards children and adolescent populations. Although the

researcher took time to explain each assessment and provided time for questions, it is possible that participants misinterpreted parts of the assessments due to cognitive developmental differences. Participant fatigue was also an area of concern, particularly because groups occurred after school. Several participants expressed being tired while completing assessments. Finally, the assessments were given three times, therefore, participants may have experienced desensitization at post-test and follow-up.

### Treatment

Participants' response to the intervention may have been impacted by contextual factors, including a recent highly publicized incident of school violence and subsequent statewide initiative to promote mental health. As such, participants may have experienced heightened mental health stigma and a belief that mental health problems are associated with violence. Further, participants were from primarily from ethnic and racial minority backgrounds and lived in economically disadvantaged communities. As such, the way this sample of participants interacted with the curriculum was unique and adaptations were made to the curriculum to increase cultural relevance. For example, group facilitators discussed with participants regarding how culture impacts our beliefs about mental health. The researcher and facilitator found the cultural appropriateness of *The Guide* curriculum as a significant limitation. Although adaptations were made, participants may have found the curriculum less relevant than previous studies of dissimilar populations.

## Implications and Recommendations for Future Research

Regardless of the abovementioned limitations, this study provides important implications in terms of counselor education, counseling practice, public policy, and future research.

### Implications for Counselor Education

Counselor educators are responsible for disseminating research and effective counseling strategies to students. Further, accreditation bodies, such as The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016), call for counseling programs to emphasize evidence-based strategies and techniques for prevention alongside intervention. The results of this study demonstrate MHL as a beneficial strategy for mitigating mental health stigma, increasing awareness, and encouraging help-seeking among diverse adolescent populations. Counselor educators who have a thorough understanding of MHL can impart this information to students and in turn mitigate barriers to mental health treatment and increase help-seeking in the general population.

Moreover, the present study has relevance for specific counseling courses. In an *Orientation to Professional Counseling* course, students learn about how the field of counseling is unique from other disciplines, with an emphasis on wellness and human development (CACREP, 2016). MHL's focus on knowledge and prevention, as a means of decreasing individual, familial, and societal suffering, is a particularly pertinent framework to promote advocacy and prevention efforts. Further, MHL provides a blueprint for addressing mental health stigma in the counseling setting. Instructors of *Skills and Techniques* can introduce the framework of MHL and explain the importance of assessing and addressing client's mental health knowledge, stigma, and beliefs

about help-seeking at the start of the counseling relationship. Findings also provides knowledge surrounding adolescent mental health and development, particularly relevant to the *Lifespan Development* course. Specifically, the findings that older adolescents have *higher* levels of mental health knowledge and *lower* levels of help-seeking compared to younger adolescents, underscore developmental themes of increasing cognitive complexity and independence in adolescence (Erikson, 1968). In summary, counselor educators' integration of MHL into the current counseling curriculum can aid students' understanding of prevention, advocacy, and human development to the field of counseling.

## Implications for Counseling

### Implications for Mental Health Counselors

Most individuals who need mental health treatment, will never seek counseling services (Merikangas et al., 2010; Waitzfelder et al., 2018). Thus, counselors advocate for mental health at a broader, societal level. Counselors do this in a multitude of ways including community advocacy, involvement in professional service organizations, and taking on the role of consultant for businesses and organizations looking to promote mental health and wellness. MHL provides a framework for counselors to continue this important work. At baseline, participants in the present study had relatively low levels of mental health knowledge and help-seeking attitudes and moderate levels of mental health stigma. These findings are consistent with previous research which demonstrates adolescents have unsophisticated views of mental health and are reluctant to seek help, even when facing a serious mental health issue (Wahl et al., 2012; Yap et al., 2011). Taking these findings into account, mental health counselors can engage in brief mental health

literacy interventions in schools, community agencies, and the private sector to encourage healthy coping, help-seeking and dispel stigmatizing beliefs. In the individual counseling setting, mental health counselors can address client resistance by dispelling beliefs endorsed by adolescents in the present study (i.e., *Most people with mental illnesses are dangerous; Most people with mental illnesses are to blame for their problems*). In this regard, mental health counselors can help clients process feelings of personal stigma and shame surrounding diagnosis and treatment and provide psychoeducation surrounding mental health.

To holistically address an individual's MHL, counselors need to prioritize understanding a client's worldview including culturally embedded values. In the present study, adolescents frequently expressed pride in dealing with problems on one's own and a reluctance to burden their family members by disclosing mental health challenges. Thus, mental health stigma was only one component affecting help-seeking; culture also plays a significant role in help-seeking. Mental health counselors must also address values such as self-sufficiency and resilience that may benefit clients up until a mental health crisis occurs.

