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Mental Health Help Seeking in Schools: The Impact of Mental Health Literacy, Stigma, and Barriers to Care

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ABSTRACT OF THE DISSERTATION

Mental Health Help Seeking in Schools: The Impact of
Mental Health Literacy, Stigma, and Barriers to Care

by

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A large proportion of adolescents experience significant psychological distress, but a vast majority never obtain needed mental health services. The availability of school-based mental health services has increased immensely in recent years, but ongoing challenges impact students' utilization of these services. Research on mental health help seeking pathways for adolescents suggests that mental health literacy (MHL), stigma towards seeking help, and context-specific barriers to care are key factors to consider. However, much of the existing literature on these constructs has not focused on help seeking in school-based mental health care settings or has taken place outside of the United States. The present study sought to explore the relationships between MHL, stigma, and school-based barriers to care, as well as to examine how these factors are related to mental health

help seeking intentions for formal services in school settings. The study sample largely consisted of culturally and linguistically diverse students with socio-economically disadvantaged backgrounds. Correlations and logistic regressions were used to estimate the relationships between variables of interest. Study results indicated measurement concerns regarding the reliability and validity of study measures in the current study sample; therefore, all analyses and results should be considered with caution. Correlational analyses revealed an inverse relationship than expected between MHL and adolescents' help seeking intentions; results suggested that higher levels of MHL were negatively associated adolescents' school-based help seeking intentions for services. Significant associations were also found between perceived stigma and barriers to care in schools. Results from logistic regression analyses suggested that site-specific barriers to care in schools predicted adolescent help seeking intentions; students who endorsed fewer site-specific barriers to care were more likely to express help seeking intentions for school-based mental health services. Specific findings highlighted the importance of providing information to students about mental health services available at their school. Furthermore, study findings may assist researchers and school-based personnel to better understand and support adolescents' help seeking for school-based mental health services.

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Mental illnesses affect great numbers of adolescents. One in five adolescents experience difficulties related to mental illness (Bowers, Manion, Papadopoulos, & Gauvereau, 2013), while an estimated 28% of youth suffer from severe impairment due to mental illness (Merikangas et al., 2010). Research on the prevalence of specific mental disorders estimates that by the end of adolescence, 25% of adolescents have experienced depression (Lewinsohn, Rodhe, & Seely, 1998). In addition, Kessler, Petukhova, Sampson, Zaslavasky, and Wittchen (2012) estimate lifetime prevalence rates of anxiety at 32.4% in adolescents between the ages of 13 and 17. Although a large number of adolescents in the United States experience mental health problems, only a fraction of individuals in need of mental health services actually receive treatment. One study estimated that only 20% of youth in need of mental health services received treatment (Kataoka, Zhang, & Wells, 2002). By examining adolescents' mental health help seeking pathways, a number of factors have been identified to better understand why such a large proportion of adolescents' mental health problems remain untreated.

First, mental health literacy has been identified as a key factor in explaining adolescent help seeking (e.g., Kelly, Jorm, & Wright, 2007). Before an individual can seek help for a problem, he or she must first recognize the symptoms of mental disorders and recognize the need for psychological help. Next, stigma towards seeking psychological help is also related to help seeking intentions and behaviors; previous research has suggested that stigma regarding help seeking is important to consider when

investigating help seeking intentions and behaviors (Vogel et al., 2006). Lastly, barriers to care are also important to examine, especially as they pertain to specific help seeking treatment contexts, such as school-based mental health care (Bowers, Manion, Papadopoulous, & Gauvreau, 2013).

Adolescents receiving mental health services are most often treated in the school setting (Farmer et al., 2003). School-based mental health care availability has greatly increased in recent years and has been shown to decrease structural barriers to mental health services, such as lack of transportation or lack of health care insurance (Kataoka et al., 2002). Few studies on adolescent mental health help seeking have focused on help seeking in school-based mental health settings. Preliminary findings suggest the importance of considering school-specific factors that impede entry into mental health services, such as concerns regarding confidentiality, and lack of familiarity or understanding regarding available school-based mental health care services (Guo, 2014; Rickwood et al., 2005).

The proposed study seeks to examine the relationships between mental health literacy, public stigma related to help seeking, and barriers to care for school-based mental health services. Further, this study seeks to examine how these constructs are related to the help seeking intentions of adolescents in school-based mental health care settings. By better understanding the contributions of mental health knowledge, stigma towards help seeking, and barriers to care in school-based mental health help seeking, intervention efforts and school-based mental health services can be tailored to facilitate the help seeking process of American adolescents.

Models of Mental Health Help Seeking

Several factors related to mental health help seeking have been examined, but a majority of the help seeking literature has focused on mental health service utilization rather than the *process* of help seeking that occurs when adolescents seek and then obtain mental health services (Srebnik, Cauce, & Baydar, 1996). Consequently, Srebnik, Cauce, and Baydar (1996) developed a model of mental health help seeking pathways in children and adolescents using three stages: problem recognition, decision to seek help, and support network and service utilization patterns. Problem recognition involves the understanding that the adolescent has a mental health problem and needs mental health services; this need for services can be defined by either an epidemiologically defined need, such as fitting DSM-V criteria, or a perceived need. Once a problem is recognized (stage 1), the next stage is the decision to seek help (stage 2). The decision to seek help can be either voluntary (adolescent-initiated) or coercive (referred by a parent/caretaker or other adult). After a decision to seek help is made, mental health service utilization (stage 3) takes place in the form of informal supports (such as family or friends), collateral services (such as school counselors), or formal mental health services (such as psychiatrists, psychologists, or social workers). Srebnik and colleagues (1996) propose that sociocultural values and beliefs of the adolescent and barriers to care will influence both the decision to seek help (stage 2) and service utilization (stage 3). Sociocultural values and beliefs may include coping strategies, as well as the adolescent's values, attitudes, and knowledge concerning health and mental illness. Barriers to care are also believed to influence these pathways including the knowledge of and about services,

economic factors, and service characteristics (such as availability, access, and provider attitudes).

The relationship among variables listed in Srebnik and colleagues' model (1996) and how they directly influence help seeking pathways in adolescents needs further exploration using approaches that incorporate cultural, contextual, and individual psychological factors related to mental health help seeking (Srebnik et al., 1996). Furthermore, Srebnik and colleagues (1996) recommend the study of predictors and pathways to different kinds of services and supports. For example, economic and structural barriers to care may be eliminated in specifically school-based mental health service provision. By developing a better understanding of help seeking pathways for adolescents in the school context, the need for services and barriers to care in specific contexts can be addressed using appropriately targeted psycho-education and intervention efforts.

It is important to note that the goal of the present study does not involve quantitative replication or validation of this model; instead the proposed study utilizes Srebnik and colleagues' (1996) help seeking model as an underlying theoretical framework and seeks to expand on the literature on how contextual and individual psychological factors influence the help seeking process. It is expected that mental health literacy be most related to stage one of the model (problem recognition). Both mental health literacy and stigma towards mental illness are expected to affect Stage 2 (the decision to seek help). Lastly, in the proposed study, barriers to mental healthcare in

schools will be appraised and are expected to influence both the decision to seek help (stage 2) and service utilization (stage 3).

In addition to Srebnik's model, two major theoretical frameworks are especially relevant to the current study. First, the Theory of Planned Behavior (Ajzen, 1991) provides a useful approach for exploring mental health help seeking intentions and behaviors in adolescents. Secondly, the Transtheoretical Model of Change is also helpful in explaining why help seeking intentions do not always result in actual help seeking behaviors.

The Theory of Planned Behavior (Ajzen, 1991) is pertinent to the proposed study of adolescents because it considers the roles of various psychological processes in explaining behaviors (see figure 1). In the Theory of Planned Behavior, attitude toward the behavior, subjective norms, and perceived behavioral control impact the intention to engage in a behavior. Attitude toward the behavior refers to whether the person views the behavior in positive or negative ways. Subjective norms are the social factors that deal with social pressure that exists to perform or not perform the behavior. The last predictor, perceived behavioral control, refers to the expected ease or difficulty of engaging in the behavior based on recollections of past experiences and current obstacles or impediments. Both attitude towards the behavior and perceived behavior control are believed to explain whether or not one actually engages in intended behaviors. In the present study, this model is relevant in explaining the construct of interest: mental health help seeking intentions. Mental health literacy is expected to affect attitudes toward the behavior, which will be appraised using a measure of help seeking intentions. A measure

of stigma from one's social network towards mental illness help seeking will be used to estimate the subjective norm element of the theory. In sum, the Theory of Planned Behavior will be tested to examine to what extent mental health literacy, stigma, and are related to help seeking intentions.

The Transtheoretical Model of Change is a theory of health behavior change that is also relevant to the proposed study (Prochaska & Velicer, 1997). This theory postulates that individuals change their behaviors as they move through a six stage process involving: precontemplation, contemplation, preparation, action, maintenance, and termination. During the precontemplation stage, an individual does not intend to change in the foreseeable future. In the contemplation stage, a person is aware of their need to change and intends to change, but is ambivalent about actually making change-related actions. Next, while in the preparation stage, an individual is ready to take action in the immediate future and may have a plan of action already planned out. In the action stage, a person is engaging in observable behavior change that has resulted in a significant reduction of risk for a disease. The maintenance stage is a time when the individual is continually working to prevent a relapse, but is not as often engaged in the active change process as someone in the action stage. Lastly, during the termination stage, a person no longer has the temptation to return to previous unhealthy behaviors and is completely self-efficacious in continuing engagement the healthier behavior. Research has supported this model for health behavior change across a variety of applied domains, such as studies of smoking recession and weight loss (cited in Prochaska & Velicer, 1997).

In the proposed study, mental health literacy and perceived public stigma are expected to be especially important to consider when individuals are in the precontemplation (e.g., individuals in this stage do not consider their behavior to be a problem), contemplation (e.g., persons are aware they need to make a change, but do not yet change the actual behavior) and preparation (e.g., individuals plan out their behavior change and prepare to change in the very near future) stages of change because these are both factors that play a role in whether a person intends to change and how they formulate a plan for change. For example, a person with very low mental health literacy (mental health knowledge) does not recognize that their symptoms (e.g., feelings of sadness, lack of energy, anhedonia, sleep disturbance) are related to a treatable and manageable mental disorder (i.e., depression); and hence, is in the precontemplation stage and is not considering seeking psychological help. Without improved mental health literacy, or recognizing that their psychologically-based symptoms constitute a mental illness, a person will never move from precontemplation to contemplation without awareness that behavior change (e.g., seeking psychological help) is needed. In addition, the fear of public stigma may influence how long a person is in the contemplation stage and help maintain their feelings of ambivalence about making behavioral changes. Perceived public stigma may also influence how the person plans to seek help (during the preparation stage), such as whether they plan to use self-help books or Internet resources to privately manage or cope with depression, or whether they intend to seek help in a more public manner, such as seeking formal psychological services.

Mental Health Help Seeking in Adolescents

A considerable body of literature has sought to explain this discrepancy between adolescents' need for mental health care services and whether or not they receive the appropriate psychological care. In a review of mental health help seeking in adolescents and young adults, researchers examined 22 published studies on perceived barriers and facilitators of care (Gulliver, Griffiths, & Christensen, 2010). To be included in this review, studies had to directly ask subjects about perceived barriers to care, involve community-based youth and young adult participants, and focus on self help seeking (as opposed to help seeking for another person) for depression, anxiety, or general mental distress. This review cited only 15 qualitative and seven quantitative studies, suggesting that research on help seeking in adolescents and young adults is needed. Ten of the reviewed studies were conducted in Australia and nine studies were conducted in the United States. Authors found that perceived stigma, embarrassment, poor mental health literacy, and preference for self-reliance were the most prevalent barriers to help seeking. Facilitators of mental health help seeking included positive past experiences, social support, and encouragement from others as aiding in the help seeking process. Findings suggested the importance of improved mental health literacy and stigma reduction in improving help seeking in adolescents. Other research on mental health help seeking has considered the role of structural and system-level factors to facilitate pathways for adolescents' help seeking for psychological problems (Rickwood, Deane, & Wilson, 2007).

In an article by researchers in Australia, the authors stress the importance of considering both structural and individual factors related to adolescent help seeking (Rickwood, Deane, & Wilson, 2007). Structural factors include family, school, and community supports, referral pathways, health system structures, and payment systems. In regards to schools, research cited from Australia has indicated that school-based interventions have significantly impacted help seeking intentions and behaviors (Wilson, Deane, Marshall, et al., 2007). For example, one intervention called MindMatters is focused on the mental health and wellbeing of students using a school-wide approach and improving referral pathways from schools to community-based mental healthcare providers to reduce access to care issues for adolescents (Rickwood, Deane, & Wilson, 2007). Another school-based approach involves general practitioners delivering lessons on physical and mental illnesses in high school classrooms. These lessons also include practical information on where and how students can seek help for physical and mental health concerns (Wilson et al., 2007). Individual aspects involve factors such as mental health literacy, emotional competence, attitudes, and stigma. More specifically, research on mental health help seeking in youth has identified both stigma towards mental illness and uncertainties regarding helpfulness of mental health services as significant barriers to care (Zachrisson, Rodje, & Mykletun, 2007).

