ABSTRACT

Title of Dissertation: OUTCOMES OF YOUTH MENTAL HEALTH FIRST AID USA WITH PARENTS: EXAMINING BELIEFS, BEHAVIORS, AND KNOWLEDGE

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Youth typically do not seek mental health services for themselves, and instead rely on their parents to play a "gatekeeper role," and identify the problem and seek appropriate services for the youth. Youth Mental Health First Aid (YMHFA) USA teaches adults to recognize signs of youth mental illness and intervene using a five-step action plan that focuses on assessing for risk, listening nonjudgmentally, and connecting youth to resources and mental health care. While studies have examined the effects of the program on various stakeholders in children's lives, limited attention has been given to parent trainees. The present study examined the effects of YMHFA USA on parents' mental health literacy; mental health first aid intentions, self-reported MHFA behaviors to help youth, and confidence in their helping skills; attitudes toward seeking professional help and intentions to do so; and stigma. Six trainings were provided at no cost to parents with at least one child under the age of

21, and 107 parents participated in the research by completing pre-, post-, and two month follow-up surveys (*n* = 64). Paired sample t-tests were conducted to examine change, and results indicated that following the training, parents reported statistically significant increases in all variables of interest with the exception of stigma, which decreased. Changes in MHL, attitudes, intentions toward help-seeking, and stigma were maintained at two month follow-up. Participants answered six open-ended questions and responses were thematically analyzed. Qualitative results indicate that parents signed up for YMHFA USA due to a desire for knowledge and skills, having multiple roles that necessitate interactions with youth, prior experience with mental illness, and the increasing prevalence of youth mental illness. Parents identified that the most beneficial aspects of the training were learning the ALGEE action plan, participating in roleplays and examples, gaining information about youth mental illness, having a positive/open training environment, and learning strategies for understanding and interacting with youth. Finally, improvements to YMHFA USA were suggested in regard to both the content and structure of the training. Implications for practice and research are discussed.

OUTCOMES OF YOUTH MENTAL HEALTH FIRST AID USA WITH PARENTS: EXAMINING BELIEFS, BEHAVIORS, AND KNOWLEDGE

by

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Dedication

For my dad. While I was writing this dissertation you were working on something much more difficult: kicking cancer's butt. Thank you for showing me how to be brave, strong, and kind in the face of even the most difficult challenges. You have taught me the importance of always finding something to smile about each day. I am so fortunate to have you as a role model and dad. I love you.

"And I think to myself, what a wonderful world."

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Chapter 1: Introduction

Adolescence is a significant time period for the development of mental health disorders: One in five youth in America experiences a mental illness between the ages of 12 and 18 (National Alliance on Mental Illness, 2017). Among these youth, 22% are severely impacted by the mental health disorder, with extreme impairment in daily activities or significant distress (Merikangas et al., 2010). While symptoms of many mental health problems first emerge during adolescence (Kessler et al., 2007), diagnosis and treatment are delayed on average between six and ten years (ten Have et al., 2013; Wang et al., 2005). Delays in treatment have been associated with adverse long-term effects including poverty, homelessness, and increased health and mental health problems (O'Connell et al., 2009). For many youth, the negative impacts of untreated mental health problems extend into adulthood and predict poorer life satisfaction (Layard et al., 2014). Unfortunately, untreated mental illness is also associated with increased suicide attempts and completion, and suicide is now the second leading cause of death for young people (Centers for Disease Control and Prevention, 2017).

Help-seeking for mental health challenges can be informal or formal. Informal sources of support include family, friends, community or religious leaders, and other members of one's social network, while formal help-seeking involves mental or physical healthcare professionals such as psychologists, psychiatrists, and doctors (D'Avanzo et al., 2012). When experiencing a mental health challenge, the majority of youth will first seek informal support, often from peers and family members, before seeking out formal help (D'Avanzo et al., 2012). In particular, parents play an

important role in providing informal support, such as listening to their child's concerns, offering information and guidance, and teaching self-help or coping strategies. Parents also play an important role in helping youth seek formal sources of support. In fact, parents are often considered "gatekeepers" to mental health treatment, as children heavily rely on their parents to seek and receive mental health services (Stiffman et al., 2004). Parents can also minimize the variety of challenges that impede the help-seeking process for youth, including perceptual (e.g., denial of the problem, stigma) and practical (e.g., need for transportation and insurance) barriers (World Health Organization, 2013). However, while parents may know the youth best and want to help, they often lack the necessary knowledge and skills to identify mental health problems and intervene appropriately (Kitchener et al., 2012). In addition to these deficits, parents may have high levels of stigma (Jorm & Wright, 2008) and low levels of confidence or self-efficacy in their ability to help their children (Frese, 2018), both of which can delay or prevent help-seeking and helping behaviors.

Many of these factors make up mental health literacy (MHL), which refers to one's knowledge and beliefs about mental health disorders (Jorm et al., 1997). An important component of MHL is having knowledge that is linked to the possibility of action (Jorm, 2012), such as providing help or seeking help from others. As such, many interventions and training programs have been developed in recent years to increase knowledge and skills among the general public. One of the most commonly implemented trainings is the Youth Mental Health First Aid (YMHFA) USA program, which provides adults with knowledge about youth mental health and a

five-step action plan to assess and help adolescents aged 12-18 who are experiencing a mental health concern or crisis. While only four studies known to the author have examined the efficacy of YMHFA USA, compared to an abundance of literature on the adult version of the training, the existing youth literature is positive. Studies of the program with various populations, including mental health professionals and teachers, have found that after completing the YMHFA USA training, adults' knowledge, skills, and attitudes toward help-seeking significantly improve (e.g., Aakre et al., 2016; Gryglewicz et al., 2019). Some recent literature has begun to explore YMHFA USA participants' intentions to implement the five-step action plan with youth in their lives, and have found significant increases in teachers (e.g., Gryglewicz et al., 2019). Fewer studies have examined self-reported helping behaviors or implementation of the plan, and findings have been equivocal. While some studies report increases in self-reported helping behaviors (Kelly et al., 2011) after the YMHFA training, others have found no significant changes (Jorm et al., 2010), possibly due to limited opportunities to implement the action plan. Overall, the limited research that has examined the efficacy of YMHFA has been predominantly positive, with some mixed findings. This highlights the need for additional research on the program, particularly in regard to self-reported helping behaviors.

Study Rationale

Parents are often the most important people in a child's life. They greatly impact all areas of a child's development, including the development of emotion regulation and coping skills, which serve as protective factors against mental illness (Hakansson, 2010). Parents can also take steps to decrease risk factors for mental

health challenges and provide support when challenges arise. For example, children who perceive high parental support experience higher self-esteem and lower rates of mental illness (Colarossi & Eccles, 2003). When mental health difficulties emerge, parents are often the first to notice changes in their children's mood and behaviors, and typically want to provide support when these challenges or crises arise. For youth with mental health difficulties, parental support is critical, and their involvement and engagement in the treatment process predicts more positive outcomes (Haine-Schlagel & Walsh, 2015).

Despite the very important roles that they play in their children's lives, parents often lack the necessary knowledge and skills to recognize the need for mental health help and intervene. Particularly with the high prevalence of youth mental health disorders and the steadily rising rates of youth suicide, it is imperative to teach a variety of stakeholders in a child's life to recognize symptoms of mental illness, provide informal help, and seek formal treatment if necessary. Yet most research on YMHFA USA and similar training programs focus on professionals, such as school staff (Gryglewicz et al., 2019) and mental health workers (Rose et al., 2019), rather than family members. Only one study known to the author specifically recruited and studied parents, and this study was done in Australia with a different version of the YMHFA training program (Morgan et al., 2019).

While professionals may have more mental health training than parents, they typically spend less time with the adolescents (i.e., one class period per day) and are responsible for large groups of students. Parents, on the other hand, are responsible for fewer children and spend several hours every day with the adolescent. Thus, while

professionals may be experts in mental health or child development, parents are the experts on their children. Parents are likely to notice changes in behavior and be available to assist youth at various hours of the day. For this reason, the present study focuses on training parents in YMHFA USA and examining the effects of the training on both internal variables such as knowledge, stigma, and confidence in helping skills, as well as external variables such as self-reported helping behaviors. In addition to being one of the first studies to examine YMHFA USA, and the only one known to the author to focus on parent trainees, this study will also add to the literature by including open-ended questions that allow parents to share their thoughts on the importance of the training, what they gained from the training, and how they feel the training can be improved.

Guiding Theories

The present study is guided by three theories: The Unified Theory of Behavior Change (UTB; Jaccard et al., 1999), the notion of MHL (Jorm et al., 1997), and Cauce and colleagues' (2002) help-seeking framework. These theories focus on how various factors can lead to increases in parents' helping (e.g., teaching self-help strategies, providing information about mental health) and help-seeking behaviors (e.g., identifying professional services) for youth with mental health concerns.

Unified Theory of Behavior Change

The first theory, UTB, guides the present work's hypotheses on behavior change, as the main goal of the YMHFA USA training is to change trainees' actual behaviors as they relate to helping youth who are experiencing mental health challenges. The UTB posits that behaviors originate from beliefs, attitudes, social

norms, and self-efficacy, all of which subsequently contribute to the intent to perform a behavior (Jaccard et al., 1999; Rose et al., 2019). This behavioral intention fosters actual behavior, which is also affected by factors such as cues to action, habits, knowledge and skills, and environmental constraints or facilitators (Anthony, Banh, & Goldman, 2015). The more favorable the constructs are in each step, the more likely a person is to complete a target behavior (Banh et al., 2019). According to the UTB, strategies that address both determinants of behavioral intentions and actual behaviors are most likely to affect behavior change (Olin et al., 2011).

The UTB applies well to YMHFA, as the training's main goal is to empower trainees to implement a five-step "action plan," which will be discussed in detail in subsequent sections, to help youth experiencing mental health challenges or crises. In order to encourage training participants to utilize the helping skills within the action plan, YMHFA USA targets determinants of behavioral intention and MHFA behaviors. Specifically, YMHFA USA seeks to increase parents' helping intentions by increasing their self-efficacy (e.g., sense of competence to help youth struggling with mental health challenges), addressing social beliefs (e.g., decreasing mental health stigma), and instilling a sense that the skills taught in the training will make a positive impact on their children (attitudes about behavior). The resulting increase in intentions to use the action plan, in conjunction with knowledge and skills taught by the program, is then likely to result in self-reported helping behaviors (implementation of the action plan) following a cue to action, such as interacting with a child who displays signs of a mental health challenge.

Mental Health Literacy

MHL is a construct that encompasses "knowledge and beliefs about mental disorders which aid their recognition, management or prevention" (Jorm et al., 1997, p. 182). It contains five components: knowledge of how to prevent mental disorders; recognition of the development of mental disorders; knowledge of help-seeking options and treatments; knowledge of self-help strategies for milder mental health problems; and skills to support others who are developing a mental disorder or are experiencing a mental health crisis (Jorm, 2012). Kutcher and colleagues (2016) have expanded upon this definition of MHL to include "decreasing stigma related to mental disorders" and "enhancing help-seeking efficacy (knowing when and where to seek help and developing competencies designed to improve one's mental health care and self-management capabilities)" (p.155). Higher levels of MHL are associated with more positive attitudes toward seeking mental health services (Cheng et al., 2018) and predict increased likelihood of accessing services (Bonabi et al., 2016; Gulliver et al., 2010; Teagle, 2002). MHL and the UTB are intertwined, such that many components of MHL (knowledge, skills, self-efficacy, social beliefs) are believed to influence behavioral intentions and actual behaviors. By increasing parents' mental health knowledge and helping skills (MHL), the YMHFA USA training should also positively alter their attitudes toward mental health help-seeking.

Help-Seeking Model

Finally, the present work is guided by Cauce et al.'s (2002) framework, which posits that help-seeking for mental health challenges is made up of three interconnected steps: recognizing the problem, deciding to seek help, and selecting

the appropriate service (informal or formal). The MHL framework is related to these three steps, as knowledge of mental illness will help someone to recognize the problem. When an individual has positive attitudes towards mental illness and help seeking, s/he is more likely to seek help when needed. Knowledge of services and providers available is related to someone selecting the services needed. Importantly, in the context of youth mental health, the identification of a child's mental health problem and decisions about help-seeking and service selection are largely determined by the child's parents (Burns et al., 1992). Parents' lack of knowledge and skills can impede each of these three steps; However, programs such as YMHFA USA can increase parents' ability to identify mental health challenges and appropriate mental health services and resources, while providing education around the importance of seeking help. Thus, by increasing parents' MHL, YMHFA USA should make completion of the three steps of Cauce et al.'s (2002) model easier for parents, ultimately leading to increased help-seeking behaviors.

Guiding Model

To better reflect how the three theories above work together to influence MHFA actions, I proposed a new guiding model (Figure 1). In this model, MHL (blue) has its own actionable steps (prevention efforts and MHFA behaviors) as well as informing concepts, such as how one must have knowledge of mental illness signs and symptoms in order to recognize a mental health problem. MHL is combined with Cauce and colleague's (2002) model, which is depicted in green, and then connected to the UTB (red) to form a more encompassing model that represents the full spectrum of mental health from prevention to treatment and the skills and knowledge

one must possess to intervene. This model is well connected to YMHFA, which teaches trainees about the spectrum of mental health (from being well to becoming unwell) and the various steps first aiders can take to promote well-being (e.g., promoting protective factors, recognizing the problem, utilizing ALGEE).

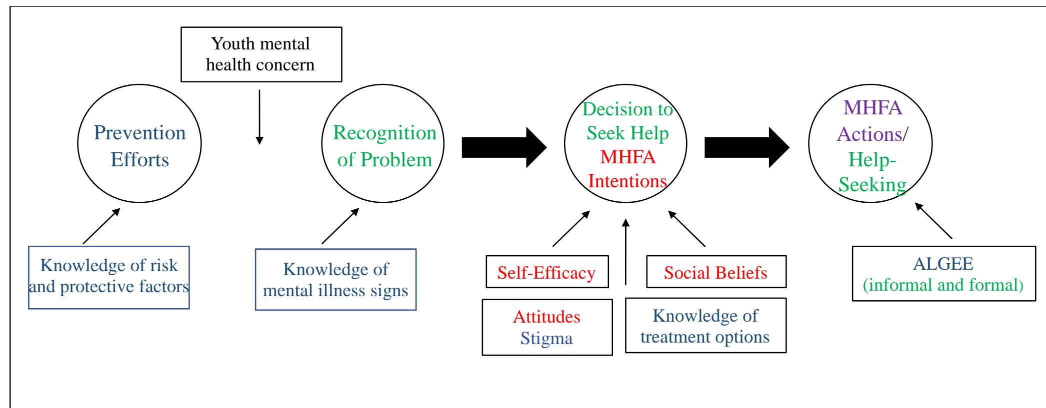

Figure 1. Guiding model.

The research questions below examine the different components of this model, such as parents' level of self-efficacy before and after the training. The overarching hypothesis for this study is that following completion of YMHFA, parents will have the necessary knowledge and skills to engage in the steps demonstrated in the guiding model. By increasing factors such as positive beliefs about mental health services and decreasing factors such as stigma/negative attitudes, participants should be more likely to engage in MHFA actions (as measured by a self-report two months following the training) when a youth mental health concern arises.

Statement of Research Questions

Quantitative Questions

1. What influence does YMHFA USA have on parents' mental health literacy?
   a. Hypothesis: Parents will demonstrate an increase in mental health literacy, including knowledge of prevention and intervention efforts,

after completing the training. This hypothesis is supported by prior research which has found the YMHFA USA training to yield significant increases in overall MHL and its various components in adult populations (e.g., Gryglewicz et al., 2019).

2. What is the effect of YMHFA USA on parents' levels of mental health stigma, intentions to seek professional help for youth mental health concerns, and attitudes toward seeking professional help?
    a. Hypothesis: YMHFA USA will decrease parental stigma and increase a) intentions to seek professional help and b) positive attitudes toward mental health help-seeking. However, it is also possible that statistically significant changes in stigma and attitudes toward help-seeking will not be found, as the population of parents who sign up for a mental health training are likely to have less stigmatizing views and more positive attitudes toward mental health help-seeking than the general public.
3. Does YMHFA USA impact parents' behavioral intentions, self-efficacy, and self-reported helping behaviors as they relate to MHFA actions?
    a. Hypothesis: After completing the YMHFA USA training, parents will feel more confident in implementing the five-step action plan and will demonstrate increased helping intentions and self-reported behaviors. This hypothesis is supported by the guiding model, which posits that the training will alter the factors that influence behavioral intentions, which in turn will increase self-reported helping behaviors.

Additionally, prior literature has examined the impacts of YMHFA on other populations of adults and found positive increases in these outcome variables (e.g., Rose et al., 2019).

4. If effects of the YMHFA USA are detected from pre- to post-test, are these effects maintained at two-month follow-up?
    a. Hypothesis: Changes in all outcome variables of interest will persist at two-month follow-up. Studies that have examined similar outcomes in adult populations following the MHFA and YMHFA trainings have found that most effects are maintained several months after the training (e.g., Haggerty et al., 2018). Based on prior literature, confidence in helping behaviors is the outcome most likely to be maintained at follow-up (e.g., Rose et al., 2019; Haggerty et al., 2018).

Qualitative Questions

5. What are parents' opinions on the utility and benefits of the YMHFA USA training? (from Acceptability measure and open-ended questions)
6. Why do parents sign up for YMHFA USA and what do they hope to learn?
7. How do parents think the YMHFA USA training can be improved?

Note: The term "parent" is used throughout this document, but is intended to reflect the experiences and beliefs of all primary caregivers/guardians, regardless of relationship to their child.

Chapter 2: Literature Review

Youth Mental Health

Over the last two decades, increased attention has been given to the scale and significance of youth mental illness, as epidemiological studies have revealed high rates of mental health concerns throughout adolescence (Kessler et al, 2005). Adolescence is a crucial period of development, during which a variety of changes and stressors occur. While many experiences such as going through puberty, questioning authority, and experiencing more intense emotions are typical, they can also lead to increased emotional vulnerability which contributes to the development of mental health challenges and disorders (National Council for Behavioral Council, 2016). Mental health disorders are "health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning" (Philpott, 2016, p. 52). Roughly half of all Americans will meet the diagnostic criteria for a mental health disorder at some point in their lives, with symptoms of many disorders first emerging in adolescence (Kessler et al., 2005). According to the National Alliance on Mental Illness, one in five youth aged 13-18 in the United States will experience a mental illness (2017). Among the most prevalent youth mental health disorders are anxiety disorders (31.9% of youth mental illnesses; 8.3% with severe impact), behavior disorders (19.1%; 9.6% with severe impact), mood disorders (14.3%; 11.2% with severe impact), and substance use disorders (11.4%) (Merikangas et al., 2010). And while the majority of mental health problems first manifest in childhood and adolescence (Kessler et al., 2007), diagnosis and treatment are typically delayed between six and ten years (ten Have et al., 2013;

Wang et al., 2005). However, early identification and intervention are crucial, as mental health problems become more complex during adolescence (Costello et al., 2003), and early intervention can prevent symptoms from worsening and alleviate negative outcomes associated with mental health challenges. In addition, long-term morbidity and mortality are highest in adolescence compared to all other age groups (Bailey, 2003). In fact, within the last decade, suicide has become the second leading cause of death among young people (Centers for Disease Control and Prevention, 2017). One contributor to high rates of suicide among youth is undiagnosed and untreated mental illness (Moskos et al., 2005).

Despite high levels of mental health disorders, as many as 75% of youth do not have their mental health needs met (Becker et al., 2015). In addition to contributing to suicidal ideation and actions, the lack or delay of treatment can lead to adverse long-term outcomes that persist into adulthood (Layard et al., 2014). Untreated youth mental health challenges are associated with long-term difficulties with interpersonal relationships, academic and work success, and economic stability (Patel et al., 2007). Specifically, youth whose mental health challenges go undiagnosed or untreated have increased rates of unemployment, homelessness, poverty, and physical and mental health problems in adulthood (O'Connell et al., 2009). Poor mental health during adolescence generally predicts poorer life satisfaction across the lifespan (Layard et al., 2014).