### Implications for School Counselors

School counselors support the social and emotional development of the students they work with through a comprehensive evidence-based school counseling program (American School Counseling Association (ASCA), 2012). Rates of mental health disorders among children and adolescents have increased in recent years and most students do not receive adequate mental health support (CDC, 2013; CDC, 2018). Accordingly, ASCA (2015) has called for school counselors to deliver a core curriculum that “proactively enhances awareness of mental health; promotes positive, healthy behaviors; and seeks to remove the stigma associated with mental health issues

(p. 57).” Hence, school counselors have a responsibility to address MHL in the school counseling curriculum. However, classroom teachers facilitate most mandated mental health education (Lou, 2018). Considering school counselors have distinct training related to mental health and trauma (CACREP, 2016), they are uniquely qualified to implement MHL curricula.

The findings of the present study demonstrate how a psychoeducational MHL curriculum can significantly change adolescents’ mental health knowledge, help-seeking attitudes, and decrease mental health stigma over time. Notably, students who attended four or less weeks of the intervention demonstrated significant changes in mental health knowledge and help-seeking, underscoring the importance of even brief MHL interventions. Moreover, the sample in the present study consisted of youth from economically disadvantaged backgrounds. Mental health knowledge scores were lower at baseline compared to previous research studies; however, participants experienced similar or greater gains in mental health knowledge. Thus, the findings demonstrate the applicability of the MHL curriculum to students from diverse racial, ethnic, and socioeconomic backgrounds. Further, non-significant differences between middle and high school students at waves two and three indicate the curriculum can be successfully adapted to meet the needs of middle school and high school students. Therefore, school counselors can implement *The Guide* curriculum in as few as four classroom sessions and tailor the intervention to students of diverse backgrounds.

### Implications for Advocacy and Public Policy

Federal, state, and local legislatures are prioritizing accessible mental health care for children and adolescents; evidenced by the recent passing *21st Century Cures Act* (H.R. 34), which promotes early mental health intervention and research, and state mental health

initiatives, including mandated mental health education in New York and Virginia public schools (Kaufman, 2018). Although these efforts are promising, it is essential that adopted strategies and interventions are evidence-based and culturally responsive. Poverty disproportionately impacts racial and ethnic minority youth, leading to increased persistence and severity of mental health challenges and barriers to care (American Psychological Association, 2017; Budhwani, Herald, & Chavez-Yenter, 2015). The present study demonstrates how a brief MHL intervention can influence mental health knowledge, stigma, and help-seeking among a sample of economically disadvantaged youth. Currently, the states of New York and Virginia do not mandate a specific MHL curriculum; instead, school districts are instructed to consider their student population when selecting a mental health curriculum. Further, teachers are responsible for implementing the MHL curriculum, regardless of their educational and professional background (Lou, 2018). As such, the promising mental health initiatives remain fragmented, lacking the structure and resources needed to succeed.

The present study furthers the field of public policy by investigating the influence of a MHL curriculum, *The Guide*, among a sample of adolescent members of Boys and Girls Clubs of America, a community organization dedicated to serving economically vulnerable, at-risk youth. The findings of this study support the notion that mental health education programs can make a difference in the lives of children from the most vulnerable backgrounds by increasing mental health knowledge, dispelling mental health stigma, and encouraging help-seeking. Although recent mental health initiatives are well-intentioned; policy without a plan is reckless. As such, policy makers must consider studies such as the present which demonstrates the efficacy of a standardized MHL curriculum, implemented by trained professionals, targeting economically disadvantaged at-risk youth.



## Research Implications

This research study is novel compared to previous mental health literacy in a several ways including: (a) inclusion of a sample of youth from economically disadvantaged backgrounds; (b) occurring in a community-based setting; and (c) counselor implementation of curriculum. Further, this research study included multiple waves of data collection and occurred at six different intervention sites. However, limitations of the present study pave the way for future research endeavors. A larger sample size of participants and varying diversity in terms of race, ethnicity, geographical region, and gender would enhance generalizability. Moreover, the present study was quasi-experimental; randomized controlled trials with similar populations would increase the ability to make causal claims about *The Guide* intervention.

The current study was implemented in an after-school community-based setting in a largely urban metropolitan area. Future research that examined the mental health literacy of adolescents living in a rural low-SES environment would be beneficial. Further, the framework of MHL can be implemented in a wide variety of settings including churches, schools, and community centers. Considering familial and cultural values influence an individual's perception of mental health, future MHL research may benefit from a family systems perspective. In the present study, participants endorsed parent or guardian as the most likely source of help for both emotional/personal problem and suicidal thoughts across all three waves of data collection. However, during the intervention participants frequently expressed hesitation to talk with their parents about their mental health challenges for fear of burdening them. Therefore, adolescents may *want* to talk to their parents first and foremost but prevent themselves from doing so. Family based MHL interventions may be an avenue for addressing this apprehension.

The sample in this study consisted of adolescents from racial and ethnic minority backgrounds. Adolescents from racial and ethnic minority backgrounds frequently face barriers to mental health including increased mental health stigma, high reliance on self, and lack of accessible treatment options (Barker, 2005; Nestor et al., 2016). The present study demonstrated that a brief MHL curriculum can significantly influence mental health knowledge, mental health stigma, and help-seeking attitudes among a sample of racial and ethnic minority youth. Considering the increased persistence and severity of mental health challenges among minority populations (American Psychological Association, 2017; Budhwani, Herald, & Chavez-Yenter, 2015), it is crucial that the field of MHL prioritizes inclusive, culturally responsive preventative interventions.