Help Seeking and Mental Health Literacy

Jorm and colleagues (1997) defined mental health literacy (MHL) as "the knowledge and beliefs about mental disorders which aid their recognition, management, or prevention" (p. 2.). More specifically, Jorm conceptualized mental health literacy as

the ability to identify disorders, understand risk factors and causes of mental disorders, familiarity with help sources available to treat disorders, knowledge of how to obtain information about mental health, and the possession of attitudes that would increase the likelihood that a person would seek help if needed. Most recent studies on mental health literacy utilize Jorm's definition of mental health literacy (Manganello, 2013). The following section briefly reviews the current literature on mental health literacy and its relationship to mental health help seeking.

A large proportion of the literature on mental health literacy has been conducted outside of the United States and has focused primarily on adults. Jorm, Barney, Christensen, Highlet, Kelly, and Kitchener (2006) reviewed the mental health literacy literature and identified MHL-related constructs that were considered known and unknown in primarily Australian research. Major findings in the category of "knowns" included the public's lack of mental disorder recognition, differences in perceptions of mental health service selection, and the significance of stigma as a barrier to help seeking. Jorm and colleagues (2006) identified both stigma reduction and the impact of MHL on help seeking behavior as domains of research that need to be further addressed. In a recent review of mental health literacy research in the United States, only 12 studies were identified examining mental health literacy in adult samples between 1987 and 2007 (Cabassa, 2009 as cited in Manganello, 2013). In one study of mental health literacy using a university-aged sample, subjects reviewed vignettes and were to identify anxiety disorders and then were asked questions regarding their perceptions on the cause of the disorder and whether help should be sought (Coles & Coleman, 2010). Fewer than half

of the university students were able to correctly identify the disorders; relationships existed between perceptions on the cause of the disorder and the necessity of help seeking. In a study examining mental health literacy using a sixth through twelfth grade sample of students in Virginia, twenty-seven percent of participants recognized anxiety as a mental health illness, while 42% of the sample recognized depression as a mental health illness (Olson & Kennedy, 2010). Further, students who were better able to identify mental disorders also reported they were more likely to seek help for treatment (Olson & Kennedy, 2010).

There are a number of ways that mental health literacy is assessed in the literature; much of the research on mental health literacy in adolescents has focused on assessing mental healthy literacy in terms of how well individuals recognize symptoms and their knowledge of treatment options. For example, Burns and Rapee (2006) examined mental health literacy in adolescents (ages 15-17) in terms of symptoms recognition of depression in peers using case vignettes and questionnaires. In this study, findings were mixed in adolescents' abilities to correctly identify and label depression in case vignettes. For example, subjects were more likely to correctly identify depression in a vignette in which very blunt endorsements of suicidality and feeling of worthlessness were articulated (67.5%). However, adolescents were less likely to identify depression when less obvious symptoms of depression were noted in the vignette (33.8%). Authors argued that this labeling/recognition piece is important because it will increase the likelihood of help seeking; however, help seeking intentions or behaviors were not directly measured in this study. Seventy-five percent of female students and 46.3% in the

study recommended counseling for depression, suggesting that a large portion of students surveyed had some knowledge of appropriate sources of help.

Other research has focused on developing and validating measures of mental health literacy (Manganello et al., 2013). Most commonly, mental health literacy is estimated using measures which include both case vignettes and follow-up questions, such as the Friend in Need Questionnaire (Burns & Rapee, 2006) or the Mental Health Literacy Questionnaire (Jorm et al., 1997). One self-report measure for adolescents has been developed in the United States for use with adolescents. The Adolescent Depression Knowledge Questionnaire (ADKQ; Hart et al., 2014) has been developed and validated to assess mental health literacy, specifically in regards to depression. Psychometrically reliable and valid measures are needed in the study of MHL; such measures are especially important in literature examining the effects of MHL interventions.

Studies on the effectiveness of mental health literacy interventions have found some positive results (Kelly, Jorm, & Wright, 2007; Pinto-Foltz, Logson, & Myers, 2011), but other researchers have expressed reservations regarding their effectiveness (Wei et al., 2013). Kelly, Jorm, and Wright (2007) reviewed the use of mental health literacy strategies as early intervention for adolescents. In this review, several school-based interventions were described and their aims included improving mental health literacy, reducing unfavorable attitudes or stigma towards mental illness, and improve help seeking intentions. Significant gains in knowledge of mental disorders were obtained in all studies that reported mental health knowledge outcomes (three of the

seven school-based interventions studies). All four of the seven intervention studies that reported stigma outcomes found improvements in stigmatizing attitudes. Only two of the seven studies reported on the effects of school-based mental health literacy interventions on help seeking intentions; the studies found small to modest effects of MHL interventions on this domain of help seeking. In one study conducted in the United States, a school-based mental health literacy intervention was implemented with female students; gains in mental health literacy were not detected at one-week following the intervention; however, gains were reported in mental health literacy at both four and eight week follow up periods (Pinto-Foltz, Logson, & Myers, 2011). Stigma reduction was not detected at any of the follow-up points. Lastly, in Wei and colleagues' 2013 review on the effectiveness of school mental health literacy programs, concerns were noted regarding the poor quality of outcome studies available. Methodological concerns were cited regarding risk of bias in studies due to lack of randomization, failure to control of confounding variables, the use of measures that lacked validity evidence, and limited information reported about study attrition. These researchers concluded that due to these methodological concerns, published literature did not clearly demonstrate the effectiveness of MHL interventions on mental health knowledge, attitudes, nor help seeking behavior.

Overall, studies of mental health literacy in adolescents suggests that the knowledge and recognition of mental disorders is crucial for help seeking for mental health services, obtaining mental health services, and adhering to treatment (Manganello, Sentell, & Davis, 2013). There is also a need for research on improving measures of

MHL and better understanding intervention target components for adolescent-focused MHL programming (Manganello et al., 2013; Wei et al., 2013). The most significant barrier to care for adolescents is stigma, an attitudinal construct that should theoretically be reduced by mental health literacy-related knowledge; however, research quantitatively linking MHL interventions to stigma reduction is scarce (Jorm et al., 2006). More research is needed on the effectiveness of MHL interventions in improving adolescents' mental health help seeking and related psychological outcomes.

Stigma Towards Mental Illness

Stigma conceptualizations. Goffman (1963) was the first to conceptualize stigma towards mental illness. He most commonly defined stigma as an "attribute than is deeply discrediting" and that reduces perceptions "from a whole and usual person, to a tainted and discounted one" for individuals with mental illness (p. 3). From this basic and earliest definition, Jones and colleagues (1984) extended the concept of stigma into six dimensions: concealability, course, disruptiveness, aesthetics, origin, and peril. Concealability is related to how obvious the condition is to others. Course refers to whether the condition is reversible over time. Disruptiveness deals with the degree to which the condition affects interpersonal interactions and relationships. Aesthetics is related to the appearance or appeal of the person with the condition or how others perceive these aspects. Origin is tied to how the condition developed; more specifically, whether or not the original root of the condition is viewed as the responsibility of the individual. Lastly, peril is a dimension of stigma that indicates to what extent feelings of fear or danger are elicited by exposure to the stigmatizing condition. Both Goffman

(1963) and Jones' and colleagues (1984) stigma conceptualizations have been criticized because they consider stigma as only the cognitive processes related to the actual problem or condition. Most recently, Link and Phelan (2001) have conceptualized stigma by expanding these earlier definitions by including discrimination and exclusion experiences into account when defining and measuring stigma.

Link and Phelan's (2001) definition of stigma involves three main component concepts under the umbrella concept of stigma. First, people discern differences and label them. Secondly, these labeled differences are stereotyped; in other words, they are viewed as negative or undesirable according to cultural beliefs. And third, people with these negative labels are categorized and distanced from the mainstream population, resulting in status loss and discrimination. According to Link and Phelan's definition of stigma, stigmatization can only occur in the context of social, economic, and political power inequalities (2001). Their definition is unique in that it does rely on a power differential; however, both Jones' and colleagues' (1984) and Link and Phelan's (2001) stigma definitions stress the importance of specifying and measuring the appropriate component or type of stigma in research. Although much of the research has viewed mental illness stigma in terms of negative perceptions towards a person will mental illness, recently researchers have also examined stigma related to seeking psychological help. Corrigan (2004) and Vogel and colleagues (2006) have conceptualized two primary types of stigma toward help seeking: public and self-stigma. In regards to seeking mental health services, public stigma is the perception of people in society viewing a person who seeks mental health treatments as undesirable or socially unacceptable

(Vogel et al., 2006). Self-stigma of seeking psychological help is an individual's negative perception of the self due to his or her own help seeking behaviors (Corrigan, 2004). Vogel and colleagues (2006; 2009) have further studied these concepts of public and self-stigma of help seeking and developed measures to assess these constructs.

First, Vogel, Wade, and Asheman (2009) proposed the importance of considering the influence of stigma from one's own social network, rather than focusing on perceived societal-level public stigma, when examining the influencing of stigma on help seeking. To measure this construct, the researchers developed the Perceptions of Stigmatization of Others for Seeking Help (PSOSH) and found it moderately correlated with constructs of public stigma toward counseling, public stigma toward mental illness, and self- stigma in college-aged students (Vogel et al., 2009). Secondly, Vogel, Wade, and Haake (2006) developed and validated a measure of self-stigma called the Self-Stigma of Seeking Help (SSOSH). Items on this measure were developed using the following definition of self-stigma associated with seeking help for psychological problems: the fear that by seeking help or going to therapy, a person will reduce their self-regard, their satisfaction with themselves, their confidence in themselves and their abilities, and that their overall self-worth as a person will be diminished" (p. 326). Exploratory and confirmatory factor analyses showed support for the measure's intended uni-dimensional factor structure, which suggested that the measure appraised a single construct. Vogel and colleagues (2006) also cited studies that supported the internal reliability and test re-test reliability of the SSOSH. Further, validation studies found support for the use of the SSOSH in

uniquely predicting intent to seek psychological help and help seeking behaviors within a two month period.

Studies on stigma in children and adolescents. A large body of literature exists on the measurement of stigma, but relatively few studies have examined stigma in child or adolescent populations. Link, Yang, Phelan, and Collins (2004) reviewed stigma measures and identified the most common methods, components of stigma, and study populations utilized to study stigma. In this review, the authors identified a research gap in the understanding of stigma in children and adolescents: only four of the 109 reviewed studies utilized child and adolescent populations. The most common methods used to study stigma were surveys (60.1%), experiments (16.2%), and qualitative methods (13.8%). The most common constructs or stigma components in reviewed studies were stereotyping (62.4%), expectations of status/loss or discrimination (58.7%), and behavior (25.7%). The authors called for more research to better understand when and how children begin developing perceptions or beliefs about mental illness, as well as better understand children and adolescents' own experiences with stigma-related behaviors.

Stigma has been investigated in a handful of studies involving children (Wahl, 2002) and adolescent samples (i.e., Corrigan et al., 2005; Dietrich, 2006). Wahl (2002) reviewed literature on children's knowledge of and views towards mental illness. Findings in this review suggested that even kindergarten-aged children demonstrated negative attitudes towards individuals with mental illness, even though their knowledge of mental illness (such as specifying symptoms, traits, and causes) was much more limited than that of older children (Weiss, 1986). More recent studies on stigma among

children and adolescents have yielded similar findings. Corrigan, Lurie, Goldman, Slopen, Medasani, and Phelan (2005) examined stigma related to stereotyping and stigma related to familiarity and contact with the stigmatized individual in a sample of about 300 adolescents in the United States. Results indicated that consistent with the adult stigma literature, adolescents stigmatized peers with alcohol abuse problems most harshly, followed by peer with mental illness. Peers with physical illnesses (such as leukemia) were viewed with the lowest levels of stigmatization. Contrary to previous adult findings, adolescents with more familiarity and contact with individuals with mental illness were more likely to endorse stigma toward mental illness and increased levels of discrimination. This unexpected finding may be due to differences in familiarity with the person with mental illness, or the type of contact subjects had with the person. In their study, Corrigan and colleagues (2005) did not take into account what type of contact or interaction took place. Although interacting with a person with mental illness could challenge pre-existing stereotypes, certain types of contact (e.g., such as meting a psychotic and violent individual with mental illness who required hospitalization) could inversely strengthen stereotypes.

Help seeking and stigma. Stigma towards mental illness is the most cited reason for why individuals who are in need of psychological help do not seek treatment (Corrigan, 2004). Research on help seeking and stigma has revealed that different types of stigma impact help seeking on individual, structural, and intra-personal levels (Schomerus & Angermeyer, 2008). In their review of the literature on help seeking and stigma, Schomerus and Angermeyer (2008) cited that the relationship is complex and that

stigma may be involved in several components of help seeking pathways. At the individual level, stigmatizing views of mental health professionals are more negative than those of the general public (Nordt et al., 2007). Stigma has also shown to vary depending on type of mental illness diagnosis (Crisp et al., 2000). Stigma towards seeking mental health services has also been substantiated; in one study, individuals who were described as seeking help were viewed as more emotionally unstable than persons with similar symptoms but who were not seeking services (Ben-Porath, 2002).