The underutilization of mental health services has been attributed to a variety of factors, including pragmatic and perceptual barriers (World Health Organization, 2013). Pragmatic barriers include factors such as physical accessibility (geographical

proximity and availability of services), financial affordability, and transportation to and from services (World Health Organization, 2013), while perceptual barriers include high levels of stigma, shame, and fear (Lindsey et al., 2012). Additional barriers, such as lack of knowledge about mental health difficulties and services, negative attitudes toward help-seeking, and low self-confidence in one's help-seeking abilities, can also deter individuals from seeking formal help (Henderson et al., 2013). One unique barrier to the diagnosis and treatment of youth mental health disorders is the difficulty adults face in distinguishing typical adolescent development from warning signs of mental illness. Adolescence is marked by physical, mental, social, and emotional changes, which often occur rapidly and can make it challenging for adults to determine whether a young person is experiencing a mental health challenge or going through normal changes (National Council for Behavioral Health, 2016). This can delay, or completely prevent, the identification of mental illness, which is a prerequisite for help-seeking (Cauce et al., 2002).

Parents' Role in Addressing Youth Mental Health Concerns

Parents play a crucial role in their children's mental health. However, it is important to begin by stating that parents should not be blamed for the development of youth mental health challenges. These difficulties have complex etiologies that are affected by a multitude of factors. Instead, it is important to consider how parents can help promote mental wellbeing and provide support during mental health difficulties. During their first years of life, children learn to understand, express, and regulate their emotions and to develop social relationships (Havighurst et al., 2010) – skills which are imperative for positive mental health. Parents greatly contribute to these skills

through their regulation and expression of their own emotions, their reactions to their children's emotions, and their coaching and discussion of children's emotions (Eisenberg et al., 1998). Parents' positive expressiveness, supportive reactions to children's emotion expression, and discussion of emotions are linked to increased socio-emotional competencies in children (Havighurst et al., 2010). Similarly, children whose parents are sensitive and use lower rates of harsh discipline are less likely to develop behavioral and mental health problems (Miner & Clarke-Stewart, 2008), while children from families with high parent-child conflict and low parental support experience higher rates of mental health difficulties during adolescence (Smokowski et al., 2014). Parenting can serve as a key risk factor or promotive factor in the development and maintenance of mental health problems (Ryan et al., 2017; Smokowski et al., 2014), such that their actions may make the development of youth mental health concerns more or less likely. This role is important, particularly because parenting in amenable to change (Ryan et al., 2017). Parents can learn and implement strategies that serve as protective factors against youth mental health, such as monitoring their child's activities, creating a consistent home routine, and providing social support (Kitchener et al., 2012). They can also teach their children skills that serve as protective factors, including how to solve problems and develop healthy practices (Kitchener et al., 2012).

When youth mental health concerns do arise, sources of both informal and formal help can be provided to address symptoms and increase mental wellbeing. Informal help comes from social relationships, including friends, family, and community and religious leaders. Youth are most likely to seek informal help before

turning to formal sources (Rickwood, 1995), and most frequently turn to friends and family first (D'Avanzo et al., 2012). Informal methods of support are easily applied and inexpensive, and may avert the development or worsening of clinical disorders (Jorm & Griffiths, 2006). They can include providing instrumental support as well as emotional support, such as listening nonjudgmentally, providing reassurance, and teaching self-help strategies. Due to their desire for increasing independence and preference for self-reliance during difficult times, many youth prefer self-help strategies as a treatment for mental health difficulties (Farrand et al., 2006). However, youth may not be knowledgeable about self-help strategies. Parents can teach their children different techniques, such as exercising, meditating, or talking to family and friends (Jorm, 2012), and can also promote the use of these strategies during times of mental health difficulty.

After seeking informal help for mental health difficulties, some youth are then referred by their social networks to formal sources of support. Formal help comes from professionals who have a recognized role and appropriate training in providing help, such as mental health and health professionals (Rickwood et al., 2005). Formal methods of help can include psychotherapy, counseling, and psychiatric medication. Professional help-seeking is associated with decreased personal distress, social and emotional problems, and suicidality (Tracey et al., 1986). However, due to many of the barriers mentioned in the section above, adolescents typically do not seek formal help for themselves, and instead tend to be directed to services by their parents or other trusted adults (Stiffman et al., 2004). In fact, parental encouragement has been identified as the primary influence of youth seeking and receiving professional help

(Rickwood et al., 2015). Parents' role in the help-seeking process has been broken down into three key stages, including 1) recognition of mental health difficulties, 2) the decision or intention to seek help, and 3) contact with services (Cauce et al., 2002; Reardon et al., 2017). Parents who have identified a problem and decide to help their child seek and receive mental health services can help youth overcome many of the barriers that prevented them from seeking help on their own. For example, advice, encouragement, and information from an adolescent's social network, including parents, can help reduce perceptual barriers such as fear and high levels of stigma (Stiffman et al., 2004). Parents can also address practical barriers by providing coverage of transportation and cost of treatment. This important role that parents play in accessing mental health treatment for their children has been referred to as the "gatekeeper model," in which parents ultimately dictate whether a child will receive formal mental health services (Stiffman et al., 2004).

Parents continue to play an important role once a child has been referred for professional mental health services. Their engagement and involvement in treatment has been linked to more positive treatment outcomes for children experiencing a variety of mental health concerns (Haine-Schlagel & Walsh, 2015), and predicts lower drop-out rates (Reyno & McGrath, 2006). Involvement in treatment is important as it allows caregivers to learn skills to support their child, and can help them understand their child's behavior in the context of the mental health challenge. While parental participation is a crucial component of youth mental health treatment, the following sections will focus on the factors that influence parents' helping skills and help-seeking behaviors before formal mental health services are initiated.

Factors that Influence Parental Help-Seeking and Helping Behaviors

Many studies have focused on identifying predictors of mental health service use. Both family and child characteristics, such as ethnicity, socioeconomic status, and severity of mental health problems have been implicated in determining the likelihood of service utilization. Specifically, studies suggest that being White (Kataoka et al., 2002), having insurance coverage (Angold et al., 2002), living in an urban area (Cohen & Hesselbart, 1993), and having a child with a severe mental health problem (Merikangas et al., 2010) increases the likelihood of a family accessing treatment. In addition to these family and child characteristics, parental factors, such as level of stigma and knowledge about mental health, also influence help-seeking behaviors for youth mental health concerns.

Attitudes Toward Mental Health and Treatment Options

The decision to seek help for youth mental health concerns is greatly influenced by parents' attitude toward the problem and treatment options. First, parents who perceive that a problem exists are more likely to seek help and access mental health services for their children than those who do not recognize a problem or its impact (Teagle, 2002; Gudino et al., 2008). Youth mental health problems are most likely to be detected by parents if they negatively impact family life and are perceived to be a burden (Ford et al., 2005). Once a problem is detected, parents' decision to seek help is greatly impacted by their attitudes toward mental health and mental health services. In particular, parents' beliefs about mental health etiology or explanatory models of mental illness can influence help-seeking behaviors. For example, beliefs that mental health problems are caused by the child's personality or

relational issues are associated with reduced help-seeking (Yeh et al., 2004). On the other hand, beliefs that mental health issues are biomedical or social-emotional and can be treated pharmacologically or through therapy are associated with higher levels of treatment utilization (Deacon, 2013). Parents who perceive mental health services to be helpful are also more likely to seek them out (Vogel et al., 2005).

According to a study of over 2,000 Australian mothers and fathers, most parents have positive attitudes toward mental health services and believe seeking professional help is useful for mental health issues (Jorm et al., 2007). However, parents are often hesitant to utilize these services for their own children, and are more likely to refer a friend's child for professional help than their own (Raviv et al., 2003). This has been attributed, in part, to "threat to self-esteem" (Nadler & Fisher, 1986), such that seeking professional psychological help for one's own child can lead to feelings of inferiority and incompetence in parents, which outweighs the benefits of seeking help and inhibits help-seeking behaviors (Raviv et al., 2003). This threat to self-esteem is alleviated when seeking help for some else's child, as the parent is unlikely to feel a sense of responsibility to have prevented or treated the mental health challenge themself. Additionally, many parents view informal sources of help more positively than formal help, in part due to reduced shame and fear (Wang et al., in preparation). When seeking professional help, general help (e.g., from a physician) is typically viewed more positively than help from specialized mental health providers (Jorm, 2010); most parents would prefer to seek help from a general practitioner (Jorm et al., 2007). In one study, when asked how they would help a mentally ill vignette character if it were their child, 55 parents said they would encourage

professional help from a doctor or physician, while only 3 parents said they would encourage professional help from a psychiatrist or psychologist (Jorm et al., 2007). This may be related to stigmatized beliefs about mental health disorders and seeking treatment for psychological concerns, such that parents feel there is less stigma associated with going to a doctor for help versus a psychologist. While holding positive attitudes toward treatment options can facilitate the help-seeking process, parents must also possess specific skills and knowledge that allow them to identify the problem and know where to go for help.

Mental Health Literacy

MHL is a subset of health literacy, a term first used to describe how effectively individuals are able to navigate their health care environments (Kutcher et al., 2016). Extending upon this idea, Jorm and colleagues (1997) coined the term MHL to refer to "knowledge and beliefs about mental disorders which aid their recognition, management, or prevention" (p. 182). MHL is now considered to be comprised of seven components: recognition of the development of mental disorders; knowledge of how to prevent mental disorders; knowledge of help-seeking options and treatments; knowledge of self-help strategies for milder mental health problems; skills to support others who are developing a mental disorder or are experiencing a mental health crisis; low mental health stigma; and high help-seeking self-efficacy (Jorm, 2012; Kutcher et al., 2016). Increasing attention has been given to the public's MHL due to the high prevalence of mental health concerns across countries. While several studies have examined MHL among adults, only a few studies have explicitly examined parental MHL, and the existing literature suggests that many parents have

low MHL (Teagle, 2002; Moses, 2011). Low MHL, including not knowing whether a mental health problem necessitates help-seeking and/or if the problem will get better by itself, poses a significant barrier to help-seeking among parents of children with mental health problems (Lawrence et al., 2015). However, more information is needed about parent MHL, as studies that have examined MHL typically disaggregate the construct and measure only one component. Many researchers use the term "MHL" to refer only to symptom recognition or knowledge of mental health disorders. The following sections review the limited literature regarding each of the individual components of MHL among adults; research specific to parents is provided when possible.

Symptom recognition. In order to seek mental health treatment or resources, an individual first needs to recognize that there is a problem (Cauce et al., 2002). Knowledge of mental health, including both mental wellbeing and mental illness, is a crucial component which influences help-seeking behaviors. Recognition of mental disorders predicts the intention and recommendation to seek help from professional sources (Rusch et al., 2012), as well as the number and quality of mental health services actually utilized (Mendenhall, 2011). To examine individuals' mental health knowledge, many researchers have focused on identification of signs and symptoms of prevalent mental health concerns. While almost 80% of parents feel confident that they would be able to tell if their teen were experiencing a mental health problem (Locke & Eichorn, 2008), studies have found that the majority of caregivers cannot recognize symptoms of mental illness in adolescent vignette characters and their own children. For example, Teagle (2002) found that only 39% of parents of children with

a diagnosed mental illness recognized the problem, and parents were more likely to recognize Attention Deficit Hyperactivity Disorder (ADHD) than other psychopathologies. Similar findings highlight that parents more easily identify externalizing disorders than internalizing disorders. In fact, Logan and King (2002) found that 79% of parents with adolescents diagnosed with depression did not endorse a single symptom of depression in their children on the Diagnostic Interview Schedule for Children.

More broadly, Moses (2011) interviewed 70 parents of children receiving wrap-around services for mental health challenges and found that over a third of the parents were "uncertain" about recognizing symptoms of mental illness in their children. These parents directly and indirectly expressed uncertainty regarding the extent to which their child's problems were indicative of mental illness (Moses, 2011), highlighting a general lack of knowledge about mental health symptoms. Additionally, parents often have difficulty distinguishing between typical and atypical childhood development. In one study of 2,000 parents, 41% did not know that persistent anger and aggression were not "normal" in school-age youth (The Royal Children's Hospital, 2017). This sort of uncertainty about typical youth social-emotional functioning can impede the help-seeking process (Gudino et al., 2008).

Knowledge of treatment options. While some research has examined adults' attitudes toward and beliefs about the effectiveness of mental health treatment, very few studies have examined knowledge of treatment options, such as where to go for mental health help or the differences between mental health professionals (e.g., psychiatrist versus psychologist). However, this is an important area of MHL, as one

must have some knowledge of mental health services and resources before they can seek help. The limited research that has been conducted on this topic suggests that many parents are unfamiliar with treatment options. In one study conducted in Australia, 48% of parents of children with mental health disorders stated that they did not know where to go to seek help (Sawyer et al., 2001). A study comparing treatment knowledge for depression among Black, Latinx, and White parents revealed low levels of knowledge across races (Chandra et al., 2009). This study also highlighted the importance of parental knowledge of mental health treatment; talking to parents who have more knowledge about treatment was associated with higher teen knowledge. Parents who are knowledgeable about mental health services can thus identify and access services more easily, and are also able to pass on their knowledge to their children. This is an important finding, as knowledge of treatment among teens is associated with a greater willingness to seek treatment (Chandra et al., 2009). Additionally, knowledge of treatment options among parents is correlated with the quality of mental health services that children receive, such that higher knowledge is associated with higher quality services (Mendenhall, 2011). These findings underscore the importance of parental and teen knowledge about mental health treatment options.

Prevention of mental health disorders. Another important aspect of MHL that has been neglected in the literature is knowledge of actions that can prevent the development of mental health disorders. Two important factors are considered to aid in this prevention: *protective factors,* which decrease the probability of experiencing a mental health problem by neutralizing risk, and *promotive factors*, which actively

enhance positive psychological well-being (Patel & Goodman, 2007). Studies that have asked participants to identify ways that mental illness can be prevented have primarily utilized youth participants in other countries. For example, Yap and colleagues (2014) asked youth in Australia to select from a list of seven activities that could prevent a variety of mental health challenges. Participants most frequently endorsed regular contact with family/friends and staying physically active as activities that could prevent the development of mental illness. Similarly, Jorm et al. (2010) found that Australian youth were most likely to believe that keeping regular contact with family and friends, making regular time for relaxing activities, and avoiding drugs would be helpful in preventing depression.

A limited number of studies have also examined knowledge of preventative strategies in adults. While the authors do not specify how many participants were parents, Schomerus and colleagues (2008) interviewed adults in Germany about their beliefs regarding depression prevention. They found that participants were most likely to believe stable friendships, participating in enjoyable leisure activities, and having family support could prevent depression (Schomerus et al., 2008). It is important to examine and increase parental knowledge of preventative strategies, as this knowledge can facilitate the implementation of protective and promotive strategies. For example, parents could suggest an evening family walk or encourage their child to develop healthy friendships. There are also steps that parents can take to help prevent the development of youth mental health concerns, including having family conversations about mental health (Solantaus et al., 2010). MHL programs,

such as YMHFA USA, explicitly teach parents about the prevention of youth mental health disorders, including the identification of risk and protective factors.

Knowledge of self-help strategies. Many of the strategies discussed in the above section on preventative efforts are also methods of self-help. Self-help strategies are “actions that a person can take on his or her own to deal with a mental disorder” (Jorm, 2012, p. 234) and include actions such as exercising, taking vitamins, talking to family and friends, or meditating. As noted earlier, self-help strategies are often viewed more favorably than professional help-seeking (Farrand et al., 2006; Jorm, 2012), possibly due to decreased associated stigma and teens’ desire for increased self-reliance (Gulliver et al., 2010). While many youth are fearful of professional mental health services because they do not know what to expect (Gulliver et al., 2010), self-help strategies are often common activities that youth already know about or have tried. To my knowledge, no studies have specifically examined parents’ knowledge of self-help strategies for mental health concerns. However, a handful of studies have utilized large adult samples. For example, Morgan and colleagues (2012) surveyed adults in six Western countries and asked them to rate their frequency of usage and perceived helpfulness of 26 self-help strategies. Participants reported most frequently getting out of the house, eating a healthy diet, and doing something enjoyable, and believed that the most helpful self-help strategies were exercising, engaging in an activity that gives a feeling of achievement, and doing something enjoyable. Individuals who can identify strategies that they find enjoyable and believe to be helpful are more likely to engage in these self-help behaviors.

Mental health professionals also endorse the use of self-help strategies. Morgan and Jorm (2009) identified 48 self-help strategies that were endorsed by 80% of mental health professionals and adults in the general public as likely to be helpful. These strategies fell into several categories, including lifestyle changes (e.g., exercising, doing an activity that distracts from negative thoughts), psychological (e.g., practicing regular goal setting, reading self-help books), and interpersonal (e.g., avoiding isolating oneself, joining a support group). This finding provides important insight into the types of self-help strategies that are not only preferred by the general public, but are also endorsed by mental health professionals. Parents can learn more about these strategies and promote the use of them among their children, independently of or in conjunction with formal services.

Skills to support others who are experiencing mental health challenges. While symptoms of some mental health challenges may be alleviated or reduced through self-help strategies, others require intervention from peers or adults. Mental health first aid (MHFA) actions are those that are utilized to support others who are experiencing mental health difficulties or crises (Kitchener & Jorm, 2002). MHFA actions can be broken down into five key elements, ranging from listening nonjudgmentally to encouraging the person to get professional help or utilize social supports and self-help strategies (Mental Health First Aid, 2016). Studies that have examined individual's knowledge of MHFA actions have typically presented different mental health scenarios and asked participants what they would do if the character was someone they knew and cared about (Jorm, 2012). In one such study, Jorm et al. (2005) found that the most common responses from adults were to

encourage professional help-seeking and to listen to and support the person. While these responses showed high levels of MHL and good knowledge of MHFA actions, participants across studies failed to mention other important actions, including assessing risk for an individual with suicidal ideation (e.g., Jorm et al., 2005). Jorm and colleagues (2008) found that many parents believed that it would be harmful to ask a young person with a mental illness if they were feeling suicidal; however, assessing risk of suicidality is an important element of mental health first aid (Kitchener et al., 2012), particularly for youth, who may not know how to express these feelings themselves.

Studies that have examined teens' skills to support others who are experiencing mental health challenges, particularly around suicidal ideation, highlight the importance of parent involvement. Dunham (2004) asked adolescents in the United States to read a vignette about a student who was having suicidal ideation and state what they would do if the character was their friend. Responding to a vignette where the character explicitly stated that she wanted to die, 62% of students said they would tell an authority figure such as a parent. One reason that youth are likely to seek help from an adult when they have concerns about a peer's mental health is that many youth do not have the skills and knowledge to appropriately respond to mental health crises in their peers. They thus may rely on their parents to make an informed decision. Parental involvement can lead to increased help-seeking, as they are more likely than their children to believe that seeking professional help would be helpful for youth mental health concerns (Jorm et al., 2007; Jorm et al., 2008). Although parents may have higher rates of MHFA skills than their children, many feel that their

MHFA knowledge is inadequate and would not feel comfortable intervening in a mental health challenge or crisis (Jorm et al., 2007; Kitchener & Jorm, 2008).

Self-efficacy. Self-efficacy, a concept first introduced by Albert Bandura (1977), refers to one's beliefs in his/her capability to succeed in a specific situation or task. Bandura suggests that individual with higher levels of self-efficacy will be more likely to invest themselves in the task and are generally more successful at the task than those with lower levels of self-efficacy. In regard to MHL, self-efficacy can be defined as "knowing when and where to seek help and developing competencies designed to improve one's mental health care and self-management capabilities" (Kutcher et al., 2016). Self-efficacy as it relates to mental health help-seeking thus refers to an individual's belief in their capability to recognize signs of mental illness and identify appropriate resources and services. This is an important construct, as lower levels of confidence in one's mental health skills predicts lower likelihood of referring another individual to mental health services (Anthony et al., 2015). In recent years, five studies have specifically examined self-efficacy as it relates to implementing YMHFA skills (e.g., Banh et al., 2019). While most of these studies focus on specific participant groups other than parents, one study by Jorm and colleagues (2007) found that only 35% of parents of 12-17 year-olds felt "very confident" in their ability to provide MHFA for their child. Similarly, roughly 32% of adults in Australia felt "quite a bit" or "extremely" confident in helping a young person with depression (Kelly et al., 2011). Because confidence in helping skills predicts comfort in referring an individual to mental health professionals (Jorm, 2012), more research is needed to examine U.S. parents' MHFA self-efficacy in order

to better understand their helping behaviors. Specifically, while prior research has found that higher mental health knowledge and lower stigma are associated with higher self-efficacy (Henderson et al., 2013), this association has not yet been studied in parents. In this study, we will use parents' confidence as an indicator of self-efficacy.