Although *The Guide* curriculum was intended to be wide-ranging, there were several areas where the researcher and group facilitators found that the curriculum could be strengthened. For example, the videos and supplemental videos primarily featured Caucasian adolescents. Further, discussions regarding culture were non-existent in *The Guide* curriculum. Participants expressed culturally embedded values including self-sufficiency (e.g., dealing with problems on one's own) and respecting elders (e.g., not burdening one's parents with one's problems) as barriers to help-seeking. The facilitators adapted the curriculum to be more culturally responsive. However, future adaptations of *The Guide* would benefit from an increased multicultural emphasis. Specifically, representation of racial and ethnic minority youth in pictures and supplied videos, discussion questions pertaining to culture and values, and a more thorough discussion of help-seeking options for economically disadvantaged youth would benefit future versions of *The Guide* curriculum.

Finding psychometrically sound MHL instruments tailored to youth was a challenge for the present study. Although the instruments in the present study demonstrated adequate internal

consistency across waves; the researcher explained each assessment and answered questions pertaining to vocabulary. For example, several participants asked for the definition of “adolescent,” and “intention,” words included in the MHKAS and GHSQ. Moreover, several existing MHL scales have a narrow definition of help-seeking, failing to consider how economic vulnerability and accessibility pose barriers to help-seeking. Future research directed towards developing a comprehensive, developmentally appropriate measure of MHL would benefit subsequent research studies.

The present study investigated the construct of hope as an exploratory variable that may change over the course of the intervention. Considering that there was no significant change in measures of hope, future studies may benefit from adopting a dual factor model of mental health literacy, prioritizing decreasing mental health stigma while also fostering well-being. Although *The Guide* curriculum incorporates wellness activities such as box breathing, the majority of the intervention is spent on stigma, diagnosis and treatment options. Incorporating positive psychology tools such as self-compassion, gratitude, and strength-finding into MHL programs may yield enhanced coping and increased well-being.

### Chapter Five Summary

This study investigated if a MHL intervention changed adolescents’ measures of mental health knowledge, mental health stigma, hope, and help-seeking attitudes over time. Further, the researcher investigated how the MHL intervention influenced middle school and high school students differently and how the dosage of intervention, measured through attendance, influenced changes across pre-test (wave one) and post-test (wave two). Main findings include a significant difference on measures of mental health knowledge, mental health stigma, and help-seeking

attitudes from wave one and wave two, with findings sustained at wave. There were no significant differences in measures of hope. High attendance participators had a significantly larger difference between wave one and wave two on measures of mental health stigma compared to low-attendance participators. Finally, high school students had higher levels of mental health but lower levels of help-seeking at baseline compared to middle school students.

There is a common parable in public health called “The Upstream Story.” The story takes place at the bottom of a waterfall where hundreds of people are frantically working to save people who have fallen down the waterfall and are drowning. One person looks up and sees the never-ending stream of people and decides instead to go upstream to see why so many people are falling into the river. They notice that some bridges along the river are stable while others are falling apart and causing those crossing them to fall. Mental health literacy illustrates upstream prevention. The more young people, particularly those who are economically disadvantaged, know about mental health including signs and symptoms of mental health disorders, avenues for positive coping, and help-seeking options, the more equipped they will be to manage and foster their own mental health and wellness.

APPENDIX A:  
IRB APPROVAL



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Jayna Mumbauer and Co-PIs: Sejal Barden, Viki Price Kelchner**

Date: **September 14, 2018**

Dear Researcher:

On 09/14/2018 the IRB approved the following human participant research until 09/13/2019 inclusive:

Type of Review: UCF Initial Review Submission Form  
Expedited Review

Project Title: Promoting Mental Health Education in  
Adolescence: Implementation of a Mental Health Literacy  
Curriculum in the After-School Setting

Investigator: Jayna Mumbauer

IRB Number: SBE-18-14077

Funding Agency:

Grant Title:

Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

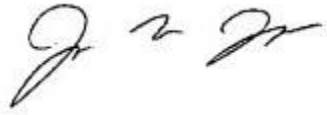
If continuing review approval is not granted before the expiration date of 09/13/2019, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

This letter is signed by:

A handwritten signature in black ink, appearing to be 'J. R. Jacques', written in a cursive style.