A number of studies have examined the effects of self-stigma, which has been defined as an internalized view one has of the self that he or she is socially unacceptable (Vogel, Wade, & Hackler, 2007), on seeking help for mental health concerns. In a study comparing self-stigma and perceived public stigma and their effects on help seeking in college students, perceived public stigma was endorsed more highly than self-stigma; however, only self-stigma was negatively associated with help seeking (Eisenberg, Downs, Golberstein, & Zivin, 2008). In another study examining the complex relationship between specific aspects of stigma and willingness to seek counseling, researchers found that self-stigma fully mediated the relationship between perceived public stigma and willingness to seek psychological help (Vogel, Wade, & Hackler, 2007). In this study, authors found support for their proposed model that both perceived public stigma and self-stigma are both important to consider when evaluating willingness to seek professional help.

The relationship between stigma and help seeking was investigated in several studies using adolescent samples (i.e., Chandra & Minkovitz, 2006; Yap, Wright, &

Jorm, 2010). In a study focused on gender differences in the relationship between perceived stigma and help seeking in 8th graders in the United States, Chandra and Minkovitz (2008) found that over one-third of their study sample reported moderate to high levels of stigma related to mental health service use; eighty-five percent of their sample reported some level of stigma toward mental health service utilization. Yap, Wright, and Jorm (2010) also found a relationship between dimensions of youth stigma and help seeking intentions in an adolescent sample in Australia. Findings suggested a complex relationship between stigmatized attitudes and help seeking intentions or beliefs. More specifically, weak-not-sick, dangerous/unpredictable, and social distance dimensions of stigma were most negatively related to help seeking intentions, while relationships between perceived stigma and help seeking were not supported. Inconsistent findings were also reported between stigma dimensions and sources of help; students who attributed mental disorders to physical illness (rather than personal weakness) and those who viewed mental problems as more dangerous or unpredictable were more likely to report they would seek help from professional mental health care providers rather than informal supports, such as family or friends. Although a majority of research on stigma and mental health help seeking in adolescents has considered help seeking across possible service sectors, only one known study focused on help seeking in mental health help seeking specifically in the school context (Bowers, Manion, Papadopoulous, & Gauvreau, 2013).

Bowers, Manion, Papadopoulos, and Gauvreau (2013) examined the role of stigma in young peoples' perceptions of school-based mental health. Participants were a

convenience sample of Canadian high school students. To measure stigma and its effects, online survey items addressed whether students perceived stigma as a barrier to obtaining mental health services, whether they believed stigma was a problem for young people in their school, and whether people with mental illness at their school were treated differently or had other social difficulties. Overall, 47.8% of the sample reported that stigma was a barrier to care in their school. In addition, not knowing where to get help (17.4%), not knowing whether they had a problem (13%), and peer pressure (8.7%) were also commonly endorsed barriers to accessing mental health services.

Overall, research on mental health help seeking and stigma has demonstrated that stigma is a critical barrier to care in both adult and youth samples (e.g., Corrigan, 2004; Chandra & Minkovitz, 2008). In particular, more recent studies of stigma and help seeking have focused on the roles of perceived stigma towards mental illness in one's social network and self-stigma in explaining help seeking intentions and behaviors (Vogel et al., 2006; 2009). Recent studies of adolescents' stigma towards school-based mental health services showed that stigma in the school environment is a significant barrier to care, specifically perceived stigma from fellow students and school-based service providers (Bowers et al., 2013).

Interventions and stigma-related outcomes. Stigma has also been examined using adolescent samples in literature on the effectiveness of school-based anti-stigma interventions (Schachter et al., 2008) and school mental health literacy programs (Wei, Hayden, Kutcher, Zygmunt, & McGrath, 2013). In Schachter and colleagues' (2008) review, 40 studies were evaluated, but conclusions could not be drawn regarding the

usefulness of school-based stigma reduction interventions due to the poor quality of research designs, methodologies, and the reporting of results. The authors did stress the importance of using behavior-related outcomes when examining the efficacy of stigma interventions, instead of solely focusing on changing knowledge, attitudes, or stereotypes related to stigma. Wei and colleagues (2013) reviewed 21 studies that addressed the effects of mental health literacy intervention on stigmatizing attitudes towards mental illness. Fourteen of these reported positive results; however, only eight of these studies showed post-intervention and follow up results. Further, only four of these showed statistically significant reductions in stigmatizing attitudes at both post-intervention and follow-up time periods. The authors concluded that evidence supporting the use of mental health literacy programs in schools to improve stigmatizing attitudes was insufficient.

Mental Health Services in Schools

School-based healthcare, which typically provides primary health, immunization, reproductive, and mental health services, has increased immensely in the United States in recent decades. In 1988, only 120 school-based health centers existed, but as of 2005 over 1700 centers have emerged in 45 states (Juszczak, Schlitt, & Moore, 2007). This growth in school-based health centers has helped reduce barriers to care that had disproportionately affected ethnic minority students in receiving both medical and mental healthcare services (Juszczak, Melinkovich, & Kaplan, 2003). Research demonstrates that the availability of school-based healthcare (including mental health services) is associated with the increased the use of healthcare services and has been linked to improvements in mental health status (Weist, Paskewitz, Warner, & Flaherty, 1996) and

improved academic performance (Walker et al., 2010). More recent research has continued to show among healthcare sectors, school settings are most commonly utilized for mental health services (Lyon, Ludwig, Stoep, Gudmundsen & McCauley, 2012; Amaral et al. 2011).

School-based mental health services address student behavioral, emotional, or other mental health care issues and are delivered by school counselors, health center counselors, drug and alcohol counselors, social workers, or psychologists, due to student behavioral, emotional, or other mental health care issues (Lyon et al., 2012). Amaral and colleagues (2011) reported that students who were on public assistance or uninsured were more likely to utilize school-based mental healthcare services their peers. Due to the continued need for low-cost, adolescent-accessible health care facilities, schools will continue to be an important setting for mental health service provision. School personnel such as school psychologists are specifically trained to support the mental health needs of students. School psychologists are trained to provide a number of mental health related services such as counseling, fostering student resilience, offer crisis intervention services, and strengthen the partnership between school and home (National Association of School Psychologists [NASP], 2015).

The literature on school-based mental health services has focused on characteristics of students receiving these services and predictors of service utilization. In studies comparing characteristics of students who utilized school-based health centers versus those who did not, findings indicate that students receiving services at school sites have more severe depression, anxiety, and suicidal ideation, as well as poorer academic

outcomes (Amaral, Geierstanger, Soleimanpour, & Brindis, 2001; Wolk & Kaplan, 1993). Among socially anxious adolescents, Colognori and colleagues (2012) reported that symptoms severity, impairment, and self-disclosure were all predictors of mental healthcare service utilization. In a study of adolescents with depression, depression severity was a significant predictor of mental health service use in the educational sector (Lyon et al., 2012). Studies have also suggested that school-based mental health services improve mental health care access for racial or ethnic minorities. For example, Guo (2014) reported that after referral, both Latino and Asian students were equally likely to accept mental health care services in school. Lyon and colleagues (2012) also reported that school-based mental health services were more likely than private service providers to be accessed by all youth, regardless of socioeconomic status, gender, or race/ethnicity. Across the literature, structural barriers to care, such as access to services or insurance-related factors, seem to be reduced in school-based mental health service provision. However, less is known regarding the self-referral process and other barriers to help seeking the school setting.

Mental health help seeking in schools. According to Srebnik and colleagues' (1996) help seeking model, the decision to seek help can be coercive (e.g., referred for care) or voluntary (e.g., self-initiated). Service selection also varies from informal supports (such as family or friends) to more formal services, such as private health care workers. In both the decision and service selection parts of the help seeking model, cultural and contextual factors are thought to play a role, but little research has been conducted on what specific cultural and contextual factors do affect adolescents'

voluntary help seeking in school settings. Although referral practices of gatekeepers such as teachers and school personnel have been identified as important in assisting students in accessing school-based services (i.e., Guo et al. 2014; Colognori et al., 2012), students' own self-referrals and help seeking behaviors remain important phenomena to understand, especially in school settings. Amaral, Geirstanger, Soleimanpour, and Brindis (2011) found that after controlling for demographics and health care factors, students were more likely to seek school-based mental health services than their peers if they reported frequent feelings of sadness, difficulties sleeping, suicidal ideation, substance use, the recent loss of a friend or relationship, or other difficult life event.

Barriers to care in schools. In addition to stigma, a number of studies have examined other barriers to mental health care services. Rickwood, Deane, Wilson, and Ciarrochi (2005) identified barriers to care in their review of the literature on adolescent help seeking. Barriers to seeking help included lack of emotional competence, negative attitudes and beliefs about help seeking, and fear of stigma. Chandra and Minkovitz (2006) evaluated barriers to obtaining mental health care, stigma associated with seeking mental health services, and mental health knowledge and examined their effects on adolescents' willingness to use mental health services. The study sample was comprised of 274 eight graders in a suburban community. In this study, barriers to mental health care were measured using a self-report questionnaire asking students to identify barriers from a list of 10 items involving embarrassment in relation to peers, not knowing where to get help, and uncertainty about parental permission. Stigma towards mental health help seeking was measured using a modified version of an established stigma scale

intended for use with adults. Mental health knowledge was measured using six true or false statements on mental health. Study findings identified that the top barriers to care endorsed by adolescents were: too embarrassed by what other kids would say (51.8%), don't want to talk about these kinds of problems with anyone (51.8%), and don't trust counselor (42.7%). Overall study findings identified that both mental health knowledge and perceived stigma from peers were important factors in adolescents' willingness to use mental health services. In another study of barriers to care reported by adolescents in need of mental health services, Samargia, Saewyc, and Elliott (2006) found that over half of their youth sample reported foregoing mental health care at least once. Of these youth, 60% were female and were more likely to come from two parent homes. The most common barriers to care in this sample were lack of knowledge about mental illness, lack of knowledge on where to seek help, and wanting to hide the problem from their parents.

A number of important factors have been identified that prevent adolescents from engaging in mental health services; studies conducted specifically in school settings have revealed a number of additional barriers that are unique to school-based mental health service provision. Rickwood, Cavanaugh, Curtis, and Sakrouge (2004) conducted a mixed methods study with high school students in Australia and identified that several specific factors related to stigma towards help seeking in school settings. Students cited that the location of the school counselor's office (whether it was in especially public location such as near the front entrance of the school or near the Principals office) was a specific barrier to treatment in their school. Studies by Rickwood and colleagues (2004) and Wilson, Rickwood, Ciarrochi, and Deane (2002) both found that confidentiality was

a significant concern of adolescents regarding school-based mental health services. In the focus group portion of these studies, students expressed fears regarding whether school counselors would break confidentiality by telling teachers or other school staff about the student's mental health problems. Fear of teasing from peers and embarrassment were also cited as stigma-related barriers to care in other high school student samples (Rickwood, 2002). Although this body of research was conducted in Australia, comparable findings have been found in similar studies in the United States.

Guo and colleagues (2014) examined barriers to mental health care utilization using data from nearly 2,000 students in a large urban district serving many immigrant and low-income families. Study authors developed a nine item barriers to help seeking measure to assess practical, attitudinal, and informational barriers. Three items assessed practical barriers, such as lack of transportation. Four items assessed affective/attitudinal to help seeking, such as feelings against self-disclosure. Two items measured informational barriers, such as not knowing where to get help. Results indicated that among the predominately Latino and Asian sample of adolescents included in analyses, attitudinal barriers were endorsed most often, followed by informational and then practical barriers. In another study, researchers investigated a depression awareness program's intervention effects on the knowledge of mood disorders using their own measure of adolescent depression literacy called the Adolescent Depression Knowledge Questionnaire (ADKQ; Hart et al., 2014). The study sample included over 8,000 adolescents across the United States. In an exploratory portion of their measure assessing barriers to care, students were asked to endorse whether or not certain statements would

make it difficult to seek mental health services. The following categories of barriers emerged in the data (percentage of students endorsing the domain is in parentheses): emotional/embarrassment/stigma (43.7%), social/interpersonal (39.2%), depression/treatment issues (46.0%), and a group that did not endorse and barriers (8.8%).

Although a number of studies have examined barriers to mental health services in schools, much of the research examining barriers to mental health care focus on mental health services outside of schools, such as seeking help medical help from a general practitioner or clinic or community-based mental health worker (Rickwood, 2005; Chandra & Minkovitz, 2006). A vast majority of the research on school-based help seeking intentions and behaviors was conducted outside of the United States (e.g., Rickwood et al., 2004; Wilson, 2002), thus the generalizability of the findings as they apply to United States schools. Although literature on barriers to school-based mental health care in the US is emerging, this research is still in its beginning stages. For example, Hart and colleagues (2014) assessed barriers to care using a qualitative approach and asked subjects to report barriers using open-ended questions. In one larger scale quantitative study on school-based mental health care and barriers to care in U.S. schools, the authors did not examine how barriers to care influenced students' help seeking behaviors or intentions (Guo et al., 2014).