Mental health stigma. An important component associated with increased help-seeking is low levels of stigma related to mental illness and receiving mental health treatment. Mental health stigma can be defined as "objectifying and dehumanizing a person known to have or appearing to have a mental disorder" (Mendoza et al., 2015, p. 206). Self-stigma may influence one's decision to seek help for themselves or for others (Cauce et al., 2002), as they may fear judgment from others or have negative beliefs about treatment in general. Importantly, there is an association between parent and adolescent stigma such that high parental stigma regarding mental illness is associated with high stigma in their adolescents (Jorm & Wright, 2008). Thus, parental stigma not only inhibits the help-seeking process for youth mental health issues, but may also contribute to high stigma in children. High parental stigma can also lead to an inclination to conceal their children's mental health problems from other people; this inclination is associated with high adolescent self-stigma (Moses, 2011), and may also inhibit help-seeking. Youths' perceptions of their parents' mental health stigma can also inhibit help-seeking, such that anticipation of negative parental responses toward seeking mental health services is associated with decreased willingness to address mental health concerns (Chandra & Minkovitz, 2006). Furthermore, high parental stigma can decrease their involvement

in the treatment process. Butler (2014) examined the correlation between shared decision-making and stigma and found that higher parent stigma significantly correlated with decreased shared decision-making, which is a parent's involvement in making treatment decisions alongside the provider. Shared-decision making between a parent and a provider has been found to correlate with lower mental health impairment in children (Butler, 2014). High levels of stigma can thus negatively impact parents' decision to seek and become involved in treatment.

Not only does one's own stigma affect help-seeking, the perception of others' beliefs can also serve as a barrier to seeking mental health services. Parents may be hesitant to seek treatment for their children or tell others about their children's mental health difficulties due to concerns about other people's stigmatized beliefs about mental illness (Banh et al., 2019), even if the parents themselves do not hold these beliefs. In a study of over 1,000 parents, 20% believed that mental health problems should be handled privately and one third thought that others would avoid their child if the mental illness was discovered (The Jed Foundation, 2006). Additionally, parents are likely to be affected by "courtesy stigma," which is the negative impact that can result from being associated with a person who is marked by a stigma (Goffman, 1963). Research has shown that parents of children with mental illnesses experience significant discrimination, which is attributable to common stereotypes (Corrigan & Miller, 2004). One such stereotype is that parents are to blame for a child's mental illness (Corrigan et al., 2000). The notion that parents either pass on flawed genetic traits (nature) or have poor parenting skills (nurture) which then leads to the development of youth mental health disorders contributes to highly stigmatized

views of parents whose children have mental health challenges (Corrigan & Miller, 2004). Thus, stigma not only affects the individual with a mental illness, but also the family members of that individual. While most studies focus on parents' own levels of stigma, the notion of courtesy stigma highlights the need to also assess and address parents' perceptions of others' beliefs.

Mental Health First Aid

Based on their systematic review of quantitative and qualitative studies, Reardon and colleagues (2017) suggested that to facilitate youth access to mental health treatment, interventions are required to improve parents' identification of mental health problems, reduce stigma, and increase awareness of how to access services. In recent years, researchers have been working to develop evidence-based interventions that target these areas of need across the general population. Mental Health First Aid (MHFA) is one such program that has been well-researched and widely implemented. MHFA is an 8-hour manualized course that teaches participants how to identify and respond to signs of mental illnesses and substance use disorders (National Council for Behavioral Health, 2018). The program, which began in Australia, was co-created by Anthony Jorm, the professor who coined the term "MHL," and his wife Betty Kitchener, a nurse, in 2001 and became popular in the U.S. after the Substance Abuse and Mental Health Services Administration (SAMHSA) added it to the National Registry of Evidence-Based Programs in 2012. MHFA teaches participants a five-step action plan to support individuals developing signs and symptoms of a mental illness or emotional crisis. The steps include: **A**ssessing for risk of suicide or harm; **L**istening nonjudgmentally; **G**iving reassurance

and information; **E**ncouraging appropriate professional help; And **e**ncouraging self-help and other support strategies (ALGEE).

MHFA has been widely implemented in the United States, with more than 1 million people trained across all 50 states as of 2018 (National Council for Behavioral Health, 2018). Many organizations and universities have trained their employees and students in MHFA to increase understanding of mental health. MHFA has been delivered and studied in populations such as firemen (Moffitt et al., 2014), student affairs staff (Massey et al., 2014), teachers (Jorm et al., 2010), and pharmacy students (O'Reilly et al., 2011). Research on MHFA outcomes typically focuses on (a) changes in trainee knowledge, (b) changes in attitudes, and (c) self-reported intention or provision of helping behavior. Recent meta-analyses on MHFA suggest improvements in all three of these areas, including increased knowledge about mental health, decreased stigma, and increased confidence in approaching and providing aid to an individual experiencing a mental health disorder or crisis (Hadlaczky et al., 2014; Maslowski, 2018). Both meta-analyses found medium effect sizes for MHFA trainees' knowledge and behavior outcomes, and small effects for attitude.

Youth Mental Health First Aid

Following the success of the MHFA program, the Youth Mental Health First Aid (YMHFA) program was developed to teach adults the risk factors and warning signs of a variety of mental health challenges common among adolescents. YMHFA USA was developed in 2008 by the National Council for Behavioral Health and the Georgetown University Center for Child and Human Development. The program focuses on youth aged 12-18, with specific emphasis on typical versus atypical

adolescent development and mental health concerns that are most prevalent in adolescence, including depression, eating disorders, and substance abuse. The training, like the adult version, teaches the ALGEE action plan and provides participants with multiple opportunities to practice applying the skills to vignettes about adolescents experiencing a variety of mental health concerns. Since 2014, the Substance Abuse and Mental Health Services Administration has granted over $15 million to state and local education agencies to deliver YMHFA USA to adults who interact with school-aged youth to increase mental health awareness and service-capacity. With the devotion of significant resources to the dissemination of YMHFA USA comes a need for rigorous evaluation of the program. Presently, however, few studies have solely examined the efficacy of the training; Several studies combine results from the adult and youth versions of the training, making it difficult to determine the effects of the YMHFA USA training specifically.

To my knowledge, only six publicly available studies have examined the effects of YMHFA USA. These studies have examined the effects of YMHFA USA on MHL, including mental health knowledge and stigma, as well as both intentions to offer assistance to youth and actual assistance. For example, one study reported that social service workers were better informed regarding when to assess for suicide, how to listen nonjudgmentally, and how to encourage professional help and the use of self-help strategies after completing YMHFA USA (Aakre et al., 2016). Participants were also better about to identify appropriate helping behaviors in response to written vignettes, were more likely to provide help to youth, and had higher knowledge of MHFA actions. In a similar study conducted with over 350 schoolteachers,

Gryglewicz and colleagues (2019) found that YMHFA USA leads to significant improvements in mental health literacy, confidence in one's ability to identify and respond to students with mental health problems, and intentions to engage in help-seeking behaviors with students. They also reported a significant decrease in negative attitudes toward youth with mental health problems. Other studies have found similar outcomes with juvenile justice staff (Anderson et al., 2020), child-serving professionals such as teachers and child welfare employees (Childs et al., 2020), social work students (Rose et al., 2019), and county workers (Haggerty et al., 2018). These positive findings related to mental health literacy, attitudes and beliefs about performing helping behaviors, and stigma have been found to persist at three- and five-month follow-up among county workers and social work students, respectively (Haggerty et al., 2018; Rose et al., 2019).

While some research has examined trainees' intentions to utilize the action plan, fewer studies have explored implementation of helping behaviors. One study of the Australian version of YMHFA, which covers much of the same content as the USA version but is 14-hours long, found significant increases in participants' MHFA actions (Kelly et al., 2011). At six-month follow-up, 88.4% of participants had talked to a young person about a mental health problem, and there were significant increases in recommending professional help, recommending self-help strategies, and giving information about local services. On the other hand, Jorm and colleagues (2010) implemented the Australian YMHFA training in a high school and found that teachers' helping behaviors for individual students did not significantly change after the training. This discrepancy, as well as the general lack of research on self-reported

helping behaviors after the YMHFA USA training, highlights the need for further research in this area. Furthermore, while studies of YMHFA USA have included participants such as social service employees (Aakre et al., 2016), school personnel (Gryglewicz et al., 2018), social work students (Rose et al., 2019), and county workers (Haggerty et al., 2018), no studies to my knowledge have examined the effects of YMHFA USA on parents. The one study that has examined the impact of YMHFA on parents was conducted in overseas using the Australian version of the training, and the authors reported that parents demonstrated increased knowledge about mental health problems, confidence in helping a young person, and intentions to provide effective support at one-year follow-up (Morgan et al., 2019). This finding supports the need for an evaluation of the YMHFA USA program with parents.

Chapter 3: Methods

The present study examines parental beliefs, behaviors, and knowledge before, immediately after, and two-months following completion of YMHFA USA.

Study Characteristics

Participants

A total of six trainings were provided at no cost to participants, including five trainings in local schools and one training at a large university. Due to the author's community ties and her advisor's connections in the Chinese-American community, one large public school system in Maryland and several Chinese-American organizations were targeted for participant recruitment. To recruit parents, flyers were sent to school districts' county-wide and school-specific Parent Teacher Associations (PTA), community centers, and Chinese language schools. Flyers were also posted to local communities on websites such as NextDoor and Facebook parenting groups and hung up in coffee shops, restaurants, and grocery stores. A total of 139 parents were trained; however, 32 parents did not complete the pre-test and/or post-test. The present study included only participants who completed both surveys and had at least one child under the age of 21, yielding a total sample size of 107 parents. Four parents missed at least one training session, but were included in the analyses because the completed both surveys. Parents of children between 18 and 21 years old were included in the study as public schools serve youth and young adults through age 21, particularly students with disabilities, which can include severe social, emotional, and behavioral difficulties. However, only four participants did not have a child under the age of 18.

Participants (M_{age} = 44.99, *SD* = 6.48) were predominantly mothers (84.11%) with teenage children (M_{age} = 13.43, *SD* = 5.33). Their children ranged in age from 8 months to 34, but all had at least one child under 21. Parents had between one and five children, with a mean of 2.02 children (*SD* = .85). The sample was diverse – 48.60% White, 36.79% Asian, 9.43% Black or African American, 3.74% Hispanic, and 0.93% multi-racial. Fifty-four percent (54.21%) of participants were born in the U.S. Participants who were born outside of the U.S. had been living in the country for an average of 20.23 years (*SD* = 10.93 years) with a minimum of one year and a maximum of 47 years. Participants were highly educated, with 50.47% holding a master's degree, 20.56% with a bachelor's degree, 18.9% with a professional or doctorate, and 7.48% with a high school diploma or less.

The majority of participants had never attended a mental health training (85.2%); those who had completed a mean of 11.5 hours of training (*SD* = 16.56). Most parents knew someone who had been diagnosed with a mental illness (68.9%), including 18.3% who had been diagnosed themselves, 38.8% whose relative had been diagnosed, 29.1% whose friend had been diagnosed, and 18.4% whose child held a mental health diagnosis. Sixty-seven percent (67.0%) of participants knew someone who had received mental health treatment from a professional, including 22.4% who had received treatment themselves, 36.8% whose relative had received treatment, 22.4% whose friend had received treatment, and 21.7% whose child had received mental health treatment. Full participant demographics can be found in Table 1.

Procedure

Trainings were provided by members of the author's research lab at the University of Maryland, including two doctoral students, one post-doctoral fellow, and one licensed psychologist/professor. All of the trainers are certified instructors who have completed a one-week training and will follow the manualized YMHFA USA program. When signing up for the training, all participants were asked to sign a consent form. Parents who were interested in the training but did not wish to participate in the study were allowed to do so. The week before the training, parents who had consented to study participation received an email asking them to complete an electronic pre-test (survey) through Qualtrics. Participants who did not complete the online pre-test were asked to complete a hard-copy version at the beginning of the training. The YMHFA USA training was then provided to parents over one eight-hour period ($N = 1$), over two four-hour sessions ($N = 2$), over three sessions ($N = 1$), or over four sessions ($N = 2$). See Table 2 for training characteristics.

The first half of the trainings covers the topics of mental health and wellbeing, typical vs. atypical adolescent development, signs and symptoms of mental health problems that typically develop in adolescence, self-injurious behavior, risk and protective factors, and assessing for risk of self-harm and suicidality. The second half focuses on the five-step action plan and provides multiple opportunities for participants to practice the ALGEE model and discuss how to intervene during a mental health challenge and crisis. Several group activities allow participants to work through examples of common adolescent mental health problems including anxiety, depression, eating disorders, substance abuse, and attention and disruptive disorders. Although no formal fidelity check was utilized, trainers closely followed the

instructor manual and created an outline of important topics and activities that each instructor would cover. At the conclusion of the training, participants were asked to complete the post-test on paper and were then given the training manual (worth $20) for free. Two-months after the completion of the training, all participants received an email asking them to complete the follow-up measure within two weeks. Participants who completed all three phases of the study were entered to win a $20 Amazon gift card. See Table 3 for a description of measures included in each wave of data collection.

Measures

Demographics

Participants were asked to complete a demographics questionnaire that included items on age, gender identity, race/ethnicity, highest degree earned, previous mental health trainings, age and sex of child(ren), and prior experience with mental illness and mental health treatment. See Appendix B for the full questionnaire.

Mental Health Literacy Scale (MHLS)

The MHLS is a 35-item measure that assesses the components of MHL and attitudes that promote recognition or appropriate help-seeking behavior (O'Conner & Casey, 2015; Appendix C). Respondents were asked to respond to a variety of questions on Likert-scales, including anchors ranging from "very unlikely" to "very likely" (1-4), "very unhelpful to very helpful" (1-4), "strongly disagree" to "strongly agree" (1-5), and "definitely unwilling" to "definitely willing" (1-5). A total score is derived from the sum of all items, with higher overall scores indicating higher levels of MHL. Scores range from 35 to 160. The MHLS is a univariate scale with overall

Cronbach's alpha of 0.87 and good test-retest reliability (0.79; O'Conner & Casey, 2015). Cronbach's alpha was calculated with the participants of the present study and was found to be very good with $\alpha = 0.89$ at pre-test, $\alpha = 0.86$ at post-test, and $\alpha = 0.85$ at follow-up.

Parental Attitudes Toward Psychological Services Inventory (PATPSI)

The PATPSI is the first measure of adult help-seeking attitudes toward child mental health services (Turner, 2012; Appendix D). The 21-item measure examines parents' help-seeking intentions, stigmatization, and help-seeking attitudes. Respondents were asked to rate the degree to which they agree with items on a zero to five Likert scale. Sample items include, "If I believed my child were having a mental breakdown, my first decision would be to get professional help" (help-seeking intention), "I would not want to take my child to a professional because of what people might think" (stigmatization), and "Strong willed parents can handle problems without professional help" (help-seeking attitudes). The stigma and attitude scales have scores from zero to 40 and the intentions scale is scored from zero to 25. The scale was factor analyzed and has demonstrated moderate to high internal consistency, with help-seeking intentions $\alpha = 0.70$, stigmatization $\alpha = 0.89$, and help-seeking attitudes $\alpha = 0.88$ (Turner, 2012). For the present sample internal reliability was adequate. At pre-test, the help-seeking intentions scale was $\alpha = 0.62$, stigmatization $\alpha = 0.77$, and help-seeking attitudes $\alpha = 0.74$. At post-test, help-seeking intentions $\alpha = 0.69$, stigmatization $\alpha = .69$, and help-seeking attitudes $\alpha = 0.65$. At two-month follow-up, help-seeking intentions $\alpha = 0.63$, stigmatization $\alpha = .71$, and help-seeking attitudes $\alpha = 0.65$. The PATPSI was developed and tested with

different racial groups, including European-, African-, Hispanic-, and Asian-American parents; internal reliability for the three subscales was higher for European Americans than parents in other racial groups (Turner, 2012).

Behavioral Intentions

Parents' first aid intentions were measured with two open-ended questions which asked participants what they would do to help two young people with mental health challenges portrayed in vignettes about depression and schizophrenia (Kelly et al., 2011; Appendix E). Both responses were scored on a 10-point scale based on a checklist that assessed responses for the five steps of the ALGEE action plan. If participants mentioned an ALGEE step, they were awarded two points (e.g., "I would listen nonjudgmentally"). One point is given for a superficial response without details (e.g., "I would listen to the child"), and zero points are given for inadequate responses or those that do not mention an ALGEE step. Two coders rated 20% of the responses to ensure inter-rater sufficient reliability. For each step of ALGEE, the scores between the two coders were compared and given one point if they were the same and zero points if they were different. Points earned between the coders were divided by the total number of possible points, and reliability was found to be adequate – 82.72%. The author then coded the remaining responses independently. This measure was created by MHFA instructors and researchers, and was initially used with adults from the general community in Australia.

Helping Behaviors

To examine parents' self-reported helping behaviors, participants completed a modified four-item measure originally developed by Kelly and colleagues (2011; Appendix F). Participants were asked about the frequency with which they have encountered and talked to a young person about a mental health problem in the past two months. An item about frequency of coming into contact with a youth with a mental health difficulty was added to the measure for this study. Frequency was scored on a four-point scale: never (0), once (1), a few times (two to five times; 2), or many times (>5 times; 3). If participants had talked to a young person about a mental health problem, they were asked to select all of the actions they took from a list of nine options (e.g., spent time listening to their problem; recommended they seek professional help). For each action taken, participants earn one point, with higher overall total scores indicating higher levels of helping behaviors.

MHFA Self-Efficacy

Parents' self-efficacy in MHFA skills was assessed using Haggerty and colleague's (2018) measure, which was developed by YMHFA USA instructors and initially used with adults in the mental health workforce and in the non-mental health workforce (e.g., teachers, nurses, secretaries). Items include five questions aimed at measuring trainees' confidence in executing the YMHFA five-step action plan. A sample item is, "I feel confident in my ability to ask school-aged youth questions that determine whether they are at risk to physically harm themselves or others." Each item is scored on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Responses to each item are averaged for a total score, with scores closer to five indicating higher confidence. Cronbach's alpha for this measure was 0.91 (Haggerty

et al., 2018). With the current sample, internal consistency was at a desirable level – pre-test was calculated at $\alpha = 0.86$, post-test at $\alpha = 0.88$, and follow-up at $\alpha = 0.88$. See Appendix G for the full measure.

Acceptability Scale

Overall program satisfaction was assessed through a five-question scale created to assess the acceptability of parenting interventions, initially with Chinese parents (Fabrizio et al., 2013; Appendix H). The measure uses a five-point Likert scale ranging from "strongly disagree" to "strongly agree." To increase readability of the items, the questions were turned into statements. For example, "How much did you like the program" was changed to "I liked this program" to better match the scale's anchors. Cronbach's alpha for the five items was desirable – calculated at $\alpha = 0.85$.

Open-Ended Questions

To collect qualitative data, parents were asked to complete a total of six open-ended questions (Appendix I). The questions explore parents' reasons for enrolling in the training (pre-test) and what they hoped to get out of the training (pre-test), beliefs about the training's benefits and areas for improvement (post-test), and what content or skill they found most helpful and how they had used that content or skill since completing the training (follow-up).

Analyses

Data were collected in Qualtrics and then entered into SPSS. Participants who completed only one phase of data collection (e.g., just the pre-test) were removed from analysis. There were only a few missing data. I used Little's MCAR test to

determine if data were missing completely at random. MCAR test confirmed that data were missing completely at random. Missing data were then replaced with the mean score of available items for the participant for each scale, with the exception of behavioral intentions, which was analyzed only with the available data. For the MHLS, which has 15 items on a four-point scale and 20 items on a 5-point scale, missing data were replaced with the mean of same-scale items (e.g., if item 12 was missing for a participant, it was replaced with the mean of items 1-15 for that individual). Intraclass correlations were conducted to determine if the data was nested by training cohort, and it was not (all ICC < 0.05, with exception of MHLS ICC $= 0.24$). Paired sample t-tests were conducted to examine the quantitative research questions to determine if significant changes in MHL, attitudes toward mental health services, intentions to seek professional help, stigma, self-efficacy, and behavioral intentions to use ALGEE occurred from pre-YMHFA USA to immediately post-training. A paired sample t-test was also conducted from post-test to two-month-follow-up to determine if changes persisted eight weeks after the training. Finally, a paired sample t-test with pre-test and follow-up data was conducted to examine the impact of the training on parents' self-reported MHFA actions. This design has commonly been used to evaluate different MHFA trainings (e.g., Gryglewicz et al., 2019; Aakre et al., 2016) and takes into account a limited sample size.