Signature applied by Racine Jacques on 09/14/2018 02:09:34 PM EDT

Designated Reviewe

APPENDIX B:  
INFORMED CONSENT



## **Investigating a Mental Health Literacy Curriculum in an After-School Setting**

### ***Informed Consent***

#### **Principal Investigator:**

Jayna Mumbauer, MA, Doctoral Student at the University of Central Florida

#### **Sub-Investigators and Faculty Supervisors:**

Drs. Sejal Barden and Viki Kelchner

#### **Investigational Site(s):**

Boys and Girls Club

#### ***Sponsor:***

University of Central Florida, Department of Counselor Education and School Psychology,  
Counselor Education

#### ***Why is my child being invited to take part in a research study?***

Your child is being invited to take part in a research study because he or she is currently attending a Boys & Girls Club in Central Florida.

#### ***What should I know about a research study?***

Someone will explain this research study to you.

Whether or not your child takes part is up to you.

You can choose not to allow your child to take part.

You can agree to let your child take part and later change your mind.

Your decision will not be held against you or your child.

You can ask all the questions you want before you decide.

#### ***Who can I talk to?***

If you have questions, concerns, or complaints, or think the research has hurt your child, talk to the research team at University of Central Florida

Jayna Mumbauer,

Doctoral Student and Principal Investigator

770-757-1309

[Jaynamumbauer@knights.ucf.edu](mailto:Jaynamumbauer@knights.ucf.edu)

Viki Kelchner, PhD,

Assistant Professor at University of Central Florida and faculty advisor

803-730-4351

[Viki.Kelchner@ucf.edu](mailto:Viki.Kelchner@ucf.edu)

This research has been reviewed and approved by an Institutional Review Board (“IRB”). You may talk to them at 407-823-2901 or [irb@ucf.edu](mailto:irb@ucf.edu) if:

Your questions, concerns, or complaints are not being answered by the research team. You cannot reach the research team.

You want to talk to someone besides the research team.

You have questions about your child's rights as a research subject.

You want to get information or provide input about this research.

***Why is this research being done?***

Researchers have identified *mental health literacy*, knowledge and beliefs about mental health as a primary factor in protecting against mental health distress and increasing positive coping. The purpose of this study is to examine the effects of a mental health literacy curriculum for adolescents in Central Florida. This study will seek to examine the effects of the curriculum on levels of mental health knowledge, stigma, hope, and help-seeking attitudes. Potential benefits of this research include an increased knowledge of mental health, increased hope, and positive attitudes towards help-seeking.

***How long will the research last?***

We expect that students will be in this research study for six weeks (1.25 hours per week).

***How many people will be studied?***

We expect about 100 adolescents (ages 13-18) from six Boys & Girls Clubs. The maximum number of participants will be 140.

***What happens if I say yes, I want my child to be in this research?***

Your child will participate in a group that meets once per week for six consecutive weeks. This group will be scheduled at a time and day that the Boys & Girls club director finds most convenient. The goal of the resource is to help adolescents learn about topics relating to mental health and skills for coping, including seeking professional help and using positive mental health coping skills. We will give your child five assessments which measures mental health literacy at three times (a) first group meeting (c) final group meeting and (d) two weeks post final group meeting. The study will begin in early October and continue through November.

The educational lessons will be facilitated by counselors-in-training at the University of Central Florida. A Boys & Girls Club staff member will also be present during the curriculum. During the six weeks, participants will engage in discussions, activities, and learn about mental health and wellbeing. The study will utilize a mental health curriculum resource that has been shown to improve students' mental health knowledge in a variety of program evaluations and research studies. The four goals of the curriculum are to: optimize and maintain good mental health, understand mental disorders and their treatments, decrease stigma, and enhance help-seeking efficacy, including promoting self-care.

***What are my responsibilities if I take part in this research?***

If your child takes part in this research, your child will be responsible to attend six classes of mental health education. These classes will take place on Wednesday afternoons.

***What happens if I do not want my child to be in this research?***

Participation in research is completely voluntary. You can decide to allow your child to participate or not to participate. If you decide your child will not participate, they can attend and participate in all of the other activities at the Boys & Girls Club.

***What happens if I say yes, but I change my mind later?***

You can have your child leave the research at any time it will not be held against you or your child. If you decide to have your child leave the research, contact the investigator so that the investigator can ensure that your child no longer participates in the research study. If you decide to no longer participate, the collected data will be destroyed.

***Is there any way being in this study could be bad for my child?***

There are no reasonably foreseeable risks involved in taking part in this study. Because the purpose of this mental health resource is to discuss issues related to mental health, participants may experience subjective discomfort. Participants will be told that what they share is up to their own discretion. Additionally, trained counselors-in-training who are part of the research team will process with participants any discomfort that may arise during the study and if necessary refer students to additional support through community counseling referrals.

***Will being in this study help my child in any way?***

We cannot promise any benefits to your child or others from taking part in this research. However, we expect that this intervention will increase students' knowledge of mental health and their positive coping. This curriculum is designed to be engaging and previous research studies have found that students enjoy participating.

***What happens to the information collected for the research?***

Your child's data will be deidentified and stored at the University of Central Florida in a locked office in a locked filing cabinet and destroyed after 5 years. Efforts will be made to limit the use and disclosure of your child's personal information, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your child's information include the IRB and other representatives of this organization.