Current Study

Improving the help seeking intentions of adolescents towards mental health services is needed due to the high percentage of students with unmet mental healthcare

needs (Kataoka et al., 2002). Because the availability of school-based mental health services has increased in recent years and school psychologists are encouraged by the national organization (NASP) to play an important role in school-based mental health services, research is needed on how and why students seek help within the school context (Juszczak, Schlitt, & Moore, 2007). Little research has focused on school-specific contextual factors and barriers to care that are unique to school-based mental health help seeking. To better understand how to facilitate adolescent help seeking at school, we examined the roles of mental health literacy, stigma towards psychological help seeking, and barriers to care and how they were associated with adolescent help seeking intentions in American school settings. In addition, we also examined the relationships between emotional and behavioral difficulties, previous help seeking behaviors, and help seeking intentions in this study.

In the area of mental healthy literacy research, few studies of MHL have been conducted in the U.S. and even fewer studies have examined MHL in American adolescents. MHL is conceptually associated with reductions in stigma towards mental illness, but few studies have examined the relationship between MHL and stigma among high school students in a diverse American student sample (e.g., Pinto-Foltz et al., 2011; Wei et al., 2013). Furthermore, very few studies have examined the relationship between MHL and help seeking in this population (Jorm et. al, 2006).

Stigma towards mental health help seeking has been identified as the leading factor in impeding adolescents' help seeking intentions and behaviors. Recent studies have highlighted the role of public stigma towards mental illness, in particular stigma

stemming from one's immediate social network (Bowers et al., 2013; Vogel et al., 2009). This type of social stigma is vitally important to study in adolescents, when individual's social development and self-concept is especially dependent on his or her own social networks and relationships.

Barriers to care for mental health services have been explored for decades, but much of this research has been conducted on help seeking towards clinical or community-based mental health care facilities and practitioners (Gulliver, Griffiths, & Christensen, 2010; Rickwood et al., 2005; Chandra & Minkovitz, 2006). Because school-based mental health services are growing in US schools and address many of the structural barriers to care, it is important to understand which barriers to care are most related to adolescent help seeking intentions and which barriers are rated as most salient for adolescents in school-specific help seeking contexts. The measure of Barriers to Care in schools used in the current study was newly developed and additional research was needed to establish the validity of the measure. Furthermore, the measure was developed to reflect different types of barriers, but limited evidence exists on the factor structure of the measure.

Based on these identified gaps in the literature on mental health help seeking in school-based settings, the following research questions were addressed in this study:

1) What is the factor structure of the modified measure of Barriers to Care in Schools?

2) To what extent are past help seeking behaviors, current emotional and behavioral difficulties, MHL, stigma, barriers to care, and adolescents' help seeking intentions for formal mental health support related to one another?
3) What is the relationship between mental health literacy, stigma, reported barriers to care, and intent to seek help at school?

Methods

Participants

The sample in the current study included high school students in two urban southern-California school districts. Data collection took place at one high school in each of these districts. Both high schools had large percentages of culturally and linguistically diverse students and students from disadvantaged backgrounds. Site-specific demographic information for the first study high school (School 1) indicates that 46.5% of students are Hispanic, 23.4% White, 14.2% Asian (types combined), 10.2% African-American, and 5.4% identified as multi-racial. Twenty six point five percent of students identify as English Language Learners. A large percentage of the district was eligible for free-reduced lunch (59.4%). According to district website statistics of student demographics in School 2, 58.9% of students are Hispanic/Latino, 15.1% are White, 13.4% are Black/African-American, 5.6% are Asian, and 6.8% identify as multi-racial. Thirteen point three percent of students are English Language Learners. Socially disadvantaged students, defined as students qualifying for free or reduced lunch, make up 76.5% of the student body.

Students in grades nine through twelve were eligible to participate in the study. Both general education and special education students were eligible to participate. A total of 377 students participated in the study. Data from eight students were deleted because less than half of the total measures were completed; study results are based on the final sample size of 369 students. Of these participants, 177 students attended the first participating high school, while 192 students attended the second participating high school. See Table 1 for all participant demographic information listed by school and for the total sample. In the total sample, 183 (49.6%) of participants identified as male, while 186 (50.4%) were female. Three hundred and nine students (83.7%) were in 10^{th} grade, 28 students (7.6%) were in 11^{th} grade, 22 students (6.0%) were in 9^{th} grade, and 9 students (2.4%) were in 12^{th} grade. The average age of the total sample was 15 years, 6 months (over 85% of the sample was 15 or 16 years old). Regarding race/ethnicity, 48.2% of students were Hispanic/Latino, 18.7% were White/Caucasian, 8.4% identified as Black/African-American, 4.9% were Asian/Pacific Islander, 15.2% were Multi-racial, and 4.3% students did not specify their race. Seventy-three percent of students (N = 271) indicated they speak at least one language other than English. Regarding economic background, 64.2% of students endorsed they qualified for free or reduced lunch, while 21.2% indicated they did not qualify (14.1% of students indicated they were unsure of this status). Six point six percent of the sample (N = 25) indicated that they were in Special Education (5.6% of total students were unsure).

Overall, participants' characteristics across study sites were comparable across demographic characteristics including age, grade, race/ethnicity, gender, economic

background (reduced lunch status), and special education status (see Table 1). In addition, participant samples appear representative of their districts according to comparisons between sample student characteristics and their respective district statistics in the terms of ethnic/racial background across groups and percentage of students qualifying for free-or-reduced lunches (see Table 2). Sample demographics representativeness regarding English language learner (ELL) status was not available because we did not gather information on each participant's ELL classification. However, we did measure English language skills using a brief self-report. A large proportion of students in the sample endorsed speaking more than one language (73%), indicating that there may be an especially high proportion of English Language Learner students in the sample. It is important to note that out of the students who endorsed speaking another language, the overall English language skills of the participants was strong. On average, students rated their English skills (across speaking, reading, oral comprehension, and writing) in the fairly strong to very strong range.

Procedures

The current study used a cross-sectional design; data were collected at a single time point. Sample students were recruited from two high schools in two urban southern California school districts. These sites were selected after school personnel showed interest in study participation. First, district approval was sought to collect data. Next, site principals assisted the PI in arranging which classrooms would participate, based on scheduling, availability, and student grade level. Parental consent forms were sent to parents of students in participating classrooms and were posted on classroom websites

regularly used to communicate information to parents. Passive parental consent procedures were used; parents were asked to send back the consent forms stating that they did not want their child to participate. At one site, approximately 200 forms were sent home and only one student was withdrawn from the study. At the other site, approximately 200 forms were sent home and two students were withdrawn from the study. Before each class session, the classroom teacher informed the PI regarding which students were withdrawn from the study and these students were given alternate activities during data collection sessions. Next, student assent was also obtained before data were collected. The principle investigator (PI) facilitated all data collection sessions. Data were collected via online surveys (using the University's Qualtrics software). Before data collection began, all students were briefed on the study and students were encouraged to answer items truthfully so that study findings could be used to better support them in school. Next, the PI instructed students to fill out all questionnaires and to read items and directions carefully. The PI was available to address questions and concerns throughout the 20 to 30 minute data collection sessions. All surveys were anonymous and no personal identifying information was collected.

Following data collection and analysis, study findings were shared with district-level personnel, as well as school site-specific administrators and mental health professionals, to inform them of study findings in their schools. Data were aggregated so that no individual data was shared.

Measures

Help seeking intentions. Help seeking intentions were measured using a modified version of the General Help Seeking Questionnaire (GHSQ) to appraise future help seeking behavioral intentions (Rickwood et al. 2005). The original measure is comprised of a list of potential sources of help and asks subjects to indicate their likelihood of seeking help from that source in the next six months for a particular problem on a 7-point Likert scale ranging from "no intentions to seek help" to "a very high likelihood of seeking help." In the present study, several modifications were made to this measure. First, subjects were asked to indicate how likely they were to seek help in the next four months (instead of the original measure's six month time frame). Next, subjects were instructed to indicate how likely they were to seek help for personal or emotional problems from various sources ranging from informal supports (such as friends or family), community-based formal supports (such as doctors), and school-based mental health service providers (such as school counselors or school psychologists). Overall help seeking intensions can be derived from three sub-scales: level of intention to seek informal help, level of intention to seek formal community-based help (outside of school), and level of intention to seek help from a school-based mental health provider.

The GHSQ has been shown to be reliable and valid in its original, unmodified form (Wilson, Deane, Ciarochi, & Rickwood, 2005). Internal consistency of scaled scores was high ($\alpha = .85$) on the GHSQ. Evidence of construct and predictive validity has been reported; for example, Rickwood and colleagues (2005) found that the GHSQ

correlated with a measure of actual help seeking behaviors ($r = .25$, $p < .05$). See Appendix A (items 1a-j) for the full GHSQ that was used in the present study.

In the current study, future help seeking intentions were analyzed across two subscales: formal community-based help seeking (for services outside of school) and school-based mental health help seeking. To calculate the formal community-based help seeking subscale score, intention ratings were summed for intentions to seek help from a doctor or an outside of school mental health practitioner. To calculate school-based help seeking intentions, item endorsements were summed across school psychologist, school counselor, and other school-based mental health service provider intention ratings. For help seeking intent (future help seeking), internal reliability for the community-based help seeking subscale was .74, while Cronbach's alpha for the school-based help seeking intentions subscale was .89.

Past help seeking behaviors. Past help seeking behaviors were measured using a modified version of the Actual Help Seeking Questionnaire (AHSQ; Rickwood et al. 2005). Subjects were asked to indicate whether or not they sought mental health-related help from various sources and endorsed how often they met with the help source in the past month (1 = 0 times, 2 = 1 time, 3 = 2 to 4 times, and 4 = 5 times or more).

The AHSQ was shown to be reliable and valid in its original form (Wilson, Deane, Ciarochi, & Rickwood, 2005). Evidence of construct and predictive validity has also been obtained; as previously mentioned, Rickwood and colleagues found that the AHSQ correlated with a measure of help seeking intentions ($r = .25$, $p < .05$). See Appendix B for the modified version of the AHSQ that was utilized. It is important to

note that the validity of the measures may have been impacted by the modifications made to the measures in the current study.

In the current study, past help seeking scores were estimated using items from the AHSQ. To calculate the past help seek from formal services score, item endorsements were summed across all formal service providers, both outside of school (community-based, including doctors and mental health professionals outside of school) and within schools, such as the school psychologist, school counselor, and other school-based service providers. On the measure of past help seeking (the AHSQ), internal consistency estimates were adequate ($\alpha = .65$) for the described formal past help seeking subscale score.

Mental Health Literacy. Mental health literacy was assessed using the Adolescent Depression Knowledge Questionnaire (ADKQ; Hart et al., 2014). This measure appraises depression knowledge and attitudes towards seeking help. The scale was developed in the context of the Adolescent Depression Awareness Program (ADAP), a universal, school-based intervention, to measure intervention effects. According to Hart et al. (2014), it is the only known measure of mental health literacy that has been developed and validated for the use of mental health professionals to help assess and plan for psycho-education intervention efforts, in addition for research purposes, such as determining intervention effects. The measure's items were originally developed through collaborations with mood disorder experts and researchers and have been further empirically refined and developed over the past ten years (e.g., Hess et al., 2004; Swartz et al., 2010).

The ADKQ consists of 19 questions. The first fifteen items comprise the Knowledge section of the measure; thirteen items are scores dichotomously and two are fill-in-the-blank. Four additional items measure attitudes toward help seeking; one is scored dichotomously and three are open-ended. For the purposes of this study, only the Knowledge items were used to appraise depression literacy. To score the measure, one point is awarded for each correct answer on items 1-13; the mean score across items was used to estimate mental health literacy. Higher means scores reflect better mental health literacy.

Hart and colleagues (2014) reported evidence on the ADKQ's construct validity and found support for a one-factor model (of items one through 13) called General Knowledge. In their study, internal consistency estimates suggest strong reliability for the Knowledge items (.89). In the current study, reliability across knowledge items was low ($\alpha = .47$). The low reliability in the current study may have been due to the ethnic and linguistic diversity in the sample. In Hart and colleagues' (2014) investigation of the ADKQ, their large sample consisted of students from Maryland and Oklahoma (specific race/ethnicity and language background information was not available) where samples likely consisted of more students with White, middle-class demographic backgrounds. In another study on earlier ADKQ scale development, only about 30% of their samples consisted of non-White students (Swartz et. al, 2010); internal consistency of the ADKQ in this sample was not reported.

Stigma. Stigma towards mental illness was measured using the Perceptions of Stigmatization by Others for Seeking Help (PSOSH; Vogel, Wade, & Asheman, 2009).

This measure was created to assess how the stigma related to seeking mental health treatment may be apparent in the social relations of others. The original measure consists of five items that reflect a one-factor model. Directions instruct participants to: "Imagine you have a problem that needed to be treated by a mental health professional. If you sought mental health services, to what degree do you believe that people you interact with would_____." In the present study, directions were modified so that participants would respond based on their perceptions of stigma in the school environment. Directions were modified as follows: If you sought counseling services at your school for this issue, to what degree to you believe that the people you interact with at school would_____." Respondents rated items on a 5-point Likert scale ranging from 1 (not at all) to 5 (a great deal), with higher endorsement indicating greater levels of perceived stigma. See the full five-item measure in Appendix C.