To analyze the qualitative (open-ended) data, an emergent coding process was utilized (Braun & Clark, 2006). First, all responses were pulled from the survey verbatim and added to an Excel sheet. Two coders (the author and a second doctoral student) then reviewed all of the quotes and familiarized themselves with the data.

They generated broad labels or codes that captured the essence of participant responses based on the response to the open-ended questions. For example, one code was “Improvements to the training.” After all of the open-ended responses had been labeled/coded, the two coders re-examined the codes and generated specific themes that described or captured the meaning of the response. For example, one theme was “Changes to the structure of the training.” These themes are more specific than the broad labels assigned during phase one. Once a set of codes and themes was agreed upon, the two coders independently coded a small subset (5%) of the responses. The coders met to discuss areas of disagreement and challenges that arose during the coding process. The codes/themes were then revised for clarity, and the coders re-coded the responses. Next, 20% of the responses were randomly selected and coded independently by each coder. Inter-rater agreement was calculated and was deemed acceptable at 88.24%. The author then independently coded the remaining responses. Themes were later organized into more specific sub-themes (e.g., “Improvements to the cultural relevance of the training”). Because the sample was racially diverse, a series of chi-squared tests was conducted to determine if there were differences in the themes by race. Due to the small number of participants in some racial groups (e.g., Latinx $n = 4$), race was broken into two categories for the Fisher tests: White ($n = 52$) and non-White (Latinx, Black, and Asian together; $n = 55$).

Chapter 4: Results

Quantitative

First, paired sample t-tests were conducted for pre- and post-test data for overall MHL, help-seeking intentions, stigma, attitudes toward seeking professional help, self-efficacy in MHFA skills, and intentions to use MHFA actions. Using Normal Q-Q plots and the Shapiro-Wilk test for normal data, the data utilized for the t-tests was analyzed and determined to be approximately normally distributed. As displayed in Table 4, participants showed statistically significant ($p < 0.05$) improvements in each construct after participating in YMHFA USA.

Research Question 1

Overall scores for MHL increased from a total mean of 128.72 ($SD = 13.85$) to a total mean of 136.59 ($SD = 12.11$), a medium effect size of $d = 0.61$. The change from pre- to post-test was statistically significant, indicating that MHL scores did improve after the training ($M_{diff} = -7.87$ $SD = 9.97$, $t = -8.12$, $p = 0.00$). The pre-test scores suggest that participants had high levels of MHL prior to the training, as the MHLS has a maximum score of 160 and a minimum score of 35.

Research Question 2

Help-seeking intentions, as measured by the PATPSI, increased from pre-test ($M_{intent} = 19.86$, $SD = 3.94$) to post-test ($M_{intent} = 21.42$, $SD = 4.04$) and this change was statistically significant ($M_{diff} = -1.56$, $SD = 4.22$, $t = -3.79$, $p = 0.00$) with a medium effect size of $d = 0.39$. Attitudes toward seeking professional help also became more positive from pre-test ($M_{attitude} = 32.12$, $SD = 5.96$) to post-test ($M_{attitude} = 34.45$, $SD = 4.78$). This change was also statistically significant ($M_{diff} = -2.33$, $SD =$

5.02, $t = -4.69$, $p = 0.00$) with a medium effect size of $d = 0.43$. The final component of the PATPSI, stigma, decreased significantly from pre-test ($M_{stigma} = 10.53$, $SD = 6.43$) to post-test ($M_{stigma} = 8.06$, $SD = 5.79$). This was a mean change of 2.47 ($SD = 5.44$, $t = 4.67$, $p = 0.00$), indicating that participants had lower levels of stigma after completing YMHFA USA. The effect size for stigma was $d = 0.40$.

Research Question 3

Self-efficacy in MHFA skills increased significantly. Prior to the training, many participants indicated that they either strongly disagreed, disagreed, or neither agreed nor disagreed with the five statements about confidence in MHFA skills ($M = 15.96$, $SD = 4.49$); after the training, participants primarily agreed or strongly agreed that they felt confident in their MHFA skills ($M = 21.86$, $SD = 2.90$). This is a mean change of -5.90 ($t = -14.12$, $p = 0.00$), which is statistically significant. There was a large effect size for self-efficacy, with $d = 1.56$.

Behavioral intentions to use MHFA skills were also examined, and results indicate that there was an improvement in participants' knowledge of and intentions to use appropriate MHFA actions for a youth with depression and a youth with schizophrenia. A paired sample t-test was conducted between the pre-test and post-test scores for each vignette. For depression, participants' intentions to use MHFA skills increased from a mean of 2.24 to 4.17 ($M_{diff} = -1.94$, $SD = 2.16$, $t = -8.66$, $p = 0.00$). The effect size was large: $d = 1.18$. Prior to the training, scores ranged from zero to seven; following the training, scores ranged from zero to ten, indicating that participants had more knowledge of MHFA actions and increased intentions to utilize these actions following the training. Changes in behavioral intentions to use each

ALGEE action was analyzed and significant increases were found for all steps with the exception of encouraging professional help, which had the highest overall score at pre-test (see Table 5). Paired t-tests indicated the following improvements: Assessing risk of self-harm (M_{diff} = -1.15, SD = 0.97, t = -11.48, p = 0.00), listening nonjudgmentally (M_{diff} = -0.39, SD = 0.83, t = -4.47, p = 0.00), giving reassurance and information (M_{diff} = -0.22, SD = 0.64, t = -3.24, p = 0.00), encouraging professional help (M_{diff} = -0.02, SD = 0.86, t = -0.24, p = 0.81), and encouraging self-help strategies (M_{diff} = -0.15, SD = 0.62, t = -2.32, p = 0.02). For schizophrenia, participants' behavioral intentions increased from a mean of 1.29 to 3.03 (M_{diff} = -1.74, SD = 1.82, t = -9.16, p = 0.00). The effect size was large: d = 1.22. Scores prior to the training ranged from zero to four, while scores after the training ranged from zero to eight. There was also a statistically significant increase for intentions to use each of the five steps of ALGEE: Assessing risk of self-harm (M_{diff} = -0.41, SD = 0.70, t = -5.68, p = 0.00), listening nonjudgmentally (M_{diff} = -0.58, SD = 0.62, t = -8.98, p = 0.00), giving reassurance and information (M_{diff} = -0.33, SD = 0.49, t = -6.33, p = 0.00), encouraging professional help (M_{diff} = -0.18, SD = 0.74, t = -2.39, p = 0.02), and encouraging self-help strategies (M_{diff} = -0.23, SD = 0.54, t = -4.08, p = 0.00). See Table 6 for these analyses.

Changes in self-reported MHFA actions were examined by conducting a paired sample t-test between the pre-test report of MHFA actions in the last two months and the identical item on the follow-up survey. Sixty-three participants reported their MHFA actions in the two months prior to and following the training. Results from the t-test indicate that parents' self-reported MHFA actions increased

from pre-training (M_{MHFA} = 0.81, *SD* = 1.03) to follow-up (M_{MHFA} = 1.14, *SD* = 1.29). This increase is significant (M_{diff} = -0.33, *SD* = 1.22, *t* = -2.17, *p* = 0.03) and has a small effect size *d* = 0.28.. See Table 7 for information on the frequency with which parents talked to youth about mental wellbeing and mental health concerns at both pre-test and follow-up. At pre-test, the most commonly utilized MHFA actions utilized with a youth in the past two months were listening to the youth's problems (62.62%) and helping the youth calm down (48.60%). At follow-up, the most commonly utilized MHFA actions were listening to the youth's problems (46.88%) and encouraging the youth to use self-help strategies (40.63%). See Table 8 for additional information on self-reported MHFA actions.

Research Question 4

To determine if these positive results were maintained at two-month follow-up, paired sample t-tests were conducted between the post-test and follow-up data. Sixty-four parents completed the follow-up survey. MHL did not change significantly and remained high (M_{MHL} = 137.11, *SD* = 10.87; Md_{iff} = -0.28, *SD* = 2.54, *t* = -0.34, *p* = 0.74, *d* = 0.02). There were also no significant changes in stigma (Md_{iff} = -0.45, *SD* = 4.16, *t* = -0.87, *p* = 0.39, *d* = 0.08), intentions to seek help (Md_{iff} = 0.30, *SD* = 3.56, *t* = 0.68, *p* = 0.50, *d* = 0.08), or attitudes toward help-seeking (Md_{iff} = 0.53, *SD* = 4.58, *t* = 0.92, *p* = 0.36, *d* = 0.11). Self-efficacy significantly decreased from post-test to follow-up (Md_{iff} = 0.67, *SD* = 2.54, *t* = 2.04, *p* = 0.05, *d* = 0.23). Behavioral intentions for depression significantly decreased (Md_{iff} = 0.84, *SD* = 2.51, *t* = 2.50, *p* = 0.02, *d* = 0.40), as did behavioral intentions for schizophrenia (Md_{iff} = 0.84, *SD* = 3.17, *t* = 2.25, *p* = 0.03, *d* = 0.48). See Table 9.

However, all follow-up scores remained significantly higher than pre-test scores. Self-efficacy improved 5.60 points from pre-test to follow-up (M_{diff} = -5.60, SD = 3.81, t = -11.56, p = 0.00, d = 1.49). MHFA intentions for depression increased 1.34 points from pre-test to follow-up (M_{diff} = -1.34, SD = 2.26, t = -4.31, p = 0.00, d = 0.75), and MHFA intentions for schizophrenia increased 1.02 points from pre-test to follow-up (M_{diff} = -1.02, SD = 2.26, t = -4.31, p = 0.00, d = 0.40). See Table 10.

Research Question 5

Finally, descriptive statistics were reviewed to examine the acceptability of the training. Participants answered five questions on a one to five scale, with higher scores indicating higher levels of program acceptability. Scores ranged from a minimum of nine to a maximum of 25, with a mean score of 23.82 (SD = 2.52). The majority of participants strongly agreed that they liked the program (86.1%), found it to be useful (85.3%), were satisfied with the program (79.0%), felt the program met their expectations (78.2%), and would recommend it to their family and friends (88.1%). See Table 11.

Qualitative

Codes were generated from participants' answers to six open-ended questions across the three waves of qualitative data collection. These codes include reasons for signing up for the training/goals for learning outcomes, beneficial aspects of the training, and improvements to the training. Themes were then developed within each of these broad categories. Under reasons for signing up for YMHFA USA and goals for learning outcomes, themes include a) desire for knowledge and skills, b) having multiple roles that necessitate interactions with youth, c) prior experience with mental

illness, and d) the increasing prevalence of youth mental illness. Five themes were identified around the most beneficial aspects of YMHFA USA for parents, including a) learning the ALGEE action plan, b) participating in roleplays and examples, c) gaining information about youth mental illness, d) having a positive/open training environment, and e) learning strategies for understanding and interacting with youth without mental health difficulties. Finally, improvements to YMHFA USA were suggested in regard to both the content and structure of the training. Themes also include more specific subthemes that emerged – these are italicized in the sections below. For broad themes, the percentage given represents the number of participants who mentioned that theme out of the total 107 participants. For the subthemes, percentages are based on the number of participants that mentioned the theme divided by the number of participants who mentioned each specific subtheme. Tables 12-14 depict percentages of themes and subthemes for each coding area. As part of an exploratory analysis, we used chi square difference test to examine whether there were racial differences (white vs. non-white) in the themes and subthemes.

Reasons for Signing up for YMHFA USA and Goals for Learning Outcomes

Four broad themes emerged regarding parents' reasons for signing up for the training and goals for learning outcomes.

Desire for Knowledge and Skills. Eighty-nine parents (83.18%) shared that they signed up for YMHFA USA in order to increase their knowledge about mental illness and develop MHFA skills. Numerous subthemes emerged, including the desire to *prepare for possible youth mental health challenges* (N = 58, 65.12%), *recognize warning signs* (N = 52, 58.43%), *learn more about mental illness and typical*

adolescent development (N = 25, 28.09%), *prevent the development of mental illness and promote mental wellbeing* (N = 10, 11.24%), *develop skills to assist with existing mental health concerns* (N = 5, 5.62%), and *find ways to talk to youth about mental health* (N = 4, 4.45%). A chi-square test revealed that White parents mentioned the overall theme of wanting to gain knowledge and skills from the training at a slightly higher rate ($n = 47$) than did non-White parents ($n = 42$, $\chi^2 = 3.76$, $p = 0.05$).

Over half of parents who mentioned a desire for knowledge and skills shared that they want to be prepared in the event that youth mental health concerns arise in their children in the future. These participants signed up for YMHFA USA to learn preemptive skills and knowledge that they can apply if necessary. For example, participant 023 shared, "As the parent of two girls, I would like to be able to help guide them through adolescence and be able to advise them as they or their friends face challenges with metal health." Several participants noted that they would like to be prepared to intervene in the event of a mental health challenge in their own children, friends, relatives, and members of their communities. There were no differences in this subtheme by race ($\chi^2 = 1.193$, $p = 0.28$).

Fifty-two parents indicated that they hoped to learn to recognize warning signs of mental health difficulties or crises. Several participants shared that they do not know common signs and symptoms of youth mental illnesses and would not be able to confidently recognize red flags. Some parents also noted that they want to be able to intervene early when mental health challenges arise, and thus signed up for YMHFA USA to learn common early signs of mental health difficulties. Participant 054 stated:

> My interest in the training was prompted by having a teenager. Although I know this is a turbulent time in life, I want to make sure I'm not missing something out of the ordinary. I hope to gain knowledge to recognize when my son(s) or someone else may need help.

This theme was mentioned more frequently by White parents (n = 31) than non-White parents (n = 21, χ_2 = 4.92, p = 0.03).

Similarly to feeling like they did not have sufficient information about warning signs of mental illness, 26 parents shared that they wanted to learn more about types of mental illness (e.g., depression, anxiety) as well as about typical adolescent development. A few parents said that they would like to learn about the emotional and mental experiences of youth. One mom stated, "[I want] to understand the emotions that my kids could go through during their adolescence" (participant 014). Another mother shared that she has sufficient knowledge about physical health but wanted to learn more about mental health, specifically with children and adolescents (participant 086). In this vein, numerous parents across trainings shared that while they were certified in CPR and physical first aid they had no formal education on mental health. Significantly more non-White parents mentioned a desire for knowledge about mental health (n = 20) than did White parents (n = 5, χ_2 = 10.68, p = 0.00).

A handful of parents (13.48%) shared a desire to learn how to prevent the development of youth mental illness and promote mental wellbeing. Participants shared interests in helping their children develop coping skills and healthy lifestyles, and wondered if it was possible to take actions that would prevent the development of mental health difficulties. One parent shared that her goal was "To help my children to develop self-esteem and self-worth and to help them develop coping strategies for

bullying, etc." (participant 065). Like this mother, several other participants indicated a desire to learn more about risk and protective factors for youth mental health. The frequency of this subtheme was not significantly different by race ($\chi^2 = 0.57$, $p = 0.45$).

Five parents specifically mentioned their children's current mental health difficulties in their open-ended responses and shared that they wanted to develop additional skills for addressing these challenges. One parent shared that she was hoping to develop the "Ability to better care for my daughter (anxiety high, severe depression with suicidal intent)" (participant 049). Rather than preparing for future challenges or crises, these five parents were already experiencing these difficulties and were hoping to take home knowledge and skills that would decrease their children's symptomology or struggling. More information about the influence of this training experience for parents with prior mental illness experience is provided in subsequent sections. The frequency of this subtheme was not significantly different by race ($\chi^2 = 0.16$, $p = 0.69$).

Finally, four parents stated that they wanted to learn how to discuss mental health and mental illness with their children. These participants noted that it can be difficult to talk about these topics, especially with younger children. One parent shared, "I hope to learn how to discuss mental health with my children in a way that they will understand" (participant 076). Additionally, parents who have experienced mental health difficulties wanted guidance on how to talk about their own struggles with their children in developmentally appropriate ways. There were no significant differences in the frequency of this subtheme by race ($\chi^2 = 0.00$, $p = 0.95$).

Having Multiple Roles with Youth. When sharing their reasons for signing up for YMHFA USA, 28 (26.17%) parents discussed the multiple roles they have that provide opportunities to interact with children or youth. Participants had professional roles including teachers, paraeducators, social workers, and advisors. Other parents discussed their roles in the community as youth group leaders, PTA members, and coaches. Across their roles, participants shared a desire to help their own children and other youth they work with in different settings. Participant 076 noted, "I hope that this training will benefit my children and other children in my community, and that I can translate some of the information I learn to be useful in support[ing] the students I interact with at the University." This theme was mentioned more frequently by White parents (n = 19) than non-White parents (n = 9, χ_2 = 5.63, p = .02).

Experience with Mental Illness. Nineteen participants (17.76%) shared that they had prior experiences with mental illness, which prompted them to sign up for YMHFA USA. Parents wrote about their own struggles with mental illness (n = 3), the experiences of loved ones such as family (n = 9) and friends (n = 4), and existing mental health concerns among their own children (n = 8). One parent talked about her own experiences with mental illness and her desire to intervene early with her children, stating, "I have dealt with depression and anxiety since puberty. My two sons are starting to show signs of anxiety, so I am interested in helping them" (participant 008). Several parents mentioned that they did not want their children to have negative experiences around mental health the way that they did when growing up. For example, participant 010 shared:

With two daughters who are about to reach adolescence, I am interested in

> being able to recognize the signs of mental illness and the different ways that I can help them to understand and/or treat any problems that arise. I would like them to know that mental health is an important part of their lives, and that many people deal with these issues every day. I also don't want them to struggle with their problems as much as I, my family, and my friends have in the past.

There were no significant differences in this theme by race ($\chi^2 = 0.15$, $p = .70$).

Increasing Prevalence of Mental Illness. Lastly, parents shared concerns about the increasing prevalence of youth mental illness and the day-to-day demands placed on children (8.41%). Participants talked about the changing world, and the new stressors children face that parents did not deal with during their own youth. For example, participant 042 shared that trainings such as YMHFA USA are important given "the increasing online world and new demands on our teens." Several parents referred to the rates of youth mental illness as a crisis and a more pressing issue than it was in the past. Changes to society and the rates of mental illness led some parents to think about how their children are growing up and what can be done to support them. Participant 046 stated, "In today's society, the rate of anxiety, depression, drugs, alcoholism and suicide continue to increase. I think about the society my stepsons live in and hope to find ways to help them, as well as be aware and more knowledgeable on resources." As seen in this quote, many participants' reasons for signing up for the training closely aligned with what they hoped to learn. A chi-squared test revealed no significant differences in the prevalence of this theme by race ($\chi^2 = 0.19$, $p = 0.66$).

Beneficial Aspects of YMHFA USA

Participants commonly shared five main benefits of the training at post-test. These themes are outlined below.

Learning the ALGEE Action Plan. Twenty-seven parents (25.23%) indicated at post-test that the most helpful component of YMHFA USA is the ALGEE action plan. They shared that the acronym was a helpful way to remember the five steps, and having a set action plan gave them confidence to recognize youth mental health concerns and intervene. Participant 032, a father, shared that "The ALGEE methodology [is] a great and important step-by-step guide on how to identify and provide MHFA." Several parents identified specific aspects of ALGEE that they found helpful, such as how to listen nonjudgmentally and the importance of encouraging children to use self-help or coping strategies. This theme was mentioned at similar rates by both White and non-White participants ($\chi_2 = 1.83$, $p = 0.18$).

During the training, participants learn how to apply ALGEE to non-crisis and crisis situations, including suicidal ideation and self-harm. In addition to the 27 parents above, 15 parents (13.89%) specifically mentioned that learning *how to respond to a crisis situation* was the most helpful part of the training. Participants shared that they found it beneficial to learn to assess for risk of self-harm and to intervene. Participant 020 stated that the most helpful thing for her was "learning concrete, actionable ways to help someone who is potentially having a mental health crisis. It was really helpful to learn what to do when someone expresses suicidal thoughts." YMHFA USA specifically addresses the myth that asking someone if they are suicidal will "put the idea in their head." Many parents shared that it was helpful for them to hear that they should directly ask youth if they are having thoughts of hurting themselves or taking their own life. This subtheme was mentioned at similar rates by both White and non-White participants ($\chi_2 = 0.52$, $p = 0.47$).