***Additionally, if a student were to disclose abuse, neglect, or their intentions of hurting themselves or someone else this information would be disclosed to appropriate authorities.***

Your signature documents your permission for the named child to take part in this research.

---

Printed name of child

---

Signature of parent or individual legally authorized to  
consent to the child's general medical care

---

Date

- ☐ Parent
- ☐ Individual legally  
authorized to consent  
to the child's general  
medical care (See note  
below)

---

Printed name of parent or individual legally authorized  
to consent to the child's general medical care

**Note:** Investigators are to ensure that individuals who are not parents can demonstrate their legal authority to consent to the child's general medical care. Contact legal counsel if any questions arise.

APPENDIX C:  
SAMPLE ACTIVITIES

## Module One: Activity Three

### Video – Digital Story Telling (10 minutes)

Digital Story Telling is the use of a video made by a person to tell others about something important in that person's life. In this module, we have placed a number of these digital stories in which youth living with a mental illness have told their story.

#### Purpose:

- To provide students with an opportunity to learn that a person who has a mental illness is a person. The illness does not define who they are.

#### How-to:

- 1) Set up the online video to show the class as a whole or arrange small groups at computers to view Digital Story Telling.
- 2) Lead a classroom discussion.

The support materials are located on:

<http://teenmentalhealth.org/curriculum/modules/module-1/>

The password is: **t33nh3alth**

Prior to teaching this module, review each of the videos yourself and choose one or two videos most appropriate for your class. Show that one video to the entire class. Support discussions by asking: What is/are the key message(s)? How is the person who is telling the story trying to get their message across? How does what you heard change your ideas about a person living with a mental illness?

## Module Two: Activity Two

### Language Matters (25 minutes)

#### Purpose:

- To help understand how the words that we use can help us better understand what mental health state category we or others are in.
- To learn how to use specific words to more clearly describe how we are feeling.

#### How-to:

- 1) Provide the students with the Handout (Understanding the Words) which is found below and in the Resource Appendix. Give the class about 10 minutes to read the handout.
- 2) Provide the class with the following list of words (found below), which all describe emotional states.
- 3) Prepare four sections along the wall of the classroom (or four different flip charts) with each titled as one of the four different mental health states (no distress, problem, or disorder, mental distress, mental health problem, mental disorder).
- 4) Have each student write each word on a sticky note corresponding to the mental health state category that they think best captures the meaning of the word.
- 5) Once they are finished, have students place their words in the mental health state categories as you have prepared them.
- 6) Discuss which words are most commonly used for each category and why some words may be less appropriate for certain categories.

### Word List Describing Various Emotional States

Upset	Disgusted	Heartbroken	Forlorn
Annoyed	Demoralized	Down	Pensive
Sad	Angry	Sorry	Thoughtful
Unhappy	Bitter	Sorrowful	Disconsolate
Disappointed	Blue	Glum	Distressed
Despondent	Depressed	Dejected	Pessimistic
Mournful	Despairing	Depression	Irritated

*Note: Here the word "Depression" would be used to denote the mental illness of Depression while the word "depressed" would be used to denote a negative emotional state which may better fit in the category of mental health problem.*

## Module Three: Activity Three

### Discussion Groups (25 minutes)

#### Purpose:

- To provide information about various common mental disorders.
- To have students learn about these disorders and share their learning with others.

#### How-to:

- 1) Form the class into eight groups. Assign each group one of the mental disorders and distribute the appropriate Fact Sheet for that disorder to each group member. Provide each group with the Reporting Page for the disorder.
- 2) Explain to students that a jigsaw puzzle activity will be used during this lesson. This means that students will work in small groups and will become resource persons about one mental illness (one piece of the jigsaw). Each group member will read the assigned disorder Fact Sheet. Then each group will collaborate to complete their Reporting Page. After completing the Reporting Page on their specific illness together, they will choose a group reporter who will share their information with the rest of the class (Activity #5).
- 3) Give the groups time to read the Fact Sheets and direct them to the online “TMH Speaks ... Mini Mags” series at <http://teenmentalhealth.org/product/teenmentalhealth-speaks-magazine/>. When they have finished reviewing, ask each group to complete their Reporting Page on the mental disorder they were assigned.
- 4) Have each group complete the handouts to share with others during the next activity.



## Module Four: Activity One

### Video Discussion Sheet (30 minutes)

#### Purpose:

- To explore the impact of mental illnesses on a young person.
- To look specifically at the experience of each character in the video through small group work.

#### How-to:

- 1) Inform the class that the videos they are about to see were created by young people who have experienced mental illness, and that they are about their experiences.  
  
Before showing the videos, divide the class into groups and distribute the video activity sheet. Allocate each group one of the videos. Give the students a few minutes to read through the questions on the video discussion sheet. Explain that each group will focus specifically on one video.
- 2) Each group should play their video.
- 3) While in their small groups and after watching the video, have each group member complete their discussion sheet. After everyone has completed their own discussion sheet ask each group to talk about what they have written and to create a single group discussion sheet that one of the group members will then share with the class as a whole.
- 4) Bring the groups back together and ask a member of each group to summarize the discussion from each of the small groups for the class.