This measure has been psychometrically validated for use with a college-aged sample (Vogel et al. 2009). Although it has not been validated for use with an adolescent sample, the readability of the measure has been reported appropriate for 13 to 15 year olds (Vogel et al., 2009). The measure's psychometrics were tested across five samples (Vogel et al., 2009) and internal consistency ratings were adequate across samples (α = .78 - .89). Concurrent validity was assessed by comparing the PSOSH to other help seeking measures. It moderately correlated with a measure of public stigma for help seeking (Stigma of Seeking Professional Psychological Help; Komiya et al., 2000; r = .31, $p < .001$) and a measure of self-stigma (Self Stigma of Seeking Help; Vogel et al.,

2006; r = .37, $p < .001$). In the current study, internal consistency across the five-item measure was adequate ($\alpha = .89$).

Barriers to care in schools. Barriers to school-based mental health treatments were assessed using a researcher-derived measure based on the Barriers to Care measure utilized in Guo and colleagues (2014). In the Barriers to Care measure (Guo et al., 2014), barriers to care were assessed using a nine-item measure and items were endorsed dichotomously (yes or no). The nine items loaded onto three factors: attitudinal barrier (items 2, 3, 5, and 9), practical barrier (items 6, 7, and 8), and informational barrier (items 1 and 4). The internal constancies of attitudinal, practical, and informational barriers were adequate ($\alpha = .65$, $\alpha = .63$, $\alpha = .65$, respectively).

In the present study, a modified version of the Barriers to Care measure was used. Specifically, participants were asked to rate items on a five point Likert scale to indicate to what extent they perceive each item as a barrier to care in school. Higher scores indicated that items were perceived as stronger barriers. Because school-based mental health services are thought to eliminate practical barriers (i.e., transportation difficulties or insurance problems), these items were eliminated from the current study. Based on other previous quantitative and qualitative research, the following items were added to the original measure barriers to care in schools: knowledge of available services and how to schedule appointments, familiarity with school mental healthcare providers, and students' trust that confidentiality will be maintained (e.g., information will not be shared with administrators or teachers). The complete measure used in the present study consisted of 12 items. Exploratory factor analysis was used to examine the factor

structure of measure; results supported a two-factor structure (see Research Question one). Reliability estimates for the general barriers and site-specific barrier factor scales were adequate (α = .86 and .85, respectively). See the full measure of all items in Appendix E.

Emotional and behavioral difficulties. Adolescent emotional and behavioral difficulties will be measured using the self-report Strengths and Difficulties Questionnaire (SDQ; Goodman, Meltzer, & Bailey, 1998). This measure was used to control for the possible impact of psychological symptoms on help seeking intentions. The SDQ is a measure comprised of 25 items assessing children's' psychological attributes across five subscales: emotional symptoms, conduct problem, hyperactivity/inattention, peer relationship problems, and prosocial behaviors. The self-report is intended for young people around the ages of 11 to 17. Subjects are instructed to endorse each item as "not true," "somewhat true," or "certainly true" based on their experiences in the previous 6 months. A few items were reverse coded. Higher scores indicated more severe levels of symptomology in that subscale. Summing scores can calculate total difficulty scores across the 4 problem subscales (prosocial behaviors subscale excluded). Total difficulty scores between 16 and 19 indicate a slightly elevated risk of clinically significant problems; total scores of 20 to 40 are considered high and indicate a substantial risk for clinically significant problems. A Cronbach's alpha of .82 has been found for this measure, indicating high internal consistency (Hawes & Dadds, 2004). Goodman and colleagues (1998) found support for discriminant validity of the SDQ; in their study, the measure discriminated between clinical and community samples

with the clinical sample scoring on average 1.4 standard deviations above the mean score of the community sample. The SDQ was also shown to correlated strongly with the Child Behavior Checklist total score (CBCL; $r = .87$), suggesting strong support for the measure's construct validity (Goodman & Scott, 1999). The full measure is listed in Appendix F.

For the current study, total emotional and behavioral difficulties were measured by using the total difficulties score across all four SDQ difficulties subscales (emotional symptoms, peer problems, conduct problems, and hyperactivity). Internal consistency across difficulties items was adequate ($\alpha = .63$). This reliability estimate was similar to other studies reporting the internal consistency of the SDQ self-report measure, which ranged from .59 in a British adolescent sample (Achenbach, Becker, Dopfner, Heirvang, Roessner, Steinhausen, et al., 2008) to .50 to .70 across subscales in a Norwegian sample (Richter, Sagatun, Heyerdahl, Oppedal, & Røysamb, 2011). Furthermore, Richter and colleagues (2011) recommended using the full SDQ score (total difficulties) in future studies due to low subscale reliability in SDQ self-reports, especially when examining urban, multi-ethnic student samples.

English language skills. To examine the effects of English language skills on mental health literacy, a brief four item self-report measure was used to estimate students' English language skills. Participants rated the following questions: "How well do you speak English?," "How well do you read English?," How well do you understand English?," and "How well do you write English?" Subjects rated items on a Likert-type scale ranging from one to four (1 = very weak or uncomfortable in this area, 2 =

somewhat weak or uncomfortable in this area, 3 = fairly strong or mostly comfortable in this area, and 4 = very strong or very comfortable in this area). Internal consistency on this measure was .75. The average total score on this measure was 14.75 (*SD* = 2.02); this indicated that most participants rated their English skills in the fairly strong to very strong range across all items. English language skill estimates did not correlate significantly with variables of interest including mental health literacy (r = -.01, p = .861), perceived stigma (r = .01, p = .93), help seeking intentions for school services (r = -.05, p = .32), nor total emotional and behavioral difficulties (r = .00, p =.97). See 8 for all correlations. This suggested English language skills were not related to study variables; therefore, we did not control for language skills in the analyses.

Analysis and Hypotheses

For research question one, exploratory factor analysis (EFA) was utilized to examine the factor structure of the modified Barriers to Care in Schools measure. First, data from the modified Barriers to Care measure was screened; this included an examination of outliers and skewness and kurtosis estimates (skew and kurtosis values of 2.0 or below were deemed acceptable as recommended in Bandalos & Finney, 2003). EFA analyses were conducted using SPSS version 23 software (IBM Corp., 2015). Before running the EFA analysis, Minimum Average Partial procedures (MAP; Velicer, 1976) and Parallel Analysis procedures (PA; Horn, 1965) were used to determine the number of factors extracted. Both factor extraction determination techniques were analyzed using macros in SPSS that were derived from syntax described in O'Connor (2000). Next, principal axis factoring analysis (with Promax rotation and Kaiser

normalization) was used to extract factors. Regarding rotation methods, oblimin rotation was used because it was expected that the dimensions of the measure were correlated. Next, items loadings were examined and items that loaded poorly (below a cutoff of .4) on factors were considered for removal. Items loading across multiple factor were also examined; if items loaded highly on multiple factors, they were also considered for removal.

For research questions two, correlations between main variables of interest, including past help seeking, emotional and behavioral difficulties, MHL, stigma, barriers to care, and help-seeking intentions (for community-based and school-based) were used. Cohen's (1992) guidelines were used to interpret the strength of the correlations. According to Cohen's (1992) guidelines, correlations of .10 were considered small, correlations of .30 were medium, and correlations of .5 were described as large. The hypotheses for research question 2 were as follows:

It was hypothesized that mental healthy literacy, stigma, and both types of barriers to care would be significantly related to help seeking intentions for formal community-based and school-based services. It was expected that mental health literacy was positively associated with both school-based and community-based help seeking intentions. It was expected that perceived stigma was negatively associated with help seeking intentions for school-based services. Lastly, stronger endorsements of barriers to care in schools were expected to predict lower help seeking intentions for school-based services.

It was hypothesized that mental health literacy was negatively associated with perceived stigma in school. Regarding perceived stigma in school, it was expected that a higher levels of perceived stigma were related to stronger endorsements of school-based barriers to care. These relationships were tested by examining correlations between the respective factors.

To analyze research question three, help seeking intentions for school-based services were dichotomized into two groups: those who intend to seek school-based services as those who did not. Participants were placed in the intend to seek help group if their school-based help seeking intentions for at least one school based provider (across school psychologist, school counselor, or other school-based clinician) was rated greater than 4 (indicating the student was more likely than not to seek help from a school-based provider). Next, mean scores across groups were compared using independent sample t-tests for mental health literacy, perceived stigma, and barriers to care in school. It was hypothesized that mental health literacy would be significantly higher in the intent to seek help at school group when compared to the no intentions to seek help group. Perceived stigma of those in the do not intend to seek help group was expected to be higher than those who did intend to seek school-based mental health services. It was expected that the group intending to seek support would also endorse lower levels of barriers to care when compared to the no help seeking intentions group.

Lastly, logistic regression procedures were used to examine the relationship between MHL, stigma, barriers to care (general and site-specific), and the dichotomized variable of school-based help seeking intentions. Model fit was examined using chi-

squared estimates; a significant chi-square estimate indicated the model was statistically significant. Next, to determine whether a predictor was significant in the model, the variable's Wald statistic was examined. If the Wald statistic was significant at the $p < .05$ level, the predictor was deemed significant in the model. It was expected that site-specific barriers would significantly impact the dependent variable (school-based help seeking intentions).

Results

Descriptive results for all variables of interest are displayed in Table 3. Mental health literacy was low across the sample; on average, students answered 66.4% of the depression knowledge questions accurately. Based on the depression literacy cutoff score of 80% correct set by the author's of the ADKQ (Hart et al., 2014), only 21.1% of the current sample (N = 78) was identified as depression literate. Endorsements of perceived stigma at school were also low; only 38% of the sample (N = 140) endorsed any level of perceived stigma towards seeking mental health services from people at their school. The average endorsement of behavioral and emotional difficulties (total SDQ scores) was 13.12 ($\sigma = 4.42$). Based on SDQ interpretative cutoff scores, total difficulties scores ranging from zero to 15 are in the average range and suggest that clinically significant mental health difficulties are unlikely (Youth in Mind, 2015); this suggests that overall emotional and behavioral difficulties in the sample are low and within the average range. Lastly, results indicated that endorsements of help seeking intentions for school-based services were also very low. Only 4% of the total sample (N = 16) expressed any level of intention of seeking school-based mental health services. Correlational analysis also

indicated some interesting findings (Table 9). For example, individuals with more mental health symptoms reported more stigma towards help seeking and perceived more barriers to care (both general and site-specific). Results pertaining to each research question are further detailed below:

Research Question 1: What is the Factor Structure of the Modified Measure of Barriers to Care in Schools?

Summary statistics (mean, standard deviation, skew and kurtosis estimates) of Barriers to Care items are displayed in Table 4. Data screening procedures suggested that the data was subject to little or no distortion due to outliers or distributional non-normality (all skew and kurtosis values were below the 2.0 cutoff). Results of Minimum Average Partial procedures (MAP; Velicer, 1976) and Parallel Analysis procedures (PA; Horn, 1965) were used to determine the number of factors extracted. MAP procedures involved completing a principal components analysis and then examining a series of partial correlations. PA analyses involved extracting eigenvalues from random datasets (that paralleled the actual dataset) and then comparing the eigenvalues of the random data sets to the eigenvalues of the original data. Factors were retained if the eigenvalue from the original data was larger than the eigenvalue from the random data. According to MAP (1976) procedures, two components were detected in the data. Results of PA procedures also supported the extraction of two factors.

Next, principal axis factoring analysis (with Oblimin rotation and Kaiser normalization) was used to extract two factors from the data. Results of the PAF analysis are displayed in Table 5 (Factor Coefficients), Table 6 (Structural Coefficients) and Table

7 (Pattern Coefficients). Communality estimates were moderate (ranging from .280 - .721) across items; this suggests that most items were explained well by the factor solution and that the structural and pattern coefficients can be interpreted to better understand the relationship between the observed variables and factors. Because the present analyses used oblique rotations, both the structural and pattern coefficients were reported. The pattern coefficient values indicated the unique relationship between the factor and the variable (controlling for other factors); the structural coefficients indicated the simple correlation between the factor and the variable (Bandalos & Finney, 2000). Based on factor coefficient and pattern coefficient loadings, items 1, 2, 3, 4, 5, 6, and 10 loaded on factor 1, while items 7, 8, 9, and 11 loaded on factor 2. Pattern coefficients estimates on factor 1 items ranged from .425 to .893, while pattern coefficients on factor 2 ranged from .591 to .861. Because all items loaded onto at least one factor (at above. 40) and no significant cross loadings occurred, no items were considered for removal from the scale.

These two factors explained 51.91% of the variance in the measure. Factor 1 explained 45.77% of the variance in the total model, while factor 2 explained 6.15% of the variance. The correlation between the two factors in the model was .707; this suggests that there was a large correlation between factors.

Regarding factor interpretation, items loading onto factor 1 included general statements about school-based mental health services, such as not knowing where or how to start the help seeking process, feeling uncomfortable or embarrassed, and the perceived helpfulness of school-based services. Items related to both informational barriers and

attitudinal barriers loaded onto this factor. Due to the similarities across items loading on factor 1, this factor was labeled general barriers to care in school. Items loading onto factor 2 involved familiarity with the school counselor, familiarity with the school psychologist, lack of knowledge regarding walk-in hours at the school, and not knowing mental health services were available at the school. These items were more strongly related to personnel and service availability at the students' own specific school site; consequently, factor 2 was labeled site-specific barriers to care. Overall EFA findings suggested that statements regarding *general* knowledge of services and attitudes as barriers may be differentiated from items that were more targeted and specific about school site services (e.g., when and where services were available) and mental health providers (e.g., familiarity with the school psychologist and school counselor at their school site).