Participating in Roleplays and Examples. The second most frequently mentioned component of YMHFA USA that parents found helpful was the opportunity to roleplay and hear examples of youth mental illness ($N = 25$, 23.36%). Participants most commonly shared that they learned a lot from the character vignette roleplays and the Kevin Hines video series, in which a survivor of a suicide attempt shares his story of youth mental illness, crisis, and recovery. These components of the training allowed parents to better understand what it is like to either be a caregiver of a youth experiencing mental health difficulties or to experience a mental illness as a teenager, respectively. Participant 008 shared, "Going through scenarios and hearing Kevin's first person account was helpful to get a better picture of the experience." This theme was mentioned at similar rates by both White and non-White participants ($\chi_2 = 3.10$, $p = 0.08$).

Gaining Information about Youth Mental Illness. Many parents signed up for YMHFA USA to learn more about mental illnesses that commonly develop during adolescence, and this was the most beneficial aspect of the training for many. Following the training, 17 parents (15.89%) stated that the most useful aspect of the training was learning more about youth mental illness, including signs and symptoms, names of common disorders, and how mental illness can look different in youth compared to adults. Several participants also appreciated learning about the prevalence of different youth mental illnesses such as depression and eating disorders. One father shared that the most helpful thing was "The entire training. There was an abundance of important material for us to work with younger individuals who may face challenging times. I learned more about conditions including depression, anxiety,

psychosis, etc." (participant 046). Similarly to this parent, many participants felt that they were able to develop knowledge about youth mental illness as well as skills to address it. A chi-squared test revealed no significant differences in the prevalence of this theme by race ($\chi 2 = 2.98$, $p = 0.08$).

Having a Positive/Open Training Environment. Several parents ($N = 12$, 11.21%) shared at post-test that the YMHFA USA trainings created a positive environment that they found beneficial. Within this theme, two primary subthemes emerged: *interactions with other parents* (66.67%) and *a space to openly discuss mental illness* (33.33%). Many participants shared that this was the first opportunity they had to talk about youth mental health in a nonjudgmental environment, and to devote significant time to learning about the topic. Several parents mentioned that it was helpful to hear about other parents' experiences with youth mental illness, and to learn how others have addressed challenges within their families. One parent summarized both subthemes well when he said that the most helpful aspect of the training was, "having open, honest discussion about mental health issues with fellow parents from the school district" (participant 010). White participants mentioned the theme of positive training environment at a higher rate ($n = 9$) than did non-White participants ($n = 2$, ($\chi 2 = 5.42$, $p = 0.02$), and White parents more frequently discussed the benefit of having open conversations about mental health issues ($\chi 2 = 4.40$, $p = 0.04$). There was not a significant difference in the frequency of the parent interaction subtheme by race ($\chi 2 = 2.42$, $p = 0.12$).

Strategies for Understanding and Interacting with Youth. While many parents found it beneficial to learn strategies for addressing youth mental health

concerns, many others felt it was most helpful to learn general strategies for understanding and interacting with their children who do not have existing mental health concerns ($N = 8$, 7.48%). Participants shared that after the training they felt they had a better understanding of their children's experiences and emotions, and had learned effective communication techniques to use with their youth at home. One father shared, "The most important thing I learned is to valid[ate] and acknowledge the teen's feeling. It is more important than [to] just give the advice" (participant 012). This parent felt the training provided an opportunity for him to learn the best way to respond to youth in his life in an effective manner. This theme was mentioned at similar rates by both White and non-White participants ($\chi_2 = 1.93$, $p = 0.17$).

Benefits at Follow-Up. At two month follow-up, parents were asked what content or skill they found most useful from YMHFA USA and how they had used that information since completing the training. Sixty-two parents completed the open-ended questions at follow-up, and many responses were consistent with the themes from the post-test survey. The *ALGEE action plan* continued to be the most frequently mentioned benefit of the training ($n = 42$, 67.74%). One mother shared that the ALGEE method allowed her to break down the process of assessing a youth and getting them help into smaller, more manageable steps. She wrote, "Helping someone with problems that look like mental health concerns is overwhelming and feels like a really big task. I learned how to break down into smaller chunks and address one step at a time. Now the entire subject is easier to address" (participant 094). Similarly to post-test data, several participants specifically talked about gaining skills to assist a youth experiencing a mental health crisis. There were no differences in the prevalence

of this subtheme by race ($\chi_2 = 0.07$, $p = 0.79$). Twelve of the 42 parents who endorsed this theme (28.57%) shared that the most helpful information they learned from the training was *how to assess for suicidality*. Specifically, several parents noted that it was beneficial for them to learn about the myths of suicidality, which was reviewed in a Fact or Fiction activity regarding self-harm and suicidal ideation and actions. Participant 054 shared:

> I think the biggest piece of information I learned is that if you are concerned about a person who is emotionally distraught, it is best to directly ask them if they've thought about hurting themselves or of committing suicide. The worry of "putting that idea into their head" isn't really valid.

White parents mentioned information about crises and suicidality as being beneficial more frequently ($n = 9$) than did non-White parents ($n =3$, ($\chi_2 = 3.77$, $p = 0.05$).

At follow-up, *information about youth mental illness* was the second most prevalent theme ($n = 12$, 19.35%) regarding the benefits of the training. Participants shared that it was helpful for them to learn about warning signs of youth mental illness, prevalence rates, and the difference between typical and atypical adolescent development. This frequency of this theme was similar across racial groups ($\chi_2 = 1.09$, $p = 0.58$). An additional 10 parents (16.13%) shared that the *roleplays and examples* were the most beneficial aspect of the training, and many participants noted that these activities allowed them to better understand mental illness. For example, participant 099 stated that the most beneficial part of the training was the "video showing real cases of mental diseases and the patient's own experience and thoughts." Parents reported that the Kevin Hines video series allowed them to better understand the experiences of youth with mental illnesses. Both White and non-White parents found the roleplays and examples helpful ($\chi_2 = 0.57$, $p = 0.45$). A small

number of parents mentioned other beneficial aspects of the training, including *learning how to better understand and communicate with their children* (n =5, 8.06%) and *receiving the YMHFA USA manual* (n = 2, 3.23%). Participant 092 summarized the benefits well: "The book as a resource, the reminders of the importance of self-care, and the reminder to not let expectations for my own child to overshadow what my child is experiencing or needing." There were no significant differences in the prevalence of these themes between racial groups (interacting with youth: $\chi_2 = 1.72$, $p = 0.19$; manuals: $\chi_2 = 2.16$, $p = 0.14$).

At follow-up parents were also asked if and how they had used the content and skills from YMHFA USA since completing the training. Forty-one parents (66.13%) shared that they were able to utilize the information in their personal and professional lives. Participants reported that they used their new knowledge and skills to facilitate conversations about mental health with their family, refer youth in their professional lives to mental health services, and help their children through difficult times. A handful of parents specifically mentioned that they were able to utilize skills from YMHFA USA during the COVID-19 pandemic, as they began to notice warning signs in their children during social distancing. Finally, several parents shared that they had a new understanding of mental illness and when to intervene since completing the training. When asked if she was able to utilize the content of the training in the last two months, one parent shared:

> Yes, actually every day. It helps me cope with my suicidal daughter. I also see my teen kids and their friends with different eyes. If I see behavior that is not quite right, I don't dismiss it anymore. I pay closer attention – confident if needed, I can ask the questions no one else is asking. (participant 049)

Improvements to YMHFA USA

Immediately following the training, participants made many recommendations for improvements to the training, both generally and more specifically for parent audiences. These suggestions are broken into two primary themes – content and structure – with several subthemes within each.

Content. Forty-three participants (40.19%) offered recommendations for improvements or changes to the content of the material. White participants suggested more changes to content ($n = 24$) than did non-White participants ($n = 15$, $\chi_2 = 4.11$, $p = 0.04$). The most commonly mentioned suggestion for the content centered on the availability of mental health resources. YMHFA USA trainers are required to distribute a list of mental health resources to trainees; however, trainers are responsible for finding these resources and creating a list on their own. For all trainings provided as part of this study, participants received a digital resource list with both nationwide and local mental health resources. However, many parents (30.23%) indicated that they would like to *receive additional resources or parent-specific resources*. For example, participant 005 said he would appreciate if the trainers could "offer resources for parents' own coping." This father shared during the training that his daughter was experiencing anxiety and he found it difficult to cope with her mental health challenges. Other parents suggested providing a physical resource, such as a palm card, of the ALGEE steps. Participant 017 noted, "It would be nice to be able to take a cheat sheet of ALGEE home with me to post in my office or have on hand." Providing this resource would allow parents to remember the action plan and have it on hand during both crisis and non-crisis situations. There were no

significant differences in the frequency of this subtheme based on parental race (χ^2 = 2.52, p = 0.11).

The second most common subtheme in this section was the recommendation to *make changes to the examples* (20.93%). Many parents shared that they enjoyed the examples provided through character vignettes and the video series on Kevin Hines, and wanted more examples from individuals who had faced and overcome youth mental health difficulties. In addition the quantity of examples desired, parents also wrote about the different types of examples they would have liked to see included in the training, such as more stories of recovery and videos from parents' perspectives. Participant 046 wrote, "More stories of recovery would be helpful and hopeful. It would help to understand more about how people have overcome mental health challenges." This sentiment was also discussed during trainings, where several parents shared that they would have liked to hear from youth who overcame mental illnesses without experiencing a crisis such as a suicide attempt. There were no significant differences in the frequency of this subtheme based on parental race (χ^2 = 0.19, p = 0.66).

Six parents (13.95%) noted that they would have liked to *have more time to share personal experiences*. As mentioned in the participant section, roughly 20% of the participants in this study had a child with a mental health difficulty. Many parents also shared that while their children did not have diagnosed mental illnesses, they were struggling socially or emotionally (e.g., being bullied, experiencing high levels of stress). During the roleplays and examples, many parents shared similar experiences from their personal lives. However, there is no built-in time for

participants to share their experiences and receive feedback from the group. Several parents felt it would be helpful to have a designated time for this, and believed it would be helpful to hear mental health experiences from other parents and receive advice or suggestions from other parents and trainers. Participant 054 shared, "Perhaps a time to put your own child's scenarios to the group would be helpful. The advice would be appreciated." This theme was only mentioned by White parents (n = 6, $\chi_2 = 6.72$, $p = 0.01$).

Parents also asked for *more content on specific topics*, including mental health disorders (9.30%) and crisis situations (9.30%). While both of these topics are covered in detail, a few parents wanted to spend more time discussing them and applying the knowledge to additional scenarios. One parent noted, "It would be nice to learn the definitions/terms of more disorders. I'm a bit unfamiliar with the meaning of some" (participant 029). Specifically, personality disorders are not covered in YMHFA USA, but participants commonly ask about these. On the other hand, one to two hours is typically spent covering the types of mental health crises and strategies for responding. However, four parents mentioned that they would have liked to spend even more time on this topic – a suggestion that makes sense given the rising rates of youth suicide. One mother wrote that her number one suggestion was to "talk more about suicide and self-harm" (participant 071). Neither of these subthemes had different frequencies based on parental race (mental health disorders: $\chi_2 = 0.93$, p = 0.24); crisis: $\chi_2 = 1.16$, $p = 0.28$).

Finally, a common subtheme was to include or increase content related to specific populations of youth, including *material about culturally diverse youth*

(4.65%) and *material on young children* (6.98%). Throughout the training, topics such as gender identity and race are not well-addressed. All of the roleplay scenarios include male/female pronouns and do not discuss the character's race or ethnicity. One mother shared:

> I'm wondering if you have any flexibility around the gender expressions used in the slides given by YMHFA? I noticed the first part of the second training is very M/F gender specific and I thought about transgender youth and how we can make space for their varying gender expressions in the training? (participant 016).

This parent mentions an important aspect of the training – that the roleplay scenarios and slides are provided by YMHFA USA (the National Council for Behavioral Health) and instructors cannot change them. The trainings provided for this study did include a discussion on sexuality, gender identity, immigration status, and race/ethnicity as risk and protective factors for youth. However, this was added at the discretion of the trainers during group discussions. One mother wrote that the training should "include statistics by race/ethnicity. For instance, are youth of color at higher risk for mental health issues because of repeated microaggressions, etc.?" (participant 075). Culture plays an important role in the development, experience, and treatment of youth mental illness and should thus be better addressed through the training. Participants also discussed the ways in which young children (e.g., under 10) have different needs than older youth and thus their parents have different concerns and priorities. Three parents recommended that there either be a separate class for parents of young children, or that the existing class speak more specifically to mental health among elementary-aged kids. These subthemes were mentioned by White and non-

White parents at similar rates (culture: $\chi_2 = 0.00$, $p = 0.97$); young children: $\chi_2 = 0.29$, $p = 0.59$).

Structure. In addition to changes to the content of YMHFA USA, many parents had suggestions for the structure of the training. Thirty-five parents (32.71%) provided recommendations related to the accessibility of the training and the presentation of materials. There were no significant differences in the prevalence of this theme by race ($\chi_2 = 0.40$, $p = 0.53$). Among the 35 parents, roughly half ($n = 14$, 42.86%) suggested *changes to the training materials*, including the PowerPoint slides and training manual. The National Council for Behavioral Health tells all trainers that because materials are copyrighted, the PowerPoint slides cannot be copied, photographed, or distributed. Many parents felt that this hindered their learning because they were writing copious notes or trying to find the material in the training manual. Although the slides included page corresponding page manuals for participants to read more about a given topic, participants found it difficult to balance these two written materials as well as listen to the trainer. Participant 008 wrote, "Going through the presentation, a lot of info is given on the slides including page numbers to refer to but that is all gone after the presentation. Maybe [offer] a condensed version to keep as a reference?" Participants also felt that they did not receive sufficient instruction on how to utilize the manual during the training and at home. One father shared that he wanted "more instruction on how to use the manual...or what sort of content we could find in it." These concerns are not surprising given that only a short amount of time is designated to discussing the manual, and it is not frequently referenced throughout the training. This subtheme

was mentioned by both White and non-White parents at similar rates ($\chi_2 = 0.16$, $p = 0.69$).

Seven parents (20.00%) discussed the *availability of YMHFA USA for parents*. One aspect of this subtheme is the frequency with which the training is offered. Many parents had not previously seen the training advertised or felt that it was offered too infrequently. One parent from a rural community shared that the best way to improve the training is to "Offer it more often, on a regular basis" (participant 077). Other participants noted that the parents who would benefit most from the training might also be the same parents who are least likely to sign up for it. Participant 073 wrote:

> I feel like the parents that register for this are already somewhat aware, but it's usually the parents that DON'T register for something like this or have any interest in this that really need the training. So somehow get those parents to be trained.

Both white and non-White parents mentioned this subtheme at similar rates ($\chi_2 = 1.20$, $p = 0.27$).

The length of YMHFA USA is a barrier for many parents, and five participants (14.29%) suggested *changes to the training time and configuration*, including alterations to overall time commitment, number and length of each session, and presentation of materials. One mother shared that it would be helpful to "provide an online module that is more accessible to parents' working hours" (participant 018). An electronic training session would allow parents to access the materials at times convenient to their schedules, as full-day trainings or sessions in the evening often conflict with work schedules and parenting duties. Participants had differing opinions on the best way to break up the course, including some parents recommending that

the two session training should have been offered over one eight-hour day and others recommending that it be broken up into three sessions. This subtheme was mentioned by both White and non-White parents at similar rates ($\chi^2 = 0.27$, $p = 0.60$).

Although the course requires sufficient time and energy, four parents (11.43%) indicated that they would have appreciated *additional work outside the training*. This suggestion was most common among parents who participated in the two session trainings, and felt that "homework" in between the sessions would have been helpful. One father shared that he would "probably give a project or homework in between the 2 sessions to help parents review their first session and to identify items for the 2nd session" (participant 032). The other common recommendation related to completing outside work was to assign parents reading to complete before the training so that they would all "come in with the same baseline information" (participant 001). This subtheme highlights parents' commitment to learning and applying the material. This theme was mentioned at similar rates by White and non-White parents ($\chi^2 = 0.93$, $p = 0.34$).

Finally, four parents (11.43%) recommended *changes to the structure of the roleplay scenarios*. Two of these parents felt that the roleplays were not helpful and suggested that less time be devoted to these activities, while the other two parents asked for more time dedicated to roleplaying and discussing various youth mental health scenarios. Differing opinions on this subtheme could be attributed to personal preference, or could be due to differences in parents' experiences with the roleplays. In some small groups, parents roleplayed the scenarios and thoroughly discussed how they would respond to the character. In other small groups, participants did not

roleplay and instead broadly discussed what they would say or do. The former pushed parents outside of their comfort zone but often was a more effective way to practice the ALGEE action steps. This subtheme was mentioned by both White and non-White parents at similar rates ($\chi^2 = 0.00$, $p = 0.95$).

Exploratory Data Analysis

Because this study is one of the first to examine parental MHL, exploratory analyses were conducted to better understand components of MHL prior to the training. All dependent variables at pre-test were analyzed by participant race, gender, education level, and prior experience with mental illness. First, a series of ANOVAs were conducted to examine the main effects of race, gender, education level, and mental health experience on the outcome variables. Importantly, it is likely that there was insufficient power to detect all statistically significant differences. Next, correlations between the dependent variables at pre-test were run to examine the associations between factors such as stigma and intentions to seek professional help.

Exploratory ANOVAS

Mental Health Literacy. An ANOVA was conducted to examine the main effects of race, gender, education level, and mental health experience on MHL . Results indicate that pre-training MHL significantly varied by race ($F(1,95) = 12.43$, $p = 0.00$) and prior mental health experience ($F(1,95) = 32.43$, $p = 0.00$). White parents had higher levels of MHL prior to the training ($M_{MHL} = 135.82$, $SD = 13.51$) compared to non-White parents ($M_{MHL} = 122.03$, $SD = 14.18$). MHL was also higher among parents with prior mental health experience training ($M_{MHL} = 133.92$, $SD = 10.22$) than among parents without this experience ($M_{MHL} = 116.15$, $SD = 13.51$).

There were no significant differences in MHL by education level ($F(3,95) = 0.87$, $p = 0.46$) or gender ($F(1,95) = 0.002$, $p = 0.96$). See Tables 15-16.

Stigma. A second ANOVA was conducted to examine the main effects of the parent characteristics of interest on stigma. Significant differences were identified in pre-training stigma based on participant race ($F(1,95) = 5.13$, $p = 0.03$) and prior mental health experience ($F(1,95) = 12.31$, $p = 0.00$). Stigma was higher among White participants ($M_{stigma} = 10.93$, $SD = 7.05$) than among non-White participants ($M_{stigma} = 10.19$, $SD = 5.90$). Parents who had prior experience with mental health difficulties (personally or among loved ones) had much lower stigma ($M_{stigma} = 9.45$, $SD = 6.03$) than parents without this experience ($M_{stigma} = 13.04$, $SD = 6.72$). See Tables 17-18.

Help-Seeking Intentions. Intentions to seek professional help for youth mental health difficulties were analyzed for main effects by race, gender, education level, and mental health experience. No significant differences based on these factors were identified. See Table 19.

Attitudes toward Help-Seeking. An ANOVA was conducted to examine main effects between parental race, gender, education level, and prior mental health experience on attitudes toward help-seeking. Results indicate that attitudes prior to YMHFA USA vary by gender ($F(1,91) = 3.86$, $p = 0.05$) and by mental health experience ($F(1,91) = 11.61$, $p = 0.00$). Attitudes toward mental health help-seeking were more positive among mothers ($M_{attitude} = 32.69$, $SD = 5.83$) than fathers ($M_{attitude} = 29.25$, $SD = 6.17$), and more positive among parents who had prior mental health

experience ($M_{attitude}$ = 33.45, *SD* = 5.19) than among parents without this experience ($M_{attitude}$ = 27.65, *SD* = 6.54). See Tables 20-21.

Behavioral Intentions. Main effects of race, gender, education level, and mental health experience on intentions to use the ALGEE action plan were examined using an ANOVA. No significant differences in behavioral intentions were found based on parent characteristics for a youth experiencing depression (see Table 22) or for a youth experiencing schizophrenia (see Table 23).

Self-Efficacy. An ANOVA was conducted to examine main effects of race, gender, education level, and mental health experience on self-efficacy. There were no significant differences based on gender, race, education level, or mental health experience. See Table 24.