Discussion of the video may raise the issue of youth suicide. While this discussion is appropriate within the broader context of mental illness, it is important that the discussion not become focused on suicide. Any discussion of suicide should:

- avoid portraying suicide as romantic, heroic or tragic;
- avoid increasing knowledge about methods of suicide;
- emphasize the importance of seeking help and of everyone's responsibility to tell a trusted adult if a friend mentions thoughts of suicide, even if that person asks for it to be kept a secret.

Thoughts about suicide are common in adolescents. However, persistent or recurring thoughts about suicide signal that help is needed. It is useful to make sure your students understand that persistent or recurring thoughts about suicide is a signal to them that they need some extra help, and if they are experiencing this they should talk to the school counselor.

## Module Five: Activity One

### Getting Help

- To describe a range of scenarios in which it would be important to tell or refer a problem to an appropriate adult.

### How-to:

- 1) Explain to students that they will be engaging in a problem-solving lesson in which they can speculate about the possible actions they could take in a range of situations involving young people in distress. They will explore the scenarios using a game.
- 2) Ask students to arrange themselves into groups of four to six. Get them to sit in a circle (on the floor might be easiest).
- 3) Hand out the set of cards from the Activity Sheet: What if... scenarios. Ask each group to lay out their What if... cards in a circle with enough room inside the circle to spin a bottle or pen.
- 4) In turn, each of the participants takes a spin, and read out the card the bottle points to. The person whose turn it is speculates first about what to do in such a situation, then others help out by adding their views, questions or challenges.
- 5) When they have finished discussing the scenarios, ask the class to come back together and pose the following questions:
  - Were there any disagreement in the groups about what was best to do?
  - Which was the scenario most likely to actually happen out of those you discussed?
  - Which do you think would be the hardest scenario to deal with if it happened to you or a friend or family member?
  - What sorts of fears or concerns would stop people from seeking help or telling someone else in these situations?
  - What kinds of things would motivate someone to seek help or tell someone their concerns in the situations you discussed?
- 6) Distribute "Something Is Not Quite Right" checklists and read them through with the class.

Remind students that communicating their concerns about coping and dealing with mental health and other difficulties is really hard and takes a lot of courage.

It's a good idea to anticipate potential student disclosures and to be prepared to deal properly with these situations. Ask the school social worker to be on hand if possible.

## Module Six: Activity Three

### Modulating the Intensity of the Stress Response (10 minutes)

#### Purpose:

- To help students differentiate positive from negative activities that they can do to lessen the intensity of the stress response.
- To review the Box Breathing technique of stress response modulation.

#### How-to:

- 1) Hand out the Box Breathing cards to each student. Remind them that this is a technique that they have been doing at the start of each class in this course and encourage them to keep using this technique to help modulate their own stress response.
- 2) Have the Coping with Stress cards available in an easily accessible location in the room.
- 3) Have flip chart papers titled Positive Coping and Negative Coping hung on different sides of the class room. Have tape available for posting the cards on the flip charts.
- 4) Ask students to pick up two Coping with Stress cards each and to post them on the flip chart paper categories in which they best fit – Positive Coping or Negative Coping.
- 5) Keep the posted lists up in the classroom for one week following the end of this activity.

One useful technique to help with dealing with stress is Box Breathing. It takes about 15 minutes to learn and once mastered can be applied unobtrusively and quietly – ideal for a classroom situation. This technique is described below. Before beginning the How Do You Cope exercise would be a good time to teach the students Box Breathing.

Box Breathing can help your heart rate return to normal, which helps you to relax. Here's how you do it:

If possible, sit and close your eyes. If not, just focus on your breathing.

- Step 1: Inhale your breath (preferably through your nose) for 4 seconds.
- Step 2: Hold your breath for 4 seconds. You're not trying to deprive yourself of air; you're just giving the air a few seconds to fill your lungs.
- Step 3: Exhale slowly through your mouth for 4 seconds.
- Step 4: Pause for 4 seconds (without speaking) before breathing again.

Repeat this process as many times as you can. Even 30 seconds of deep breathing will help you feel more relaxed and in control.

APPENDIX D:  
FIDELITY TEST

## Fidelity Test: *The Guide* Curriculum

1. A phobia is an intense fear about something that might be harmful (such as heights, snakes, etc.)
  - a. true
  - b. false
2. Useful interventions for adolescent mental disorders include BOTH psychological and pharmacological treatment.
  - a. true
  - b. false
3. Mental distress can occur in someone who has a mental disorder.
  - a. true
  - b. false
4. Stigma against the mentally ill is uncommon in the USA.
  - a. true
  - b. false
5. Substance abuse is commonly paired with a mental disorder.
  - a. true
  - b. false
6. The most common mental disorders in teenage girls are eating disorders.
  - a. true
  - b. false
7. The stresses of being a teenager are a major factor leading to adolescent suicide.
  - a. true
  - b. false
8. Three of the strongest risk factors for teen suicide are: romantic breakup, conflict with parents, and school failure.
  - a. true
  - b. false
9. Schizophrenia is a split personality.
  - a. true
  - b. false
10. A depressed mood that includes a drop in school grades and lasts for a month or longer in a teenager is very common and should not be confused with a clinical Depression that may require professional help.
  - a. true
  - b. false
11. A Generalized Anxiety Disorder usually arises from being burned out by stressful events.