Research Question 2: To What Extent Are Past Help Seeking Behaviors, Emotional and Behavioral Difficulties, MHL, Stigma, Barriers to Care, and Adolescents' Help Seeking Intentions for Formal Mental Health Support Related to One Another?

See Table 9 for correlations between all variables of interest in the present study. Only past help seeking ($r = .211$, $p < .01$) and depression knowledge ($r = -.163$, $p < .01$) were significantly related to help seeking intentions for school-based services. According to Cohen's (1992) criteria, both of these correlations were small in magnitude. Regarding directionality, the relationship between past help seeking was positive, as hypothesized. However, the negative relationship between MHL and help seeking intentions was opposite than expected. Results suggest that higher intentions of seeking

help in school-based settings were associated with lower levels of MHL. Regarding intentions for community-based services, only past help seeking was significantly correlated with the likelihood of help seeking for community-based mental health services ($r = .187$, $p < .01$).

According to correlations, MHL was not significantly related to perceived stigma ($r = .035$, $p = .501$), general barriers to care ($r = -.027$; $p = .572$), nor site-specific barriers to care ($r = .041$, $p = .438$). Perceived stigma was positively associated with both site-specific barriers to care ($r = .219$, $p < .01$) and general barriers to care ($r = .212$, $p < .01$), suggesting that greater levels of perceived stigma are associated with stronger endorsements of both types of school-based barriers to care. Regarding the strength of the association, both of these correlations between stigma and barriers to care were in the small to moderate range. Interestingly, significant correlations were also endorsed between behavioral and emotional difficulties and stigma (r = .362) and both general barriers ($r = .353$, $p < .01$) and site-specific barriers ($r = .245$, $p < .01$). This suggests that students experiencing more mental health symptoms also endorsed higher levels of barriers to care. Lastly, general barriers to care and school-specific barriers were strongly correlated ($r = .671$, $p < .01$). See Table 8 and Table 9 for correlation estimates between all study variables.

Research Question 3: What is the Relationship between Barriers to Care, Mental Health Literacy, Stigma, and School-based Help Seeking Intentions?

Based on endorsements of school-based mental health help seeking intentions, sixteen students (4.3%) were placed in the school-based help seeking intentions group,

while 353 students (95.7%) were placed in the no intentions (to seek help at school) group. Students' self-reported need for help (endorsements of emotional and behavioral difficulties on the SDQ) was not controlled for in the regression because they were not significant in the final model. Furthermore, student demographic variables were also no included in the model because they were also not significant predictors of help seeking intentions. Mean scores for each group across MHL, stigma, barriers to care, and emotional and behavioral difficulties, as well as t-test results, are displayed in Table 10. These results indicated that statistically significant differences in site-specific barriers to care were observed between the intend to seek help group and the no intent to seek help group ($t(367) = 2.53$, $p < .05$). This suggests that the no help seeking intent group reported more site-specific barriers to care than the help seeking intentions group. No other expected mean differences across groups were statically significant for MHL, perceived stigma, nor general barriers to care.

Results of the logistic regression are displayed in Table 11; these models examine the relationship between barriers to care and intention to seek mental health services at school. The dependent variable (help seeking intentions for school-based services) was coded as follows: 0 = no intentions to seek help and 1 = intend to seek help. The results from Model 1 indicate that after controlling for MHL and stigma, those endorsing fewer site-specific barriers to care were more likely to seek help than those endorsing higher levels of site-specific barriers (OR = .778, 95% CI [.658 - .920]). General barriers were not a significant predictor (OR = 1.055, 95% CI [.960 – 1.159]). The predictors added to the model significantly improved the null model, $\chi^2 (4, N = 368) = 8.61$, $p < .05$ (-2 LL

statistic = 111.804, Cox & Snell R^2 = .034, Nagelkerke R^2 = .113). The model predicted 95.7% of the responses correctly.

The significant relationship between site-specific barriers and the outcome was retained with the inclusion of past formal help seeking for school services (Model 2). In Model 2, past formal help seeking for school services was also a significant predictor of adolescent school-based help seeking at school (OR = 1.344, 95% CI [1.033 – 1.749]). This Odds Ratio estimate suggests that those who have sought help in the past are 1.344 times more likely to seek help in the future. The predictors added to the model significantly improved the null model, χ^2 (5, N = 368) = 15.871, p < .01 (-2 LL statistic = 107.972, Cox & Snell R^2 = .044, Nagelkerke R^2 = .149). The model predicted 95.7% of the responses correctly.

Discussion

The current study sought to better understand the help seeking intentions of adolescents in school-based mental health settings. Although the availability of school-based mental health services has grown immensely in the recent decades, most students in need of mental health support do not receive the services they need (Kataoka et al., 2002). Factors involved in adolescent mental health help seeking processes are complex and may vary depending on the context in which mental health services are delivered. The current study examined the effects of mental health literacy, perceived stigma, and barriers to care in schools on adolescents' help seeking intentions for community-based and school-based mental health services. Overall study results demonstrate the complexity of studying adolescent help seeking pathways across different sources and

settings (e.g., school based, community based) of mental health support. Neither perceived stigma towards help seeking, nor general barriers to care were significantly related to school-based help seeking intentions. Additionally, logistic regression results suggested that site-specific barriers and past help seeking behavior were two significant predictors for help seeking intent for school based mental health services. Students who perceived fewer site-specific barriers and who sought help in the past were more likely to report help seeking intent for school based mental health services. Findings also replicated previous research demonstrating relationships between perceptions of stigma towards mental health help seeking and perceived barriers to care.

Before a discussion of each research question, it is important to highlight several unanticipated measurement issues that arose in the data. First, results suggest that the help seeking intentions for school-based services in the current sample was very low, across both formal community-based supports and school-based mental health services. In total, less than 5% of the sample indicated some likelihood of seeking help from either a school psychologist, school counselor, or other mental health service provider at school for a personal or emotional problem during the next 4 weeks. Low help seeking intentions have been reported elsewhere in the literature. For example, one study examining help seeking intentions in college students also reported a very low level of help seeking intentions: only 22% of students reported they would likely seek treatment if they developed psychological distress (Thomas, Caputi, & Wilson, 2013). This unexpected floor effect likely impacted the outcome of study analyses, which were largely focused on school-based help seeking intentions as a key outcome of interest.

When compared to other studies examining adolescent help seeking, the floor effect observed in the current study may have been related to how help seeking was operationalized and measured: other researchers have examined help seeking willingness rather than help seeking intent. For example, Chandra and Minkovitz (2006) sought to examine help seeking by asking about students' willingness to seek help (without specifying a time frame) if they were suffering from a mental health problem for a month or more; furthermore, willingness to seek help was analyzed as a dichotomous variable. In the current study, students were asked to report the likelihood that they would seek help in the next month for a personal or emotional problem. Instead of exploring willingness to seek help if experiencing a mental health difficulty, students' actual help seeking intentions in the immediate future were examined. This wording was intentional because we were interested in approximating actual behavioral help seeking intentions rather than willingness to seek help when presented a hypothetical situation. Similar to Chandra & Minkovitz (2006), we also examined school-based help seeking intentions as a dichotomous variable in research question 3: students who indicated any likelihood of seeking mental health service at school were compared to students who did not intend to seek school-based services. Results of these analyses suggested that these groups were significantly different in their endorsements of site-specific barriers to care. See Research Question 3 below for additional details on these analyses.

Study Sample and Related Measurement Considerations

Another major area of concern in the present study is the performance of the measures across the study sample. Of particular concern was the low reliability of some

of the measures and issues regarding the validity of the measures in the current sample. For example, the MHL measure (the ADKQ) had very low internal reliability in the current sample ($\alpha = .47$). As mentioned previously, the low internal consistency in the measure may have been due to the increase ethnic diversity in the current study sample when compared the study samples used to develop and evaluate the ADKQ. Numerous previous studies reporting the reliability of the ADKQ have found adequate reliability of the measure in more homogenous samples consisting of White, middle class students (e.g., Hart et al., 2014; Schwartz et al, 2010). Issues related to reliability are closely linked to validity concerns with the ADKQ; the low reliability estimates in the present study also indicate that the measure may not be a valid indicator of MHL in the current study sample. It is possible that individuals from ethnic minority background conceptualize mental health problem differently compared with European Americans (Sue, 1994), which may have contributed to the low reliability of the ADKQ measure. Due to the low reliability estimate in the study sample and related validity concerns, study results based on MHL findings should be interpreted with extreme caution.

Similar to measurement concerns with ADKQ, results from the SDQ (the measure of emotional and behavioral difficulties) and the Barriers to Care measure suggest validity concerns regarding how these measures functioned in the current study sample. Regarding the SDQ, the reliability of the overall emotional and behavioral difficulties score was above .60 and was consistent with the reliabilities reported in other studies (e.g., Achenbach et al., 2008; Richter et al., 2011). Overall endorsements of mental health difficulties were low in the current study; most students' total difficulties scores

were well within the "not at risk" range. It is possible that students who agreed to participate in the study were more emotionally adjusted than students who did not participate.

Each research question is further examined below, followed by sections on study implications, limitations, and recommendations for future research.

Research Question 1: What is the factor structure of the modified measure of Barriers to Care in Schools?

Study analyses found support for a two-factor structure of the modified Barriers to Care measure originally developed by Guo et al. (2014); however, the factors that emerged were not representative of current research or theory. Previous research conducted on the original Barriers to Care measure revealed a three-factor model: attitudinal, informational, and practical (Guo et al., 2014). Guo and colleagues' (2014) examined their measure in a sample that was similar to the current study sample in terms of ethnic diversity and income, but slightly younger than the current sample (mean age 12.4 versus 15.6). The current study utilized a modified version of the measure; the practical scale items (concerning barriers such as lack of transportation or having the wrong insurance) were removed because they were not relevant to the students in participating school districts. Additional items were added pertaining to familiarity with school mental healthcare personnel, awareness of mental health services at school, and the perceived helpfulness of school-based services.

Items did not load on to factors that were clearly associated with informational nor attitudinal barriers to care. Instead, items loading onto the first factor pertained to

general knowledge and attitudes about seeking help at school; this factor was labeled "general barriers to care in school." Items loading onto the second factor pertained more specifically to the students' school site-based informational barriers; consequently, this factor was labeled "school-site specific barriers." The emergence of these factors suggests that general knowledge and attitudes about school-based barriers to care may be distinct from school site-specific types of barriers. Taken together, EFA findings suggest that the specificity of how items are worded are very important when asking about barriers to care. In addition, the Barriers to Care measure needs further investigation, especially in regards to its factor structure across different student groups.

Research Question 2: To What Extent Are Past Help Seeking Behaviors, Emotional and Behavioral Difficulties, MHL, Stigma, Barriers to Care, and Adolescents' Help Seeking Intentions for Formal Mental Health Support Related to One Another?

Past help seeking was significantly related to help seeking intentions for school-based services ($r = .211$, $p < .01$) and community-based services ($r = .187$, $p < .01$); both of these correlations were small (according to Cohen's (1992) criteria). The significant relationship between past help seeking and current help seeking intentions for formal services replicated previous research indicating the importance of measuring past help seeking when looking at future help seeking intentions.

Next, the association between depression knowledge and help seeking intentions at school was significant ($r = -.163$, $p < .01$); however, the negative correlation coefficient suggested an inverse relationship than expected. In the present sample, mental health literacy was negatively associated with help seeking intentions in schools.

Otherwise stated, higher levels of mental health literacy were associated with lower intentions of seeking mental health support in schools. Mental health literacy was not associated with help-seeking intentions for community-based services. Furthermore, the current study did not find significant results linking stigma nor site-specific barriers to care to help seeking intentions for either school-based nor community mental healthcare services. Site-specific barriers to care were related to help seeking when analyzed using logistic regression (see Research Question 3).

Previous research related to mental health literacy was not replicated in the current study as expected. Several factors may have contributed to this unexpected finding. First, internal consistency of the Adolescent Depression Knowledge Questionnaire was much lower in the current study ($\alpha = .47$) than in previously reported results ($\alpha = .89$ as reported in Hart et al., 2014). This may have been due, in part, to demographic differences in adolescent samples, such as differences in cultural, linguistic, and socio-economic background. Furthermore, Hart and colleagues (2014) used the ADKQ as a post-intervention outcome measure to evaluate students' growth in mental health knowledge. In the current study, students were not exposed to a formal mental health literacy curriculum or intervention program before completing the ADKQ. Next, the current study found a negative relationship between mental health literacy and help seeking intentions in schools, while previous studies have found that greater mental health literacy leads to greater help seeking intentions. For example, in one of such studies, students were sometimes asked whether they would seek help for a peer suffering from a certain set of mental health symptoms (Olson & Kennedy, 2010). In that study,

students were significantly more likely to seek help for a peer if they recognized depressive and anxious symptoms as mental health problems. In the current study, students were asked to indicate the likelihood they would actually seek help in the near future for their own personal emotional concerns. Other studies examining mental health literacy have used vignettes, and specifically measured the recognition of depression in the vignette, or have focused more on knowledge of treatment options or appropriate sources of help, which differs from our mental health literacy measure (e.g., Olson & Kennedy, 2010; Burns & Rapee, 2006). For example, in Burns and Rapee (2006), students were asked to identify depression in case vignettes rather than answer direct questions about the prevalence, symptoms, and causes of depression as in ADKQ. The unexpected findings regarding MHL in the present study may be due to our study's measure of MHL, which used true and false questions and focused primarily on symptoms of depression and causes of depression, rather than using a vignette-based MHL measure focused on the recognition of symptoms and labeling of depression.