Self-Reported MHFA Behaviors. Finally, an ANOVA was conducted to examine main effects of race, gender, education level, and mental health experience on self-reported MHFA behaviors in the two months prior to the training. Results indicate that per self-report, MHFA behaviors varied significantly by race ($F(1,96) = 3.79$, $p = 0.05$). White parents reported that they spoke to a youth about a mental health concern more frequently (M_{MHFA} = 1.06, *SD* = 1.23) than did non-White parents (M_{MHFA} = 0.51, *SD* = 0.78). These results suggest that White parents spoke to a youth about a mental health concern between one and five times in the two months prior to the training while non-White parents report speaking to a youth about mental health difficulties between zero and one times. Self-reported MHFA behaviors were not significant based on the other parental demographics of interest. See Table 25-26.

Exploratory Correlations

Pearson correlations were analyzed to examine the association between the dependent variables at pre-test, including overall MHL, stigma, attitudes toward help-seeking, intentions to seek professional help, intentions to use MHFA actions for depression and schizophrenia, self-efficacy, and self-reported MHFA behaviors in the two months prior to the training. Overall MHL prior to the training was positively correlated with attitudes toward help-seeking ($r = 0.48$, $p < 0.01$), intentions to seek help ($r = 0.34$, $p < 0.01$), self-efficacy ($r = 0.26$, $p < 0.01$), and self-reported MHFA actions ($r = 0.21$, $p = 0.03$). MHL was negatively associated with stigma ($r = -0.42$, $p < 0.01$). The three components of the PATPSI were also significantly associated with one another, such that stigma was negatively associated with attitudes ($r = -0.50$, $p < 0.01$) and intentions ($r = -0.28$, $p < 0.01$), and attitudes and intentions were positively associated ($r = 0.37$, $p < 0.01$). Intentions for help-seeking were also positively correlated with self-efficacy ($r = 0.31$, $p < 0.01$). Lastly, the two MHFA intentions for depression and schizophrenia were positively correlated ($r = 0.37$, $p < 0.01$). See Table 27.

Chapter 5: Discussion

The present study is the first known study to examine the effectiveness of YMHFA USA among parents who had at least one child under the age of 21. Participants completed a survey immediately before and after the training (n = 107), as well as two months after completion of the training (n = 64). Responses to the pre-test allowed for an examination of parental MHL and attitudes toward youth mental health services without intervention – areas which have not been well-studied. Analyses from pre-test to post-test suggest that following completion of YMHFA USA, MHL, stigma, attitudes toward help-seeking, intentions to seek help, self-efficacy, behavioral intentions to use the ALGEE action plan, and self-efficacy in MHFA skills increased significantly. Stigma significantly decreased. These positive changes were maintained at two-month follow-up, with the exception of self-efficacy and behavioral intentions to use the ALGEE action plan. However, mean scores for these two constructs remained significantly higher at follow-up than they were at pre-test. These results are positive for parents, who are often the first to notice changes in their children, and also have positive implications for communities, as many parents noted that they play other roles (e.g., coaches, teachers, trusted adult to children's friends).

This study also allowed for one of the first qualitative explorations of participants' beliefs about YMHFA, including why the signed up for the training, what aspects were most beneficial, and what they would change about the course. Common themes around reasons for signing up for YMHFA USA include a desire for knowledge and skills, having multiple roles that necessitate interactions with youth,

prior experience with mental illness, and the increasing prevalence of youth mental illness. Parents identified that the most beneficial aspects of the training were learning the ALGEE action plan, participating in roleplays and examples, gaining information about youth mental illness, having a positive/open training environment, and learning strategies for understanding and interacting with youth. Lastly, improvements to YMHFA USA were suggested in regard to both the content (e.g., increasing material mental health among culturally diverse youth) and structure of the training (e.g., increasing accessibility of training to parents by offering it more frequently or in a condensed manner). This study fills many gaps in the existing literature regarding both YMHFA USA and parental MHL.

In respect to the first research question, the hypothesis was confirmed as results indicated that parents' MHL significantly increased after completing the training. This finding is consistent with prior studies examining changes in MHL in different populations who complete YMHFA USA (e.g., teachers; Gryglewicz et al., 2019). Participants' overall MHL increased from an average of 128.72 to an average of 136.59, a change of over 7 points ($d = 0.61$). While other studies of YMHFA USA do not utilize the full MHLS to measure changes in MHL, other research using this measure indicates that the parents in the present sample have similar levels of initial MHL compared to other samples (e.g., psychology undergraduates' MHL = 127.38; O'Connor & Casey, 2015). The increase in average MHLS scores after completing YMHFA USA is encouraging, as it suggests that participation in an eight-hour training can have significant impacts on parents' MHL.

Support was also found for the second hypothesis, such that following the training, parents reported increased intentions to seek professional services for youth mental health challenges, more positive attitudes toward professional services, and decreased stigmatizing attitudes toward youth with mental illnesses. Parents in the current study had similar pre-training intentions to seek professional help as parents in a previous study (Turner & Mohan, 2015). However, the stigma among parents in our sample was much lower at pre-test (M = 10.53) compared to levels of stigma among parents in Turner and Mohan's study (M = 20.64) and their attitudes toward professional help were more positive – 32.12 in the current sample compared to 23.04 in Turner's work. The results suggest that following completion of YMHFA USA, parents are more likely to seek professional help for youth mental health concerns, view these services more positively, and have less stigmatizing beliefs about youth with mental illnesses. Stigma is a particularly important aspect of MHL, as high parental stigma is associated with rates of help-seeking for youth mental health concerns as well as youth stigma (Jorm & Wright, 2008). Decreasing stigma among parents may decrease stigma in their children and increase the likelihood that the family will seek help in the event of a mental health difficulty. To further address youth stigma, MHL interventions for adolescents are becoming more available. For example, teen MHFA is a three hour and 45 minute training designed for youth in 10-12th grades. The program is currently being piloted in the United States by the Johns Hopkins University Bloomberg School of Public Health. Providing trainings such as MHFA to parents, youth, and other important adults in a child's life (e.g., teachers, youth group leaders) can reduce some of the barriers that communities face in

recognizing signs of youth mental illness and intervening by increasing the number of people with high MHL.

Regarding the third research question, the present study found that, as hypothesized, parents' behavioral intentions to use the ALGEE action plan significantly increased following the training for both depression and schizophrenia, with mean increases of 1.96 and 1.74, respectively, out of 10 total points. This change was slightly smaller than changes in behavioral intentions among a sample of 246 Australian adults, whose intentions to use the ALGEE action plan increased 2.44 points for depression and 2.25 points for schizophrenia (Kelly et al., 2011). However, these participants received the 14-hour Australian version of YMHFA. It is possible that the longer, original version of the training leads to larger increases in intentions to utilize the ALGEE action plan due to additional exposure and practice using the steps. Following the training, parents had significantly increased self-efficacy in their MHFA skills, with a mean increase of roughly six points on a 25-point scale. Parents who are confident in their ability to implement MHFA actions, including assessing for risk of suicide or harm, are more likely to use these skills with the youth in their lives.

Two months following the training, 64 (59.81%) parents completed a follow up survey. This response rate is similar, or slightly better, than other studies of MHFA (e.g., 55%, Haggerty et al., 2018) but does reflect a high level of attrition. This can be attributed, in part, to the covid-19 pandemic which became most significant in the USA in March 2020 when many participants were being contacted to complete the follow-up survey. At two month follow-up, changes from pre- to

post-test in MHL, stigma, attitudes toward help-seeking, and intentions to utilize mental health services and resources were maintained. However, self-efficacy in MHFA skills and behavioral intentions to assist youth with depression and schizophrenia significantly decreased compared with immediately after the training, although the scores were still significantly improved compared with the pretest. These results suggest that parents might need a refresher course or a touchpoint in the months following the training to prevent a decrease in self-efficacy and intentions to use the ALGEE action plan. This is supported by our qualitative data from parents who suggested providing a physical resource (e.g., a printout to hang up at home, a wallet-size card) with the ALGEE steps.

Acceptability of the training was high, with the majority of participants strongly agreeing that the program met their expectations and that they liked the training, would recommend it to relatives and friends, found it useful, and were satisfied. This finding was also supported by the qualitative data, as several participants recommended that the program be offered more regularly and in a more accessible manner to other parents in their communities.

The quantitative findings suggest that positive changes in all variables of interest were observed following the eight-hour training. The findings also suggest support for the guiding model created for this study, such that parental knowledge of prevention efforts and ability to recognize mental illness increased (as measured by the MHLS), behavioral intentions increased (measured by open-ended vignettes), help-seeking intentions increased and attitudes toward services became more positive, and self-reported MHFA actions increased following the training. However, while a

single group trial is a simple, cost-effective design that allows for the generation of initial information about a program, without an experimental design (random assignment and a control group) changes cannot be definitively attributed to the intervention. Additionally, only participants who completed the full eight-hour training were included in the analyses. These parents were likely the most motivated to attend multiple training sessions and participate in the research, and thus may be different from the general population.

Because parental MHL has not been well-studied, several exploratory analyses were conducted using data from pre-test. ANOVAs examining the main effects between parent race, gender, education level, and prior mental health experience were conducted. There were no differences in the dependent variables of interest based on level of education. Results of the ANOVAs revealed that White parents had higher levels of pre-training MHL and self-reported MHFA behaviors than non-White parents. However, non-White parents had lower levels of stigma, which is inconsistent with previous literature (e.g., Wong et al., 2017). In the next section, the cultural relevance of YMHFA USA is discussed. Parents who had prior mental health experience had higher MHL, lower stigma, and more positive attitudes toward help-seeking than parents without this experience. Finally, attitudes toward help-seeking were more positive among mothers than fathers. These results suggest that trainings targeted at parents without prior mental health experience may be particularly helpful. In addition, providing parents with opportunities to come into contact with other people with mental health challenges may be an effective way to

reduce stigma. The training could include additional videos of youth discussing their mental health difficulties, such as the NAMI In Our Own Voice videos.

Pearson correlations were conducted between the dependent variables at pre-test, and results indicate positive relations between MHL and attitudes toward help-seeking, intentions to seek help for youth mental health concerns, and self-reported MHFA actions. MHL and stigma were negatively associated. Finally, intentions to seek help were positively associated with self-efficacy. These results suggest that parents who have high levels of MHL are also likely to be open to seeking professional mental health services and more likely to utilize MHFA actions. Parents with high levels of self-efficacy regarding their MHFA skills are likely to have higher intentions to seek professional help, potentially because one MHFA skill is knowing about various mental health supports and encouraging youth to utilize them.

Parents were very interested in learning more about youth mental health, and 83.18% of parents shared that they signed up for YMHFA USA to learn about mental illness and skills to help youth facing difficulties. Participants reported that there were limited opportunities for them to learn about mental health in other parenting groups or training. Incorporating this information into other more widely available parenting workshops may increase the accessibility of the information for a broader audience. On the other hand, parents reported that they enjoyed the dedicated space to discuss youth mental illness in great detail, particularly in an open, nonjudgmental environment with other parents who shared an interest in mental health. This positive training environment was facilitated by the openness of the participants, many of whom had prior experiences with mental illness (70.09%). Roughly one fifth of

participants in the present sample had a child who was diagnosed with a mental illness (18.4%) or had received mental health services (21.7%). During the trainings, these parents shared openly about the challenges they faced parenting children with mental illnesses, including the stress placed on them. The percentage of parents who had experiences with youth mental illness is closely aligned with the estimate of the percentage of children with these experiences (20%). Importantly, the vast majority of participants (85.2%) had never attended a mental health training, which could influence participants' low levels of confidence in MHFA skills prior to YMHFA USA.

Having a mixture of parents who both had and had not personally experienced youth mental illness allowed for important conversations among participants, including sharing of advice (e.g., what self-help strategies different youth utilize, what signs parents first recognized in their own children). Qualitative data revealed that while some parents signed up for YMHFA USA to learn strategies to care for their children with existing mental health difficulties, many others wanted to prepare for possible future challenges. Several parents noted that mental health concerns are becoming more prevalent in their communities, and they want to be prepared to help the youth in their lives. For example, one mother shared that two students at her daughter's high school had died by suicide, and she wanted to gain knowledge and skills to prevent this number from rising. Parents were particularly interested in learning more about different mental illnesses and how symptoms may appear both similar to and different from typical adolescent development. This is a challenge that many adults face when concerns arise, as adolescence is a time of rapid development

with frequent difficulties and social, emotional, physical, and cognitive changes (National Council for Behavioral Council, 2016). YMHFA USA explicitly covers typical versus atypical adolescent development, and following the training 15.75% of parents shared that the most beneficial aspect of the course was gaining knowledge about youth mental health. An additional 7.478% of parents noted that the training allowed them to gain a better understanding of youth development. One father summarized this notion well when he shared on the two-month follow-up survey, "I have been able to look at my (nearly) teenage daughter with a little better perspective lately. I now realize that being moody and withdrawn sometimes is typical behavior for her age group and I have been worrying much less that she may be suffering from mental health issues." Thus, by teaching parents about typical versus atypical adolescent development, YMHFA USA allowed parents to set more realistic expectations which resulted in decreased worry and stress about their children's development.

Parents noted many benefits of YMHFA USA, both immediately after completion of the training and two months later. Analysis of their responses indicates that the ALGEE action play, roleplaying, and information about youth mental illness were the most helpful components of the training. Many parents noted that the ALGEE action plan gave them confidence in their abilities to help youth struggling with mental illness, suggesting that other MHL interventions could benefit from focusing on an action plan that breaks down mental health support into smaller steps. Parents were particularly impacted by the crisis section of the training, which taught them how to assess for suicidality and harm (to self or others). At two-month follow-

up, many parents specifically mentioned the portion of the training that centered on myths about suicide, including the false notion that assessing for suicidality will put the idea into someone’s head. This point was reiterated in the Kevin Hines videos, where he shares that had someone asked him explicitly if he was thinking of suicide, he would have told them what he was experiencing and not attempted suicide. It would likely be beneficial for YMHFA USA and other MHL programs to explicitly address and debunk other common myths about mental health, and provide supporting evidence from research and case stories from real people.

YMHFA USA with Culturally Diverse Parents

Roughly one third of the present sample was comprised of Asian American parents, in part because one of the trainers is a well-recognized Chinese American psychologist. She actively distributed the YMHFA flyers in the Chinese/Asian American community through Asian American community partners. Her connections to this community led to the development of one training exclusively for Chinese/Asian American parents. Many Asian Americans also signed up for the other available trainings with non-Asian parents. Small cultural adaptations were made to the trainings with high numbers of Asian American participants, such as including additional statistics (e.g., suicide rates among Asian American youth) and risk and protective factors about youth mental health within the Asian American community. When training culturally diverse participants, these sorts of adaptations may increase the acceptability of the training and its applicability to participants’ lives. Presently, several researchers are working on culturally adapting MHFA for specific populations (e.g., Bhutanese refugees; Subedi et al., 2015) as the program was initially designed

for Australian and American trainees and thus is centered in many Western beliefs about the development and treatment of mental illness (e.g., the biomedical model which posits that mental illness is a brain disease that can be treated through pharmacology and talk therapy; Deacon, 2013). This model may not align well with the beliefs of culturally diverse individuals, so cultural adaptations to the program involve making changes to the training program based on the needs of the community. For example, Wang and colleagues (In Preparation) adapted YMHFA USA for Asian Americans by (a) increasing engagement of Asian American parents by adding one session before the training to increase engagement and understanding of the training, and (b) contextualizing the YMHFA USA curriculum content to ensure cultural relevance for Asian American parents. These changes to the training added roughly two hours to YMHFA. Moving forward, it will be important to examine cultural sensitivity and acceptability of the training across the original version of YMHFA USA, the new curriculum, and culturally adapted versions.

Additionally, chi-squared tests applied to the qualitative data revealed some significant differences in prevalence of themes by race. For example, more White parents than non-White parents reported that they signed up for the training due to a desire for knowledge and skills and multiple roles with youth in their communities. White parents also more frequently shared that the training setting was beneficial and suggested changes to the content of the course. Notably, there were no differences by race in the number of parents who found ALGEE to be the most beneficial aspect of the training, both immediately after the training and at two-month follow-up. This suggests that while cultural adaptations may be needed, the core aspect of the training

is equally beneficial regardless of race. The results of the chi-squared test indicate that many of the themes were more frequently mentioned by White participants than by non-White parents. This could be attributed to the higher rates of completion of open-ended questions by White parents compared to non-White parents, potentially due to the high language demands of this task. However, this discrepancy could also be influenced by the author's cultural lens as a White woman while adding codes and themes to the data; however, the second qualitative coder identifies as Asian American. Thus, additional work is needed to better understand the experiences and opinions of racially and ethnically diverse parents who sign up for YMHFA USA.

Implications for YMHFA USA

While the majority of parents found YMHFA USA to be extremely beneficial, they also shared some limitations and challenges of the training. This qualitative data can help inform future actions for the National Council for Behavioral Health and possible modifications to YMHFA USA. The most significant challenge related to training parents in YMHFA USA revolves around the accessibility and availability of the course. Several participants suggested that the training should be offered more regularly and promoted more broadly, indicating that advertisement efforts need to be increased. Presently, YMHFA USA instructors are expected to advertise their own trainings and have the option of posting their course to the MHFA website. However, many courses are "closed" trainings, meaning that they are only accessible to members of a certain community (e.g., employees at a company). Instructors should be encouraged, and perhaps incentivized, to offer open classes and advertise them in a more streamlined fashion. For example, trainers would benefit from additional

instruction on the best methods of advertisement to reach diverse populations, and the National Council for Behavioral Health could require that all courses be posted on the MHFA website and in other locations. When sharing information about open trainings, a variety of advertisement methods should be used including hanging flyers in community settings such as libraries or recreation centers, sharing on social media, and distributing to listservs.

When trainings were advertised, multiple parents reached out to the instructor to share that while they were interested in the training, they were unable to attend the eight-hour course. Alternatives were offered to the full-day course, such as attending two four-hour sessions or four two-hour sessions. However, this led to significant attrition (22%) because unanticipated events or needs would arise, preventing parents from attending all of the sessions. In February 2020, the National Council for Behavioral Health announced a new version of YMHFA USA which is condensed into five and a half hours, including a one and a half hour online module and a four hour in-person session. This could make the training more accessible for parents by allowing them to be away from their children for shorter amounts of time. Trainers should also consider opportunities to offer childcare at the training to make it more convenient for the parents. However, many parents' suggestions for improvements to YMHFA USA focused on increasing time for certain activities (e.g., roleplays, videos, time to share personal examples) or including additional content (e.g., information about younger children, examples of recovery); thus, while a condensed training may be more accessible, it also decreases opportunities for the exercises and instruction parents desire.

Several parents also noted in their open-ended responses a need for more culturally relevant material, such as information on the impact of race/ethnicity and LGBTQ+ status on children's mental health. The new YMHFA USA curriculum seeks to address some of these suggestions, including the addition of gender neutral pronouns, an emphasis on how culture impacts mental health, and information about how first aiders can practice cultural sensitivity. Additional changes include more information about trauma, bullying, school violence, and the impact of social media on youth mental health. Statistics on the prevalence of mental illnesses and symptomology are updated to match the DSM-V. Current YMHFA USA instructors will begin receiving training in the new curriculum in May 2020 and must be certified to teach the updated course by October 2020. Finally, while YMHFA USA is currently available in English and Spanish, the National Council for Behavioral Health also plans to release the training in additional languages in 2021.

Participants in the present study also noted several areas for improvement to the presentation of course materials. These suggestions do not appear to be well-addressed in the updated curriculum. For example, many parents requested that copies of the PowerPoint be provided. While the National Council for Behavioral Health does not allow participants to receive copies of slides or to take pictures of the slideshow due to copyright issues, handouts could be provided summarizing the main points from the slideshow. Alternatively, the slides could include cues about important information to write down if it is not easily found in the training manual. This manual, while appreciated by some parents, also poses some challenges. In particular, parents found it difficult to understand how the slideshow and manual

were connected and what material overlapped. The manual and slideshow should be updated so the connections between the two resources are clear, and participants have a better understanding of what is covered in the manual and where the information is located. Parents also asked for more explicit instruction for reading and utilizing the training manual, as trainers are expected to briefly review the manual at the onset of the training but do not need to refer to it throughout. Utilization of the manual throughout the training should be increased so participants feel more comfortable with the resource, including having instructors frequently highlight resources or information in the manual throughout the presentation.