24. Panic Disorder is a type of Anxiety Disorder.

- a. true                      b. false

25. Medications called “anti-psychotics” are helpful in treating some of the symptoms of Schizophrenia.

- a. true                      b. false

26. A delusion is defined as seeing something that is not real.

- a. true                      b. false

27. Lack of pleasure, hopelessness and fatigue can all be symptoms of a clinical Depression.

- a. true                      b. false

28. Nobody with Schizophrenia ever recovers to the point where they can live a positive life.

- a. true                      b. false

29. People with Mania may experience strange feelings of grandiosity.

- a. true                      b. false

30. Mental disorders are psychological problems that are often caused by poor nutrition.

- a. true                      b. false

APPENDIX E:  
PROGRESS NOTE



## Progress Note Sample

Name:

Date:

Module: *The Stigma of Mental Illness*

Learning Objective: In this module students will learn:

- To understand mental health stigma and the impact of stigma on help seeking
- To explore the differences between the myths and realities of mental illness
- About some ways of overcoming stigma and promoting a realistic understanding of mental illness

Please circle the completed activities:

Activity 1: Defining Stigma

Activity 2: Powerpoint Presentation

Activity 3: Digital Storytelling

Activity 4: Which Famous People Lived with A Mental Health Disorder?

Please report any modifications you made to the curriculum as it is presented in *The Guide*.

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*On a scale of 1 (not at all successful) to 5 (extremely successful) how would you rate participants overall engagement with the curriculum (please circle)?*

1                      2                      3                      4                      5

*On a scale of 1 (not at all successful) to 5 (extremely successful) how would you rate participants' understanding of the curriculum (please circle)?*

1                      2                      3                      4                      5

*Please report any confounding factors (e.g., disruptions) that may have impacted today's session:*

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APPENDIX F:  
DEMOGRAPHIC QUESTIONNAIRE

### Demographic Information Form

*Instructions: Please answer each of the following question by checking the circle.*

1. What is your age?
  - ☐ 11
  - ☐ 12
  - ☐ 13
  - ☐ 14
  - ☐ 15
  - ☐ 16
  - ☐ 17
  - ☐ 18
2. What is your sex?
  - ☐ Female
  - ☐ Male
  - ☐ Transgender
  - ☐ Non-Binary
3. What is your grade?
  - ☐ Sixth
  - ☐ Seventh
  - ☐ Eighth
  - ☐ Ninth
  - ☐ Tenth
  - ☐ Eleventh
  - ☐ Twelfth
4. Do you qualify for a free or reduced lunch at school?
  - ☐ Yes
  - ☐ No
  - ☐ I Don't Know
5. Which racial category do you identify with the most?
  - ☐ African American or Black
  - ☐ Asian/Pacific Islander
  - ☐ Caucasian or White
  - ☐ Bi-Racial
  - ☐ Multiracial
  - ☐ Other

6. Are you Hispanic or Latinx?

- ☐ Yes
- ☐ No

7. Have you ever attended counseling?

- ☐ Yes
- ☐ No
- ☐ I don't know

8. How would you rate your mental health?

- ☐ Very good    ☐ Quite Good    ☐ Neither Good Nor Poor    ☐ Quite Poor    ☐ Very Poor

9. What is your relationship with your family?

- ☐ Very good    ☐ Quite Good    ☐ Neither Good Nor Poor    ☐ Quite Poor    ☐ Very Poor

APPENDIX G:  
MENTAL HEALTH KNOWLEDGE AND ATTITUDE SURVEY

Directions:

For each of the following statements select True, False, or Do Not Know by marking an X in the appropriate box.

Question	True	False	Do Not Know
1. Mental health and mental illness both involve the brain and how it functions.			
2. People who have mental illness can at the same time have mental health.			
3. The brain can affect the way the body functions but the body can not affect the way the brain functions.			
4. The frontal lobes of a young person's brain continue to grow and develop until about the age of 25 years.			
5. Three of the functions of the brain include thinking, signaling and behavior.			
6. Every person's mood can fluctuate up and down naturally.			
7. The brain acts to help control the functioning of the heart, lungs, and fingers.			
8. Both genetic problems and infections can cause the brain to get sick and stop functioning normally.			
9. The symptoms of mental illness are caused by abnormal functioning of the brain.			
10. People who have a mental illness are frequently violent.			
11. Most people who have a mental illness get well and stay well with treatment.			
12. People who have schizophrenia often get a split personality.			
13. Vitamins and meditation are good treatments for most mental illnesses.			
14. Depression and Bipolar Disorder are two examples of the type of mental illnesses called mood disorders.			
15. An anxiety disorder happens when a person's brain detects the presence of danger – such as a dog attacking.			