Although the present study did not find a significant relationship between perceived stigma and school-based mental health help seeking intentions, interesting findings emerged related to adolescents' reports of perceived stigma. Correlational findings emerged between stigma, SDQ scores, and barriers to care. First, significant correlations emerged between stigma and both types of barriers to care. Although these correlations were small in magnitude, this relationship makes substantive sense because it is expected that an individual who perceives higher levels of barriers to care in schools also perceive more stigmatization from others to seek mental health services in schools.

This finding replicated Bowers and colleagues' (2013) study that also reported significant associations between perceived stigma and barriers to care in school settings. Next, a moderate correlation was also found between SDQ scores and perceived stigma. This indicates that students who reported higher mental distress also reported higher levels of stigma in the school environment. Lastly, small to moderate positive correlations between SDQ scores and barriers to care suggest that students experiencing higher levels of emotional and behavioral difficulties may also perceive more barriers to care in the school setting. These correlational findings underscore the importance of targeting emotionally and behaviorally at-risk students for school-based anti-stigma campaigns and ensuring they are familiar with the mental health services available at their school.

Overall, endorsements of perceived stigma from others at school were relatively low across the sample. It is important to remember that the current study asked students to appraise their perceptions of stigma in the school setting specifically, rather than perceived stigma from society or individuals outside of the school setting. Descriptive results of the PSOSH measure (Perceptions of Stigmatization of Others for Seeking Help) demonstrated low levels of perceived stigma in the current sample; average ratings of perceived stigma at school for each item ranged from 1.50 to 1.82 (on a scale in which 1 = none at all and 2 = a little). On average, 62% of the sample rated "none at all" in response to perceived stigma items; this indicates that majority of the sample did not endorse perceptions of stigma towards seeking mental health treatment in their school. These ratings suggest that students in participating schools perceive relatively low levels of stigma for seeking mental health services in their school environment, which supports

the importance of providing mental health services at school. In another study of adolescents' perceptions of stigma, Bowers and colleagues' (2013) reported that 47.8% of their Canadian high school student sample reported stigma towards mental health was a barrier to care for school-based mental health services. The low endorsements of perceived stigma in the current student may be due to district-wide efforts towards creating safe, positive school environments; for example in one of the two participating districts, large-scale efforts focused on bullying prevention and the promotion of trauma-informed practices at school are being implemented.

Although previous studies have examined barriers to care and their effects on help seeking intentions, many of these studies have used broader conceptualizations of barriers that included perceptions of stigma, feelings of embarrassment, and mental healthy literacy (Gulliver et al., 2010). However, the present study sought to examine barriers to care that were more specific to school settings. In much of the previous research on barriers to care in school settings, researchers did not statistically model the effects of school-based barriers to care on help seeking intentions; instead, they reported the percentage of students who endorsed different types of barriers to care. For example, in Chandra and Minkovitz (2006) participants were given a list of possible barriers to care and asked to indicate which items they perceived as barriers (endorsed dichotomously). The most endorsed school-based barriers to care included embarrassment by peers (51.8%) and not trusting the counselor (42.7%). In the current study, participants were asked to indicate to what degree they agreed or disagree with statements suggesting different types of barriers to care, resulting in a more sensitive measure of school-based

barriers and an continuously-scaled estimate of barriers that could be statistically examined in relation to other variables of interest.

Correlational results indicated that neither general school-based barriers to care, nor site-specific barriers were significantly associated to formal help seeking intentions (across community-based and school-based services). This finding was likely impacted by the overall low endorsements of future help seeking intentions in the current sample.

This study sought to evaluate the relationship between barriers and help seeking intentions because most existing literature has only established that significant barriers to care do exist, even in regards to school-based mental health services. To the best of our knowledge, this is the first study of barriers to care and adolescent help seeking intentions for mental health services in U.S. schools. The discrepancy in findings in the current study may indicate differences between adolescents in American versus teens in other cultures. A substantial amount of research on barriers to care and school-based mental health service utilization has focused on Australian student samples (Rickwood et al, 2004; Wilson et al., 2002). In these studies, fears of embarrassment and teasing from peers, as well as concerns about confidentiality were significant barriers to care. Current study results suggest that perceived social stigma related to seeking help may be less prominent in participating school samples.

Research Question 3: What is the relationship between MHL, stigma, barriers to care, and intent to seek help at school?

Significant differences across school-based help seeking intentions groups (those who intended to seek help and those who did not intend to seek help) were only observed

in site-specific barriers to care. T-test results demonstrated that those who did not intend to seek help at school endorsed significantly higher levels of site-specific barriers than students who intended to seek help at school. In logistic regression analyses, demographic variables (e.g., grade, age, gender, language skills) were not significant predictors so they were not included in the reported models. Results of logistic regression analyses suggested that site-specific barriers and past help seeking behaviors for school-based services were two significant predictors of help seeking intent. Students who perceived fewer site-specific barriers and who sought help at school in the past were more likely to report help seeking intent for school based mental health services. This finding re-iterates the importance of providing students with specific information about school-based mental health supports at their school. As measured in the current study, important information may include how and where to schedule appointments, familiarity with school-based service providers, and a basic understanding that formal services for personal and emotional problems are available at their school site.

Implications

Although the present study did not find support for MHL and stigma as predictive of help seeking intentions for school-based services, study results indicated that site-specific barriers to care were associated with help seeking intentions in regression analyses. Results from the present study underscore the need for research on how adolescent help seeking processes differ across help seeking contexts and mental health service providers. Next, study results highlight the importance of informing students about available mental health services and reducing perceived barriers to services in

school settings. Correlational relationships between increased emotional and behavioral difficulties and stronger endorsements of barriers to care and perceived stigma suggest that this group should be the target for mental health promotion (e.g., reducing informational and attitudinal barriers for help seeking) and stigma reduction efforts.

Descriptive results from the Barriers to Care in School measure indicated that large site-specific informational barriers exist regarding mental health services in the participating school sites. Over half of students sampled reported that they did not know that mental health services were available at their school. Two-thirds of students reported they did not know how to schedule an appointment or when walk in hours were available. The most often endorsed item on the Barriers to Care measure asked about familiarity with the school psychologist at the school. Seventy percent of students indicated that they were unfamiliar with the school psychologist at their school. Administrators and school-based mental health care providers, such as school psychologists and school counselors, need to ensure that all students know about the availability of mental health services, including information about where to go, how to schedule appointments, and who is available to offer services. According to the National Association of School Psychologist's model of comprehensive services, school psychologists play a vital role in serving adolescents with mental health difficulties in the school settings (2015). School-based mental health service delivery largely depends on school psychologists, who need to be visible in school and lead efforts that help address the mental health needs of students.

Limitations and Future Studies

Due to the current study's research design and measurement issues, several limitations should be noted. First, the study examined the impact of several factors on help seeking *intentions* and did not address future mental health help seeking *behaviors*. Data collection was cross-sectional and took place at one time point; this study did not examine whether students who expressed intentions to seek help actually did seek help in the future. Future studies should use a longitudinal research designs to examine the relationship between help seeking intentions and help seeking behavior, and other barriers and facilitating factors (e.g., mental health literacy, stigma). As noted in Prochaska and Velicer's Transtheoretical Model of Change (1997), an individual may be in the *precontemplative* stage of behavior change in which he or she may have intentions to seek help; however, the individual may or may not progress to the *action* stage of behavior change, in which he or she actually initiates and engages in mental health services. A number of researchers have cited the need for additional studies of factors that prevent and facilitate help seeking behaviors (e.g., Rickwood et al., 2007), rather than exploring help seeking intentions alone.

Secondly, the reliability and validity of some of the measures used in this study was another limitation. First, the floor effect for help seeking intention in schools measure (the modified GHSQ) was a limitation. As discussed previously, endorsements of school-based help seeking intentions were very low across the sample, despite the large sample size recruited for participation. The current study asked participants to endorse their help seeking intentions for the next month; future studies may want to ask

students about their help seeking intentions for a longer period of time, such as in the next 6 months, to increase reports of school-based mental health help seeking intentions. Next, the current study's use of a modified version of the GHSQ may have impacted the validity of the measure; therefore, study findings related to help seeking intentions should be interpreted with caution.

In a related measurement issue, the use of the ADKQ as a measure of mental health literacy was a limitation in the current study. First, the ADKQ was originally intended to be an intervention outcome measure to examine differences between mental health knowledge pre- and post-intervention. Although literature has been published on the factor structure and construct validity of the measure (e.g., Hart et al., 2014), limited evidence is available on the concurrent validity of the measure in comparison to other published measures of mental health literacy. Secondly, much of the published literature on the development and use of the ADKQ has utilized White, middle-class student samples (e.g., Swartz et al., 2010). The current study sample largely consisted of culturally and linguistically diverse students; therefore, the ADKQ may not have been a valid indicator of mental health literacy in the present study population.

Next, sampling procedure utilized in the current study is a limitation because random sampling procedures could not be used. Convenience samples were used for the current study: school principals agreed to participate in the study after expressing interest and specific teachers and classes selected for inclusion were based on voluntary and scheduling factors. Consequently, the student sample may be biased and not representative of all students in each participating school, nor representative of all urban

high school students. Additionally, the current study sample included students from only two high schools in two different urban school districts in southern California. Future studies should attempt to use random sampling procedures so that stronger inferences and generalizations can be made based on such study results. Furthermore, future studies should seek to replicate this study in other high school student samples around the United States, including areas with more diverse socio-economic status populations.

Next, it is important to note that this study utilized all student self-report measures: students were asked to report their past help seeking behaviors, current emotional and behavioral difficulties, future help seeking intentions, perceptions of stigma in the immediate school environment, and views of barriers to care in school. The goals of this study were to better understand cognitive factors (e.g., perceptions of stigma, knowledge of mental health symptoms) associated with self-referred mental health help-seeking; however, a more ecological perspective needs to be considered in light of these intrapersonal variables. For example, other studies on mental health help seeking and school-based mental health services have examined teacher referral practices and mental health service entry among specific minority ethnic groups. One such recent study (Guo et al., 2014) examined teacher referral practices for school-based mental health services and found that Latino students were more than four times more likely than their Asian peers to be referred for mental health services. This difference in referrals was partially accounted for by Latino students' higher rates of self-reported externalizing behaviors, but specific ethnic group referral rate differences persisted beyond this finding. This study also revealed that disparities in mental health service entry continued

to exist even in school-based services, a setting where disproportionality in accessing should care should be reduced.

Exploratory factor analysis results of the Barriers to Care measure should be considered with caution due to the lack of consistent findings with previous research on the measure and the modifications made to the measure in the current study. For example, in Guo and colleauges (2014), students endorsed barriers to care items dichotomously and factor analytic results were based on these endorsements. It is unclear whether the current studies' use of a continuous, Likert-type scale for Barriers to Care responses affected study results. It is also unknown whether students were able to differentiate between the different response options. Future analyses should examine the Barriers to Care measure and how different response options affect measure outcomes.

In the future, studies should also look to explore other types of stigma and their relationships to help seeking intentions and behaviors. In the current study, the only form of stigma measured was perceived public stigma towards seeking help. As evidenced by Vogel and colleagues (2006; 2007), other forms or aspects may be important to better understand the relationship between stigma and help seeking. For example, Vogel and colleagues (2006) found that in a college sample, self-stigma towards seeking help was an important indicator of help seeking intentions and also differentiated between individuals who sought help and those who did not over a two-month period. Furthermore, Vogel and colleagues (2007) sampled another college-age sample and found that and self-stigma fully mediated the relationship between perceived public stigma and willingness to seek counseling. Although the current study only measured

perceived stigma towards help seeking in the context of school, further examinations of the role of self-stigma may help to better understand adolescent help seeking pathways.