While some participant concerns were generic to the YMHFA USA training, others were specific to participants' experiences as parents. The National Council for Behavioral Health offers several modules for the Adult MHFA training that focus on gaining knowledge and skills related to specific populations such as Fire/EMS, older adults, and veterans. These modules cover the core components of Adult MHFA and also include more specific information, such as how to discern the difference between talking about death and suicidal ideation (for older adults) and a discussion of military culture and its relevance to the topic of mental health (for veterans). While no modules currently exist for YMHFA USA, the creation of a module for parents would be beneficial. As evidenced by the qualitative data, parents enjoyed having an open forum to discuss youth mental health challenges, but wished to have more time to discuss their own children's challenges. Because time for this is even more limited in the new condensed curriculum, an extended parent-specific module could provide more opportunities for parent interactions and sharing of experiences. Parents also

wanted more information about being the caregiver of a child with significant mental health challenges. A parent module would allow for more tailored materials, including information regarding parents' role in promoting protective factors and reducing risk factors for youth mental illness. Early intervention and prevention were areas of emphasis for many parents in the training, as evidenced by the young ages of some participants' children (e.g., 8 months old, four years old) and the many parents who shared that they signed up for the training so that they could be prepared in the event that a mental health concern develops in their family. A set module would also allow YMHFA USA instructors to get additional training regarding how to instruct parents and the different types of questions, concerns, and areas of interest that may arise with this population. For example, one parent noted that it is much easier to use the ALGEE action plan with kids in the community rather than with her own children, particularly in regard to assessing for suicidality and risk of harm. Trainers could also provide more specific resources for parents, such as National Alliance for Mental Illness (NAMI) caregiver support groups. Importantly, a parent module would need to take into consideration that roughly 20% of parents have a child with a mental illness, meaning the majority of training groups do not have this lived experience. Therefore the module would need to address both prevention and intervention.

Decreases in variables such as self-efficacy and intentions to use ALGEE at two month follow-up, as well as qualitative data around participants' desire for more time to discuss topics such as personal experiences with youth mental health indicate the need for a refresher or booster course in the months following completion of YMHFA USA. A brief booster session could allow participants to have time to utilize

ALGEE and then come back to discuss their experiences and any challenges faced. As noted by some participants, using ALGEE in roleplays is very different than using the skills during real mental health difficulties or crises. Allowing participants time to apply their knowledge and skills and then return for a discussion could increase self-efficacy and intentions to use ALGEE in the future. These sessions could be provided by experienced trainers who would be comfortable and competent to facilitate productive discussions around participants' personal experiences.

Implications for Schools

While some studies have examined the effects of YMHFA USA on teachers (e.g., Gryglewicz et al., 2018), this was the first study known to the author to examine the effects of the training on parents of school-aged children (under 21). Five of the six trainings in the present study were provided at local schools and advertised through school district parent listservs and PTAs. Trainings held at schools are often convenient for parents who may come to the school on a regular basis or for evening events such as Back to School Night. Schools are also well-positioned to advertise YMHFA USA to parents through their websites, newsletters, social media accounts, and PTA meetings. Although many school systems are actively providing YMHFA USA training to staff, they are strongly encouraged to also target parents specifically because they play an important role in promoting youth mental health and may be the first to notice social, emotional, and behavioral changes. Increasing MHFA knowledge and skills among both teachers and parents will create a much more comprehensive community that can fully engage in mental health promotion (e.g., look for symptoms of mental illness) and intervention as needed. This is particularly

important due to the national shortage of specialized youth mental health providers. School psychologists, for example, are recommended to be responsible for 500-700 students; however, many are responsible for over 1,400 youth (National Association of School Psychologists, 2017). Programs such as YMHFA USA are excellent universal (Tier one) education programs that increase MHL among non-mental health professionals. Promoting early recognition of mental health concerns and early intervention will also decrease the need for later Tier two and Tier three interventions.

Though schools may be an ideal setting for YMHFA USA trainings to occur, these sites also face additional challenges. First, it may be difficult to fill an entire class (minimum of 10 participants, but up to 25 is encouraged) from one school. In the present study, some trainings were initially offered to one school but were expanded to entire counties or school clusters to recruit sufficient participants to host the training. Schools interested in providing trainings such as YMHFA USA to their communities should first gauge interest, and consider partnering with other local schools to host a full class with diverse participants. Schools must also consider whether they will offer combined or separate trainings to school staff and parents. While combined courses require fewer resources and promotes collaboration and learning between the two groups, there are also additional challenges to consider. For example, there may be confidentiality concerns associated with teachers learning more about their students' mental health challenges without the youths' permission. School staff might also feel less comfortable sharing their own experiences with youth mental illness (e.g., students, their own children) with parents in the community. Schools must also consider if YMHFA USA is the most appropriate

training for their population of staff and families. As noted earlier, the YMHFA curriculum is based in Western beliefs about mental health and treatment, and thus may not address the beliefs, values, and concerns among culturally and linguistically diverse individuals. Before investing time and money into a program like YMHFA USA, schools must consider if the training is a good match for the community. Other MHL intervention programs may yield similar outcomes with parents and teachers but be more culturally appropriate, less of a time commitment, or available in more languages.

Additionally, school settings often have their own culture and sense of community. Schools should consider if their community would benefit from having an outside trainer come into the school to provide YMHFA USA, or if staff and families would feel more comfortable being trained by a member of the community. School districts should weigh the costs and benefits of training community members to be YMHFA USA instructors. This may be particularly challenging in lower income school districts; while there are some scholarships for YMHFA USA instructor trainings, this opportunity is not widely available, and the instructor course costs upwards of $2,000 and requires five full days of training. Similarly, YMHFA USA costs at least $18.95 per person to cover the cost of the manuals, and many trainers charge upwards of $100 per participant. The current study was able to cover the cost of materials through grants and a faculty member's research funds, and the trainers donated their time. However, schools many not have the resources to cover this cost, and the price of the training is likely to be a deterrent for some families. Although the initial instructor training is expensive, having a dedicated trainer within

a school district could facilitate more frequent, free trainings and the trainer could apply to grants for additional funds. However, not all school districts will have the funds to cover this cost or interest and availability from employees or community members to get trained and then provide frequent trainings. Thus, although school districts that provide YMHFA USA trainings to parents and staff are likely to reach a much broader audience, they must also consider logistical factors and challenges that other sites may not face, including confidentiality concerns, getting participants to sign up, and the cost of the training.

Limitations and Future Directions for Research

Although the results of this study were positive and show promise for the utility of implementing YMHFA USA with parents, there are a few notable limitations. As mentioned earlier, the main limitation of this study is the lack of experimental manipulation, including a control group and randomized assignment of parents between the intervention and control groups. Thus, the impact of repeating questions from the pre-test to post-test is unknown in the current study, and improvements in scores may be the result of other factors unrelated to YMHFA. Subsequent studies on the impact of YMHFA USA on parents should utilize an RCT design in order to draw more causal conclusions about the effects of the training. Due to the exploratory nature of this study and limited resources (funding, time, and trainer constraints), another limitation is the relatively small sample size. Future research should seek to train a much larger number of parents, which would also allow for analyses with additional covariates such as parent age, gender, race, etc. Larger studies should also compare training outcomes based on the number of

sessions offered (e.g., one eight-hour session vs. two four-hour sessions) and attended (e.g., if a participant misses one of four sessions). Another limitation is the inability to assess fidelity to the YMHFA USA training model. Although all instructors are certified (following a five day training) and follow a training manual, the National Council for Behavioral Health does not have a mechanism in place to assess instructors' integrity during trainings. The present study also did not implement a fidelity check. Future research should seek to examine the degree to which instructors follow YMHFA USA training procedures and how variations in fidelity might impact changes in first aiders' beliefs, behaviors, and knowledge. Research on YMHFA USA should also include multiple trainers to reduce potential trainer effects on the results. Additionally, the instructors who provided the trainings for the present study had significant prior mental health knowledge and experience which allowed them to answer complex questions and provide support to parents who shared personal experiences. The average YMHFA USA trainer who does not have formal training in mental health may be less prepared to handle these sorts of challenging experiences, and it is possible that training outcomes could be different for less experienced instructors.

The current study had very few exclusionary criteria. Future studies should be more targeted in regard to participants, such as only including parents of children enrolled in public schools (aged 5-18) or looking at specific subsets of parents, such as parents of high schoolers. Finally, it is important to consider that parents who willingly sign up for an eight-hour mental health training are likely to be more psychologically minded and interested in this topic than the general population. They

might have lower levels of stigma and higher levels of MHL prior to the training. While studies of other populations have benefited from providing the training to all participants in an organization (e.g., all teachers in a school), requiring all parents within one school to attend YMHFA USA is unlikely. Thus, future studies should focus more on reaching parents who would not typically sign up for the training in order to determine effects of YMHFA USA on a broader sample of parents. For example, schools should advertise trainings widely, offer them on a regular basis, provide interpretation and childcare services, and offer other trainings and resources which highlight the need for YMHFA. Those who understand the prevalence of youth mental illness and the opportunity for parents to intervene are more likely to invest their time into an eight-hour training.

Conclusions

The present study examined the effectiveness of YMHFA USA using several components of MHL, MHFA intentions, and MHFA behaviors in parents before, immediately after, and two months following the training. While YMHFA USA has been studied with populations such as school staff and county workers, this is the first study known to the author to examine the impact of this training with parent participants. Limited research has been conducted on MHL in diverse parents, but published studies suggest while most parents want to help their children overcome mental health challenges, many have low levels of MHL. Results of the current study reveal that following the training, parents had significant increases in overall MHL, positive attitudes toward help-seeking, intentions to seek professional help for youth mental health concerns, intentions to utilize MHFA skills, and self-reported MHFA

behaviors, as well as significant decreases in stigma. The training had high levels of acceptability among participants, and parents shared that they benefited from learning the ALGEE action plan, having a chance to role play and hear examples of youth mental illness, learning about mental illness and typical adolescent development, and interacting with other parents in a nonjudgmental training environment. Parents also provided many suggestions for improving both the content and structure of YMHFA USA, such as making the training more accessible and including additional information on topics such as young children's mental health and the impact of culture on mental health.

The results of this study reveal that parents have many learning goals they want to achieve through MHL interventions, and desire to learn additional skills and knowledge following an eight-hour training of YMHFA USA. As youth mental health difficulties become more prevalent, it is likely that more parents will be interested in attending MHL interventions, such as YMHFA USA. However, finding time for lengthy mental health trainings is hard for many families. Efforts should be made to design MHL interventions that are shorter and delivered flexibly (e.g., self-paced online trainings). Additionally, the cultural relevance of various MHL trainings should be explored, both in regard to culturally and linguistically diverse (CLD) parents and for adults who work with CLD youth. Finally, parents may be interested in more niche courses that cover topics of particular interest for their families (e.g., promoting mental wellbeing in young children).

Recruiting participants, finding physical space for trainings, and paying for the course are all barriers to providing MHL interventions. Schools may be ideal

settings to host MHL interventions as they have large facilities, budgets that may include trainings and workshops, and wide reach to staff, parents, and community members. Schools and their communities would benefit from regularly offering mental health training programs such as YMHFA USA.

Appendices

Appendix A

Results Tables

Table 1

Participant Demographics

	N (%)
Gender	
Female	90 (84.11%)
Male	17 (15.89%)
Race	
White	52 (48.60%)
Asian/Asian American	39 (36.45%)
Black/African American	11 (10.28%)
Hispanic/Latinx	4 (3.74%)
Multi-Racial	1 (0.93%)
U.S. Born	
Yes	58 (54.21%)
No	49 (45.79%)
Highest Degree Earned	
Less than a bachelor's degree	8 (7.48%)
Bachelor's degree	22 (20.56%)
Master's degree	54 (50.37%)
Professional or doctorate degree	20 (18.69%)
Prior Mental Health or Substance Abuse Training	
Yes	16 (14.95%)
No	92 (85.98%)
Mental Health Diagnosis	
Total	71 (66.36%)
Self	19 (17.76%)
Relative	40 (37.38%)
Friend	30 (28.04%)
Child	19 (17.76%)
Mental Health Treatment	
Total	71 (66.36%)
Self	24 (22.43%)
Relative	39 (36.45%)
Friend	30 (28.04%)
Child	23 (21.50%)

Table 2

Training Characteristics

Training Cohort	**# Research Participants**	**Training Days**	**Training Location**
1	23	4	School (suburban)
2	18	1	School (rural)
3	11	2	Chinese School
4	10	2	School (suburban)
5	28	2	University
6	17	3	School (suburban)

Table 3

Quantitative Measures Includes in Each Wave of Data Collection

Pre-Test	Post-Test	Follow-Up
Demographics	MHLS	MHLS
MHLS	PATPSI	PATPSI
PATPSI	Behavioral Intentions	Behavioral Intentions
Behavioral Intentions	Confidence in Helping Skills	Helping Behaviors
Helping Behaviors	Acceptability of Training	Confidence in Helping Skills
Confidence in Helping Skills		

Table 4

Paired Sample T-Tests for Research Questions 1-3 (Changes from Pre- to Post-Test)

Paired Samples Test

Variable	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Effect Size (*d*)
Mental Health Literacy	-7.87	9.97	.97	-9.79	-5.95	-8.12**	105	0.61
Help-Seeking Intentions	-1.56	4.22	.41	-2.37	-.74	-3.79**	105	0.39
Stigma	2.47	5.44	.53	1.42	3.51	4.67**	105	0.43
Attitudes toward Help-Seeking	-2.33	5.02	.50	-3.32	-1.34	-4.69**	101	0.40
Confidence in MHFA Skills	-5.90	4.18	.42	-6.73	-5.07	-14.12**	99	1.56
Behavioral Intentions – Depression	-1.94	2.16	.22	-2.38	-1.49	-8.66**	92	1.58
Behavioral Intentions – Schizophrenia	-1.74	1.82	.19	-2.12	-1.36	-9.16**	91	1.22

*$p < 0.05$
**$p < 0.01$

Table 5

Changes in Behavioral Intentions by ALGEE Step from Pre- to Post-Test (Depression)

Paired Samples Test

Action	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df
Assessing	-1.15054	.96624	.10019	-1.34953	-.95154	-11.483**	92
Listening	-.38710	.83448	.08653	-.55896	-.21524	-4.473**	92
Giving Reassurance	-.21505	.64013	.06638	-.34689	-.08322	-3.240**	92
Encouraging Professional Help	-.02151	.85946	.08912	-.19851	.15550	-.241	92
Encouraging Self-Help	-.15054	.62461	.06477	-.27917	-.02190	-2.324**	92

*$p < 0.05$
**$p < 0.01$

Table 6

Changes in Behavioral Intentions by ALGEE Step from Pre- to Post-Test (Schizophrenia)

Paired Samples Test

Action	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df
Assessing	-.41304	.69775	.07275	-.55754	-.26854	-5.678**	91
Listening	-.57609	.61544	.06416	-.70354	-.44863	-8.978**	91
Giving Reassurance	-.31609	.49411	.05151	-.42841	-.22376	-6.330**	91
Encouraging Professional Help	-.18478	.74020	.07717	-.33807	-.03149	-2.394*	91
Encouraging Self-Help	-.22826	.53664	.05595	-.33940	-.11713	-4.080**	91

*$p < 0.05$
**$p < 0.01$

Table 7

Self-Reported Experience with Youth Mental Health

	%							
	Pre-Test (2 months prior to training)				Follow-Up (2 months after training)			
Action	Never	Once	2-5 Times	>5 Times	Never	Once	2-5 Times	>5 Times
Talked to youth about mental wellbeing.	23.5	11.8	32.4	32.4	23.4	14.1	17.2	45.3
Came into contact with youth with mental illness.	52.4	14.6	18.3	14.6	46.2	18.8	9.4	23.4
Talked to youth about a mental health concern.	57.9	16.8	15.0	10.3	48.4	14.1	9.4	26.6

Table 8

Self-Reported MHFA Actions in the Past Two Months

	N (%)	
Action	Pre-Test (2 months prior to training)	Follow-Up (2 months after training)
Spent time listening to their problem	67 (62.62%)	30 (46.88%)
Helped to calm them down	52 (48.60%)	22 (34.38%)
Talked to them about suicidal thoughts	16 (14.95%)	8 (12.50%)
Recommended they seek professional help	41 (38.32%)	15 (23.44%)
Recommended self-help strategies	42 (39.25%)	26 (40.63%)
Gave them information about their problem	18 (16.62%)	11 (17.19%)
Gave them information about local services	20 (18.69%)	13 (20.31%)
Made an appointment for them with services	26 (24.30%)	9 (14.06%)
Referred them to books or websites about their problem	15 (14.02%)	13 (25.00%)

Table 9

Paired Sample T-Tests from Post-Test to Two-Month Follow-Up

Paired Samples Test

Variable	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Effect Size (*d*)
Mental Health Literacy	-.28	6.70	.84	-1.96	1.39	-.34	63	.02
Help-Seeking Intentions	.30	3.56	.44	-.59	1.19	.68	63	.08
Stigma	-.45	4.16	.52	-1.49	.59	-.87	63	.08
Attitudes toward Help-Seeking	.53	4.58	.57	-.62	1.67	.92	63	.11
Confidence in MHFA Skills	.67	2.54	.33	.01	1.32	2.04*	59	.23
Behavioral Intentions – Depression	.84	2.51	.34	.17	1.51	2.50*	55	.40
Behavioral Intentions – Schizophrenia	1.00	3.17	.45	.11	1.89	2.25*	50	.52

*$p < 0.05$
**$p < 0.01$

Table 10

Paired Sample T-Tests from Pre-Test to Follow-Up

Variable	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Effect Size (*d*)
				Lower	Upper			
Mental Health Literacy	-8.95	0.57	1.20	-11.35	-6.56	-7.48**	63	.74
Help-Seeking Intentions	-1.42	3.62	.45	-2.32	-.51	-3.13**	63	.41
Stigma	2.30	4.79	.60	1.10	3.50	3.84**	63	.38
Attitudes toward Help-Seeking	-1.85	4.15	.52	-2.88	-.81	-3.56**	63	.36
Confidence in MHFA Skills	-5.60	3.81	.48	-6.57	-4.63	-11.56**	61	1.49
Behavioral Intentions – Depression	-1.34	2.26	.31	-1.96	-.72	-4.31**	52	.75
Behavioral Intentions – Schizophrenia	-1.02	1.67	.23	-1.48	-.56	-4.44**	52	.75

*$p < 0.05$
**$p < 0.01$

Table 11

Frequency of Acceptability Scale Responses

	N (%)				
Item	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Liked the program	1 (1.0%)	0 (0.0%)	5 (5.0%)	8 (7.9%)	87 (86.1%)
Found program useful	1 (1.0%)	0 (0.0%)	0 (0%)	14 (13.0%)	87 (85.3%)
Satisfied with program	1 (1.0%)	0 (0.0%)	7 (7.0%)	13 (13.0%)	79 (79.0%)
Felt program met expectations	1 (1.0%)	1 (1.0%)	7 (6.9%)	13 (12.9%)	79 (78.2%)
Would recommend program to family/friends	1 (1.0%)	0 (0.0%)	5 (5.0%)	6 (5.9%)	89 (88.1%).