<b>Question</b>	<b>True</b>	<b>False</b>	<b>Do Not Know</b>
16. Panic Disorder commonly begins in adolescence.			
17. A panic attack comes on suddenly and typically lasts one or more days.			
18. Attention Deficit Hyperactivity Disorder has three components including attention problems, hyperactivity, and depression.			
19. Suicide in young people is mostly related to bullying and has little to do with mental illness.			
20. Self-harming behaviors may sometimes accidentally lead to death.			
21. Treatment of mental disorders has three purposes including, relieving symptoms, restoring functioning, and promoting recovery.			
22. People with Social Anxiety Disorder experience irrational and excessive fear that they will act in a way that will be humiliating or embarrassing.			
23. Anorexia Nervosa is an eating disorder that can lead to death.			
24. One important job of the brain is to help the person adapt to the environment.			
25. Mental disorders usually begin because of the stresses of everyday life.			
26. Psychosis is a disturbance in thinking and perception leading to loss of contact with reality.			
27. The main symptoms of Schizophrenia are delusions and hallucinations.			
28. Medicines should be used to treat all mental disorders.			

APPENDIX H:  
THE GENERAL HELP SEEKING QUESTIONNAIRE



## The General Help Seeking-Questionnaire

If you were having a personal or emotional problem, who would you seek help from? Please circle the number that best describes how likely you would be to ask for help from that person.

1= Extremely Unlikely.

3= Unlikely

5= Likely.

7= Extremely Likely

a. Boyfriend or Girlfriend	1	2	3	4	5	6	7
b. Friend	1	2	3	4	5	6	7
c. Parent	1	2	3	4	5	6	7
d. Other relative/family member	1	2	3	4	5	6	7
e. Mental health professional (e.g. school counselor, social worker, counsellor)	1	2	3	4	5	6	7
f. Phone helpline (e.g. Lifeline)	1	2	3	4	5	6	7
g. Doctor	1	2	3	4	5	6	7
h. Boys and Girls Club staff member	1	2	3	4	5	6	7
i. I would not seek help from anyone	1	2	3	4	5	6	7
j. I would seek help from another not listed above (please list in the space provided, If no, leave blank)_____	1	2	3	4	5	6	7

If you were having suicidal thoughts, who would you seek help from? Please circle the number that best describes how likely you would be to ask for help from that person.

1= Extremely Unlikely.

3= Unlikely

5= Likely.

7= Extremely Likely

a. Boyfriend or Girlfriend	1	2	3	4	5	6	7
b. Friend	1	2	3	4	5	6	7
c. Parent	1	2	3	4	5	6	7
d. Other relative/family member	1	2	3	4	5	6	7
e. Mental health professional (e.g. school counselor, social worker, counsellor)	1	2	3	4	5	6	7
f. Phone helpline (e.g. Lifeline)	1	2	3	4	5	6	7
g. Doctor	1	2	3	4	5	6	7
h. Boys and Girls Club staff member	1	2	3	4	5	6	7
i. I would not seek help from anyone	1	2	3	4	5	6	7
j. I would seek help from another not listed above (please list in the space provided, If no, leave blank)_____	1	2	3	4	5	6	7

APPENDIX I:  
SELF-STIGMA OF MENTAL ILLNESS SCALE-SHORT FORM

## SSMIS-SF

People believe many different things about people with mental illnesses. We would like to know what you believe about people with mental illnesses. Please answer the following items using the scale below. Please circle your level of agreement.

### I believe...

1. Most people with mental illness are to blame for their problems.

I strongly disagree			Neither agree nor disagree				I strongly agree		
1	2	3	4	5	6	7	8	9	

2. Most people with mental illnesses will not recover or get better.

I strongly disagree			Neither agree nor disagree				I strongly agree		
1	2	3	4	5	6	7	8	9	

3. Most people with mental illness are dangerous.

I strongly disagree			Neither agree nor disagree				I strongly agree		
1	2	3	4	5	6	7	8	9	

4. Most people with mental illness cannot take care of themselves.

I strongly disagree			Neither agree nor disagree				I strongly agree		
1	2	3	4	5	6	7	8	9	

APPENDIX J:  
THE CHILDREN'S HOPE SCALE

### The Children's Hope Scale

Directions: Place a check inside the square that describes YOU the best. Please answer every question by putting a check in one of the squares. There are no right or wrong answers.

1. I think I am doing pretty well.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

2. I can think of many ways to get the things in life that are most important to me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

3. I am doing just as well as other kids my age.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

4. When I have a problem, I can come up with lots of ways to solve it.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

5. I think the things I have done in the past will help me in the future.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

6. Even when others want to quit, I know that I can find ways to solve the problem.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

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