Table 12

Themes and Subthemes: Reasons for Signing up for Training and Goals for Learning Outcomes

Theme	% Participants
Desire for Knowledge and Skills	**83.18%**
Prepare for Possible Youth Mental Health Challenges	*65.12%*
Recognize Warning Signs	*58.42%*
Learn More about Mental Illness and Typical Adolescent Development	*28.09%*
Prevent the Development of Mental Illness and Promote Mental Wellbeing	*11.24%*
Develop Skills to Assist with Mental Health Concerns	*5.62%*
Find Ways to Talk to Youth About Mental Health	*4.45%*
Have Multiple Roles with Youth	**26.17%**
Experience with Mental Illness	**17.76%**
Increasing Prevalence of Mental Illness	**8.41%**

Table 13

Themes and Subthemes: Most Beneficial Aspects of Training

Theme	% Participants
Post-Test	
The ALGEE Action Plan	**25.23%**
How to Respond to a Crisis Situations	*13.89%*
Roleplays and Examples	**23.36%**
Information about Youth Mental Illness	**15.89%**
Open/Positive Training Environment	**11.21%**
Interactions with Other Parents	*66.67%*
Space to Openly Discuss Mental Illness	*33.33%*
Strategies for Understanding and Interacting with Youth	**7.48%**
Two-Month Follow-Up	
The ALGEE Action Plan	**67.74%**
How to Respond to Crisis Situations	*28.57%*
Information about Youth Mental Illness	**19.35%**
Roleplays and Examples	**16.13%**
Strategies for Understanding and Interacting with Youth	**8.06%**
YMHFA Manual	**3.23%**

Table 14

Themes and Subthemes: Suggestions for Improvements to Training

Theme	% Participants
Content	**40.19%**
Additional Resources or Parent-Specific Resources	*30.23%*
Changes to the Examples (e.g., more examples of recovery)	*20.93%*
Time to Share Personal Experience	*13.95%*
More Content on Mental Health Disorders	*9.30%*
More Content on Crisis Situations	*9.30%*
Material on Young Children	*6.98%*
Material on Culturally Diverse Youth	*4.65%*
Structure	**32.91%**
Changes to Training Materials (e.g., slideshow, manual)	*42.86%*
Availability of YMHFA for Parents	*20.00%*
Changes to Training Time and Configuration	*14.29%*
Additional Work Outside Training	*11.43%*
Changes to Structure of Roleplays	*11.43%*

Table 15

Exploratory ANOVA: Mental Health Literacy

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	9040.167	6	1506.695	13.150**
Intercept	631584.289	1	631584.289	5512.128**
Gender	.230	1	.230	.002
Race	1424.503	1	1424.503	12.432**
Mental Health Experience	3716.228	1	3716.228	32.433**
Education Level	300.083	3	100.028	.873
Error	10885.181	95	114.581	
Total	1709383.18	102		
Corrected Total	19925.348	101		

*$p < 0.05$
**$p < 0.01$

Table 16

MHL ANOVA: Significant Results

Group	Mean	N	Std. Deviation
Race: White	135.8240	51	9.65908
Race: Non-White	122.0348	53	14.18457
Race: Total	128.7968	104	13.95876
MH Experience: No	116.1555	31	13.51406
MH Experience: Yes	133.9197	75	10.22063
MH Experience: Total	128.7245	106	13.84631

Table 17

Exploratory ANOVA: Stigma

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	595.013	6	99.169	2.545*
Intercept	5618.608	1	5618.608	144.209**
Gender	1.128	1	1.128	.029
Race	199.743	1	199.743	5.127*
Mental Health Experience	497.748	1	479.748	12.313**
Education Level	167.304	3	55.768	1.431
Error	3701.349	95	38.962	
Total	15634.806	102		
Corrected Total	4296.32	101		

*$p < 0.05$
**$p < 0.01$

Table 18

Stigma ANOVA: Significant Result

Group	Mean	N	Std. Deviation
Race: White	10.9312	52	7.04758
Race: Non-White	10.1922	52	5.90010
Race: Total	10.5617	104	6.47824
MH Experience: No	13.0380	32	6.72473
MH Experience: Yes	9.4486	74	6.03159
MH Experience: Total	10.5322	106	6.43313

Table 19

Exploratory ANOVA: Help-Seeking Intentions

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	63.448	6	10.575	.705
Intercept	16204.853	1	16204.853	1079.754**
Gender	14.430	1	14.430	.962
Race	10.049	1	10.049	.670
Mental Health Experience	19.072	1	19.072	1.271
Education Level	9.069	3	3.023	.201
Error	1425.751	95	15.008	
Total	41910.214	102		
Corrected Total	1489.199	101		

*$p < 0.05$
**$p < 0.01$

Table 20

Exploratory ANOVA: Attitudes Toward Help-Seeking

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	648.488	6	108.081	3.524**
Intercept	42429.819	1	32429.819	1057.232**
Gender	118.507	1	118.507	3.863*
Race	1.644	1	1.644	.054
Mental Health Experience	356.021	1	356.021	11.607**
Education Level	41.416	3	13.805	.430
Error	2791.358	91	30.674	
Total	104633.121	98		
Corrected Total	3439.846	97		

*$p < 0.05$
**$p < 0.01$

Table 21

Attitudes Toward Help-Seeking ANOVA: Significant Results

Group	Mean	N	Std. Deviation
Gender: Female	32.1154	86	5.80645
Gender: Male	29.2500	16	6.16982
Gender: Total	32.1154	102	5.96406
MH Experience: No	28.6113	28	6.38308
MH Experience: Yes	33.4412	74	5.25854
MH Experience: Total	32.1154	102	5.96406

Table 22

Exploratory ANOVA: Behavioral Intentions – Depression

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	7.487	6	1.248	.753
Intercept	130.060	1	130.060	78.507**
Gender	.014	1	.014	.009
Race	.203	1	.203	.122
Mental Health Experience	4.458	1	4.458	2.691
Education Level	3.014	3	1.005	.606
Error	137.502	83	1.657	
Total	585.000	90		
Corrected Total	144.989	89		

*$p < 0.05$
**$p < 0.01$

Table 23

Exploratory ANOVA: Behavioral Intentions – Schizophrenia

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	4.377	6	.729	1.288
Intercept	43.740	1	43.740	77.246**
Gender	1.400	1	1.400	2.473
Race	1.186	1	1.186	2.095
Mental Health Experience	.009	1	.009	.017
Education Level	2.512	3	.837	1.479
Error	46.432	82	.566	
Total	202.00	89		
Corrected Total	50.809	88		

*$p < 0.05$
**$p < 0.01$

Table 24

Exploratory ANOVA: Self-Efficacy

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	96.986	6	16.164	.762
Intercept	9565.839	1	9565.839	450.870**
Gender	3.090	1	3.090	.146
Race	19.266	1	19.266	.908
Mental Health Experience	.971	1	.971	.046
Education Level	73.774	3	24.591	1.159
Error	1994.341	94	21.216	
Total	27522.00	101		
Corrected Total	2091.327	100		

*$p < 0.05$
**$p < 0.01$

Table 25

Exploratory ANOVA: Self-Reported MHFA Behaviors

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F
Corrected Model	13.057	6	2.176	2.055
Intercept	26.365	1	26.365	24.897**
Gender	.776	1	.776	.733
Race	4.016	1	4.016	3.792*
Mental Health Experience	2.304	1	2.304	2.176
Education Level	3.003	3	1.001	.945
Error	101.662	96	1.059	
Total	180.00	103		
Corrected Total	114.718	102		

*$p < 0.05$
**$p < 0.01$

Table 26

Self-Reported MHFA Behaviors ANOVA: Significant Results

Group	Mean	N	Std. Deviation
Race: White	1.0577	52	1.22736
Race: Non-White	.5094	53	.77516
Race: Total	.7810	105	1.05594

Table 27

Exploratory Analyses: Pearson Correlations among Dependent Variables at Pre-Test

Variable	1.	2.	3.	4.	5.	6.	7.	8,
1.Self-Efficacy	-	-	-	-	-	-	-	-
2.MHFA Intent – Depression	0.167	-	-	-	-	-	-	-
3.MHFA Intent – Schizophrenia	0.027	0.367**	-	-	-	-	-	-
4.MHL	0.260**	0.168	0.179	-	-	-	-	-
5.Attitudes	-0.158	0065	0.198	0.483**	-	-	-	-
6.Help-Seeking Intentions	0.306**	-0.105	0.135	0.344**	0.368**	-	-	-
7.Stigma	-0087	-0.086	-0.088	-.428**	-0.503**	-0.279**	-	-
8.MHFA Actions	0.018	0.031	-0.014	0.208*	0.054	-0.022	0.089	-

*Correlation is significant at the 0.05 level
**Correlation is significant at the 0.01 level

Appendix B

Demographic Questionnaire

1. What is your age? _________
2. What is your gender?
   a. Male
   b. Female
   c. Transgender
   d. Non-binary
   e. Gender fluid
   f. Gender neutral
   g. Other
   h. Prefer not to answer
3. If "other," how do you identify ? _________
4. What is your race/ethnicity? _________
5. What is your highest degree earned?
   a. Less than a bachelor's
   b. Bachelor's degree
   c. Master's degree
   d. Professional/doctorate degree
6. What state do you live in? _________
7. Please list your child(ren)'s age(s) and gender(s). _________
8. Have you attended a prior mental health/substance abuse training?
   a. Yes
   b. No
9. How many hours of mental health or substance abuse training have you received? _________
10. Have you or someone close to you ever been diagnosed with a mental illness? (check all that apply)
    a. Yes, myself
    b. Yes, my child
    c. Yes, a relative
    d. Yes, a friend
    e. No
11. Have you or someone close to you ever sought professional help or treatment for a mental illness? (check all that apply)
    a. Yes, myself
    b. Yes, my child
    c. Yes, a relative
    d. Yes, a friend
    e. No

Appendix C

Mental Health Literacy Scale (MHLS)

The purpose of these questions is to gain an understanding of your knowledge of various aspects to do with mental health. When responding, we are interested in your degree of knowledge. Therefore when choosing your response, consider that:

Very unlikely = I am certain that it is NOT likely
Unlikely = I think it is unlikely but am not certain
Likely = I think it is likely but am not certain
Very Likely = I am certain that it IS very likely

1

If someone became extremely nervous or anxious in one or more situations with other people (e.g., a party) or performance situations (e.g., presenting at a meeting) in which they were afraid of being evaluated by others and that they would act in a way that was humiliating or feel embarrassed, then to what extent do you think it is likely they have Social Phobia?

Very unlikely Unlikely Likely Very Likely

2

If someone experienced excessive worry about a number of events or activities where this level of concern was not warranted, had difficulty controlling this worry and had physical symptoms such as having tense muscles and feeling fatigued then to what extent do you think it is likely they have Generalized Anxiety Disorder?

Very unlikely Unlikely Likely Very Likely

3

If someone experienced a low mood for two or more weeks, had a loss of pleasure or interest in their normal activities and experienced changes in their appetite and sleep then to what extent do you think it is likely they have Major Depressive Disorder?

Very unlikely Unlikely Likely Very Likely

4

To what extent do you think it is likely that Personality Disorders are a category of mental illness?

Very unlikely Unlikely Likely Very Likely

5

To what extent do you think it is likely that Dysthymia is a disorder?

Very unlikely Unlikely Likely Very Likely

6

To what extent do you think it is likely that the diagnosis of Agoraphobia includes anxiety about situations where escape may be difficult or embarrassing?

Very unlikely Unlikely Likely Very Likely

7

To what extent do you think it is likely that the diagnosis of Bipolar Disorder includes experiencing periods of elevated (i.e., high) and periods of depressed (i.e., low) mood?

Very unlikely Unlikely Likely Very Likely

8

To what extent do you think it is likely that the diagnosis of Drug Dependence includes physical and psychological tolerance of the drug (i.e., require more of the drug to get the same effect)?

Very unlikely Unlikely Likely Very Likely

9

To what extent do you think it is likely that in general in Australia, women are MORE likely to experience a mental illness of any kind compared to men?

Very unlikely Unlikely Likely Very Likely

10

To what extent do you think it is likely that in general, in Australia**,** men are MORE likely to experience an anxiety disorder compared to women?

Very unlikely Unlikely Likely Very Likely

When choosing your response, consider that:

- Very Unhelpful = I am certain that it is NOT helpful
- Unhelpful = I think it is unhelpful but am not certain
- Helpful = I think it is helpful but am not certain
- Very Helpful = I am certain that it IS very helpful

11

To what extent do you think it would be helpful for someone to improve their quality of sleep if they were having difficulties managing their emotions (e.g., becoming very anxious or depressed)?

Very unhelpful Unhelpful Helpful Very helpful

12

To what extent do you think it would be helpful for someone to avoid all activities or situations that made them feel anxious if they were having difficulties managing their emotions?

Very unhelpful Unhelpful Helpful Very Unhelpful

When choosing your response, consider that:

- Very unlikely = I am certain that it is NOT likely
- Unlikely = I think it is unlikely but am not certain
- Likely = I think it is likely but am not certain
- Very Likely = I am certain that it IS very likely

13

To what extent do you think it is likely that Cognitive Behaviour Therapy (CBT) is a therapy based on challenging negative thoughts and increasing helpful behaviours?

Very unlikely Unlikely Likely Very Likely

14

Mental health professionals are bound by confidentiality; however there are certain conditions under which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental health professional to **break confidentiality**:

If you are at immediate risk of harm to yourself or others

Very unlikely Unlikely Likely Very Likely

15

Mental health professionals are bound by confidentiality; however there are certain conditions under which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental health professional to **break confidentiality**:

if your problem is not life-threatening and they want to assist others to better support you

Very unlikely Unlikely Likely Very Likely

Please indicate to what extent you agree with the following statements:

	Strongly Disagree	Disagree	Neither agree	Agree	Strongly agree

			nor disagree		
16. I am confident that I know where to seek information about mental illness					
17. I am confident using the computer or telephone to seek information about mental illness					
18. I am confident attending face to face appointments to seek information about mental illness (e.g., seeing the GP)					
19. I am confident I have access to resources (e.g., GP, internet, friends) that I can use to seek information about mental illness					

Please indicate to what extent you agree with the following statements:

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
20. People with a mental illness could snap out if it if they wanted					
21. A mental illness is a sign of personal weakness					
22. A mental illness is not a real medical illness					
23. People with a mental illness are dangerous					
24. It is best to avoid people with a mental illness so that you don't develop this problem					
25. If I had a mental illness I would not tell anyone					

26. Seeing a mental health professional means you are not strong enough to manage your own difficulties					
27. If I had a mental illness, I would not seek help from a mental health professional					
28. I believe treatment for a mental illness, provided by a mental health professional, would not be effective					

Please indicate to what extent you agree with the following statements:

	Definitely unwilling	Probably unwilling	Neither unwilling nor willing	Probably willing	Definitely willing
29. How willing would you be to move next door to someone with a mental illness?					
30. How willing would you be to spend an evening socializing with someone with a mental illness?					
31. How willing would you be to make friends with someone with a mental illness?					

	Definitely unwilling	Probably unwilling	Neither unwilling nor willing	Probably willing	Definitely willing
32. How willing would you be to have someone with a mental illness start working closely with you on a job?					
33. How willing would you be to have					

someone with a mental illness marry into your family?					
34. How willing would you be to vote for a politician if you knew they had suffered a mental illness?					
35. How willing would you be to employ someone if you knew they had a mental illness?					

Appendix D

Parental Attitudes Toward Psychological Services Inventory (PATPSI)

Directions: For each item, indicate whether you strongly disagree (0), disagree (1), somewhat disagree (2), somewhat agree (3), agree (4) or strongly agree (5). The term ‘‘psychological problems’’ refer to reasons one might visit a professional. Similar terms include mental health concerns, emotional problems, mental troubles, and personal difficulties. The term ‘‘professional’’ refers to individuals who have been trained to deal with mental health problems (e.g., psychologist, psychiatrist, social workers, and physicians).

0	1	2	3	4	5
Strongly disagree					Strongly agree

1. I would not want others (friends, family, teachers, etc.) to know if my child had a psychological or behavior problem. 0 1 2 3 4 5
2. To avoid thinking about my child’s problems, doing other activities is a good solution. 0 1 2 3 4 5
3. Having been mentally ill carries with it feelings of shame. 0 1 2 3 4 5
4. If my child were experiencing a serious psychological or behavior problem at this point in my life, I would be confident that I could find relief in professional help. 0 1 2 3 4 5
5. If my child were to experience a psychological or behavior problem, I would get professional help if I wanted to. 0 1 2 3 4 5
6. Important people in my life would think less of my child if they were to find out that he/she had a psychological or behavior problem. 0 1 2 3 4 5
7. Psychological problems tend to work out by themselves. 0 1 2 3 4 5
8. It would be relatively easy for me to take my child to see a professional for help. 0 1 2 3 4 5
9. I would want to get professional help if my child were worried or upset for a long period of time. 0 1 2 3 4 5
10. I would be uncomfortable seeking professional help for my child because people (friends, family, coworkers, etc.) might find out about it. 0 1 2 3 4 5
11. I would not want to take my child to a professional because what people might think. 0 1 2 3 4 5
12. There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without seeking professional help. 0 1 2 3 4 5
13. If I believed my child were having a mental breakdown,

my first decision would be to get professional help. 0 1 2 3 4 5

14. I would feel uneasy going to a professional because of what some people would think. 0 1 2 3 4 5

15. Strong willed individuals can handle emotional or behavior problems without needing professional help. 0 1 2 3 4 5

16. Had my child received treatment for a psychological or behavior problem, I would feel that it should be "kept secret". 0 1 2 3 4 5

17. I would be embarrassed if my neighbor saw me going into the office of a professional who deals with mental health concerns. 0 1 2 3 4 5

18. People should work out their own problems instead of getting professional help. 0 1 2 3 4 5

19. There are things that happen in my family I would not discuss with anyone. 0 1 2 3 4 5

20. Seeking professional help is a sign of weakness. 0 1 2 3 4 5

21. Strong willed parents can handle problems without professional help. 0 1 2 3 4 5

Appendix E

First Aid Intentions

1. Jenny is a 15 year old who has been feeling unusually sad and miserable for the last few weeks. She is tired all the time and has trouble sleeping at night. Jenny doesn't feel like eating and has lost weight. She can't keep her mind on her studies and her marks have dropped. She puts off making any decisions and even day-to-day tasks seem too much for her. Her parents and friends are very concerned about her. Jenny feels she will never be happy again and believes her family would be better off without her. She has been so desperate, she has been thinking of ways to end her life.

Imagine Jenny is a young person you know. You want to help her. What would you do?

____
____
____
____
____
____

2. John is a 15 year old who lives at home with his parents. He has been attending school irregularly over the past year and has recently stopped attending altogether. Over the past six months he has stopped seeing his friends and begun locking himself in his bedroom and refusing to eat with the family or to have a bath. His parents also hear him walking about in his bedroom at night while they are in bed. Even though they know he is alone, they have heard him shouting and arguing as if someone else is there. When they try to encourage him to do more things, he whispers that he won't leave home because he is being spied upon by the neighbor. They realize he is not taking drugs because he never sees anyone or goes anywhere.

Imagine John is a young person you know. You want to help him. What would you do?

____
____
____
____
____
____

Appendix F

Self-Reported Mental Health First Aid Actions

1. Over the past 2 months, how many times have you talked to a youth about mental health and wellbeing? _________
2. Over the past 2 months, how many times have you come into contact with a youth who has a mental health problem? _________
3. Over the past 2 months, how many times have you talked to a young person about their mental health problem? _________
4. If you talked to a young person about a mental health concern, did you do any of the following? (Select all that apply):
    a. Spent time listening to their problem
    b. Helped to calm them down
    c. Talked to them about suicidal thoughts
    d. Recommended they seek professional help
    e. Recommended self-help strategies
    f. Gave them information about their problem
    g. Gave them information about local services
    h. Made an appointment for them with services
    i. Referred them to books or websites about their problem
5. Did you do anything else? If so, what?

Appendix G

Confidence in Helping Skills

Please circle the number that best reflects your beliefs from 1 (strongly disagree) to 5 (strongly agree).

1. I feel confident in my ability to ask school-aged youth questions that determine whether they are at risk to physically harm themselves or others. 0 1 2 3 4 5
2. I have the skills necessary to patiently listen and not judge school-aged youth when they talk about their mental health problems. 0 1 2 3 4 5
3. I feel comfortable in helping school-aged youth feel reassured that supports are available when they are experiencing mental health problems. 0 1 2 3 4 5
4. I feel confident in my ability to refer a school-aged youth who is experiencing mental health problems to appropriate school-based and/or community-based resources. 0 1 2 3 4 5
5. I have the knowledge necessary to recommend Effective self-help strategies to school aged youth experiencing mental health problems. 0 1 2 3 4 5

Appendix H

Acceptability Scale

Please indicate to what extent you agree with the following statements about the Youth Mental Health First Aid program:

1 Strongly Disagree	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree

1. I liked this program.	0	1	2	3	4	5
2. This program was useful to me.	0	1	2	3	4	5
3. I am satisfied with the program.	0	1	2	3	4	5
4. The program met my expectations.	0	1	2	3	4	5
5. I would recommend this program to my relatives and friends.	0	1	2	3	4	5

Appendix I

Open-Ended Questions

1. Why are you interested in the Youth Mental Health First Aid training? *(pre-test)*
2. What do you hope to get out of the Youth Mental Health First Aid training? *(pre-test)*
3. What did you think was the most beneficial/helpful aspect of the training? *(post-test)*
4. What would you do to improve the training? *(post-test)*
5. What content or skill did you find most helpful from the training? *(follow-up)*
6. How have you used that content or skill since completing the training? *(follow-up)*

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