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Table 1

Participant Demographic Characteristics

	School 1		School 2		Total	
	N	%	N	%	N	%
Gender						
Male	91	51.4	92	47.9	183	49.6
Female	86	48.6	100	52.1	186	50.4
Age						
14 years	2	1.1	15	7.8	17	4.6
15 years	107	60.4	86	44.8	197	53.4
16 years	61	34.4	68	35.4	129	35.0
17 years or older	7	4.0	23	12.0	30	7.0
Grade						
9th	1	0.5	21	10.9	22	6.0
10th	166	93.4	143	74.5	309	83.7
11th	8	4.5	20	10.4	28	7.6
12th	2	1.1	7	3.6	9	2.4
Race/Ethnicity						
Hispanic/Latino	70	39.5	108	56.3	178	48.2
White/Caucasian	51	28.8	18	9.4	69	18.7
Black/African-American	8	4.5	23	12.0	31	8.4
Multi-racial	31	17.5	25	13.0	56	15.2
Asian	11	6.2	7	3.6	18	4.9
Language						
Speak another language	147	83.1	124	64.6	271	73.4
English-only	30	16.9	68	35.4	98	26.6
Special Education						
Yes	10	5.6	15	7.8	25	6.8
No	159	89.8	164	85.4	323	87.5
Unsure	8	4.5	13	6.8	21	5.7
Free/Reduced Lunch						
Yes	105	59.3	132	68.8	237	64.2
No	36	20.3	42	21.9	78	21.2
Unsure	34	19.2	18	9.4	52	14.1

Table 2

Sample and District Demographic Comparisons

	Site 1		Site 2	
	School %	District %	School %	District %
Race/Ethnicity				
Hispanic/Latino	39.5	46.5	56.3	58.9
White/Caucasian	28.8	23.4	9.4	15.1
Black/African-American	4.5	10.2	12.0	13.4
Multi-racial	17.5	5.4	13.0	6.8
Asian	6.2	14.2	3.6	5.6
Free/Reduced Lunch				
Yes	59.3	59.4	68.8	76.5
No/Unsure	40.7	40.6	31.2	23.5

Table 3

Descriptive Results from All Measures

Measure	*N*	*Mean*	*Min.*	*Max.*	*Std. Deviation*
Depression knowledge	369	.664	0.15	0.85	2.18
Stigma total	369	8.44	5.00	25.00	4.33
BCS- General	369	19.81	7.00	35.00	6.52
BCS- Site-specific	369	11.48	4.00	20.00	4.54
SDQ total	369	13.12	4.00	25.00	4.42
Past help seeking	369	6.08	5.00	15.00	1.94
Help seeking intent-formal	369	3.96	2.00	10.00	2.25
Help seeking intent-school	369	5.10	3.00	15.00	2.91

Note. SDQ = Strengths and Difficulties Questionnaire. BCS = Barriers to Care in Schools.

Table 4

Summary Statistics for Modified Barriers to Care Measure Items

	Mean	Std. Deviation	Skewness	Kurtosis
1. Not knowing how to start, where to go, or who to talk to to get help.	2.95	1.253	-.163	-.980
2. Feeling uncomfortable or embarrassed.	3.17	1.282	-.329	-.971
3. Worrying that information about me or my family would be shared with other teachers or staff at my school.	2.98	1.325	-.076	-1.143
4. Not knowing whom to talk to or whom to seek help from.	2.92	1.232	-.184	-1.038
5. Feeling like I have something to hide (for example, I live outside school boundaries, immigrant status, etc.)	2.46	1.265	.336	-.999
6. The term "mental health" makes me uncomfortable.	2.40	1.251	.400	-.879
7. I am not familiar with the school psychologist at my school.	3.23	1.417	-.317	-1.172
8. I am not familiar with the school counselor at my school.	2.86	1.375	.008	-1.278
9. I don't know how to schedule an appointment or when walk in hours are available for counseling services.	2.82	1.347	.029	-1.170
10. I do not think people or services at my school will be helpful with my personal or emotional problem.	2.93	1.309	-.018	-1.016
11. I did not know that mental health or counseling services were available at my school.	2.57	1.349	.329	-1.045

Table 5

Factor Coefficients for Barriers to Care in Schools Measure

	General	Site-specific
1. Not knowing how to start, where to go, or who to talk to get help.	.699	.122
2. Feeling uncomfortable or embarrassed.	.755	.224
3. Worrying that information about me or my family would be shared with other teachers or staff at my school.	.642	.410
4. Not knowing whom to talk to or whom to seek help from.	.759	.129
5. Feeling like I have something to hide (for example, I live outside school boundaries, immigrant status, etc.)	.588	.212
6. The term "mental health" makes me uncomfortable.	.514	.128
7. I am not familiar with the school psychologist at my school.	.744	-.238
8. I am not familiar with the school counselor at my school.	.701	-.336
9. I don't know how to schedule an appointment or when walk in hours are available for counseling services.	.774	-.349
10. I do not think people or services at my school will be helpful with my personal or emotional problem.	.615	.061
11. I did not know that mental health or counseling services were available at my school.	.596	-.214

Note. Principal axis factoring was used to generate factor loadings.

Table 6

Structural Coefficients for Barriers to Care in Schools Measure

	General	Site-specific
1. Not knowing how to start, where to go, or who to talk to get help.	.695	.593
2. Feeling uncomfortable or embarrassed.	.785	.604
3. Worrying that information about me or my family would be shared with other teachers or staff at my school.	.748	.426
4. Not knowing whom to talk to or whom to seek help from.	.753	.645
5. Feeling like I have something to hide (for example, I live outside school boundaries, immigrant status, etc.)	.624	.454
6. The term "mental health" makes me uncomfortable.	.525	.420
7. I am not familiar with the school psychologist at my school.	.587	.795
8. I am not familiar with the school counselor at my school.	.528	.777
9. I don't know how to schedule an appointment or when walk in hours are available for counseling services.	.591	.849
10. I do not think people or services at my school will be helpful with my personal or emotional problem.	.594	.540
11. I did not know that mental health or counseling services were available at my school.	.476	.632

Note. Principal axis factoring, with Promax rotation was used to generate factor loadings.

Table 7

Pattern Coefficients for Barriers to Care in Schools Measure

	General	Site-specific
1. Not knowing how to start, where to go, or who to talk to get help.	.594	-
2. Feeling uncomfortable or embarrassed.	.715	-
3. Worrying that information about me or my family would be shared with other teachers or staff at my school.	.893	-
4. Not knowing whom to talk to or whom to seek help from.	.594	-
5. Feeling like I have something to hide (for example, I live outside school boundaries, immigrant status, etc.)	.606	-
6. The term "mental health" makes me uncomfortable.	.455	-
7. I am not familiar with the school psychologist at my school.	-	.759
8. I am not familiar with the school counselor at my school.	-	.805
9. I don't know how to schedule an appointment or when walk in hours are available for counseling services.	-	.861
10. I do not think people or services at my school will be helpful with my personal or emotional problem.	.425	-
11. I did not know that mental health or counseling services were available at my school.	-	.591

Note. Principal axis factoring, with Promax rotation was used to generate factor loadings.

Table 8

Correlations Between Demographics and Variables of Interest

	PastHS-C	PastHS-S	Stigma	BCS-Gen	BCS-Sit	SDQ	MHL
Age	.062	.163**	.005	.066	-.096	.054	-.010
Gender	.012	.047	-.077	-.038	-.017	-.018	-.046
English Skills	-.072	-.049	.005	-.023	-.032	.002	-.010
Grade	.139**	.144**	-.015	-.006	.057	.058	-.064

Note. PastHS-C = past help seeking for community-based services. PastHS-S = past help seeking for school-based services. BCS-Gen = Barriers to Care- General. BCS-Sit = Barriers to Care- Site-Specific. SDQ = Strengths and Difficulties Questionnaire. MHL = Mental health literacy.
**$p < .01$.

Table 9

Correlations Between All Variables of Interest

	1	2	3	4	5	6	7	8	9
1. INTENT-S									
2. INTENT-F	.674**								
3. INTENT-I	.546**	.470**							
4. PASTHELP	.211**	.187**	.103*						
5. DEPKNOW	-.163**	-.048	-.001	-.069					
6. ENGLISH	-.059	-.027	.006	-.069	.009				
7. STIGMA	.047	.009	-.037	.053	.035	.005			
8. BCS-GEN	.017	.068	.024	.081	-.027	-.023	.219**		
9. BCS-SITE	-.050	-.032	.036	.083	.056	-.032	.212**	.671**	
10. SDQ	-.002	-.021	-.053	.186**	.040	.002	.362**	.353**	.245**

Note. INTENT-S = Help seeking intentions for school-based services. INTENT-F = Help seeking intentions for formal community-based services. INTENT-I = Help seeking intentions for informal support. PAST-HELP = Past help seeking behaviors for formal services. DEPKNOW= Depression knowledge total score. ENGLISH = English language skills sum. BCS-GEN = Barriers to Care- General. BCS-SITE = Barriers to Care- Site-specific. SDQ = Strengths and Difficulties Questionnaire.
**$p < .01$; *$p < .05$

Table 10

Mean Scores for MHL, Stigma, Barriers to Care, and SDQ and T-Test Results Across School-based Help Seeking Intentions Groups

	Group	N	Mean	SD	*t*	*p*-value
Depression	1	16	.615	.166	-1.18	.236
Knowledge	0	351	.666	.168		
Stigma	1	16	9.31	6.00	.822	.412
	0	353	8.40	4.24		
BCS-Site-specific	1	16	8.69	4.06	2.53	.012
	0	353	11.61	4.52		
BCS-General	1	16	18.56	7.12	.780	.436
	0	353	19.86	6.49		
SDQ total	1	16	14.06	6.24	.875	.382
	0	353	13.07	4.32		

Note. 1 = Intend to seek help for school-based services group. 0 = Do not intend to seek help at school group. BCS = Barriers to Care. SDQ = Strengths and Difficulties Questionnaire.

Table 11

Site-Specific Barriers to Care and School-based Help Seeking Intentions

	β	OR (95% C.I.)	χ^2	R^2
Model 1			12.04*	.113
Site-Specific Barriers to Care*	-.251	.778 (.658 - .920)		
General Barriers to Care	.054	1.055 (.960 - 1.159)		
Stigma	.064	1.066 (.961 - .1.183)		
Depression Knowledge	-1.52	.219 (.009 - 5.317)		
Model 2			15.87**	.149
Site-Specific Barriers to Care**	-.229	.795(.669 - .946)		
General Barriers to Care	.037	1.037 (.940 - 1.145)		
Stigma	.061	1.063 (.958 - 1.180)		
Depression Knowledge	-1.33	.265 (.010 – 6.713)		
Past Formal Help* Seeking at School	.296	1.344(1.033 – 1.749)		

**p < .01, *p < .05.

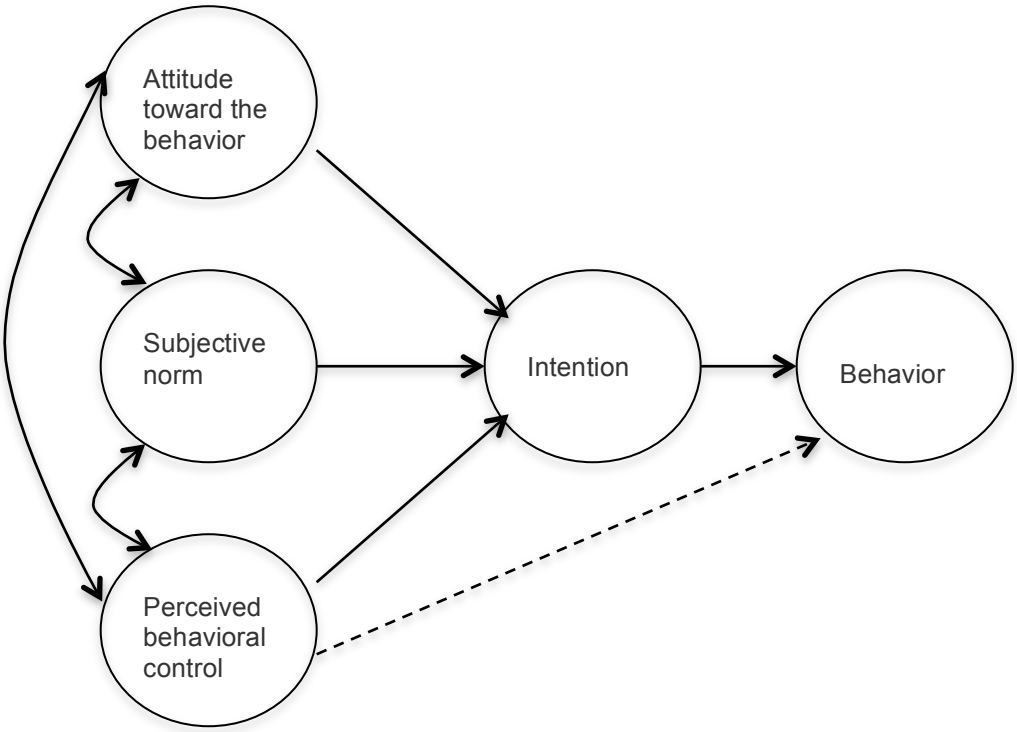

Figure 1. Theory of Planned Behavior (Ajzen, 1991)

Appendix A

General Help-Seeking Questionnaire

Below is a list of people who you might seek help or advice from if you were experiencing a personal or emotional problem.

Please circle the number that shows **how likely is it** that you will seek help from each of these people for a personal or emotional problem during the **next 4 weeks**?

		Extremely Unlikely						**Extremely Likely**
1)	Partner (e.g., girlfriend or boyfriend)	1	2	3	4	5	6	7
2)	Friend (not related to you)	1	2	3	4	5	6	7
3)	Parent/Other relative or family member	1	2	3	4	5	6	7
4)	Family Doctor/ Pediatrician	1	2	3	4	5	6	7
5)	Mental health professional outside of school (e.g., counselor, psychologist, psychiatrist)	1	2	3	4	5	6	7
6)	School Psychologist	1	2	3	4	5	6	7
7)	School Academic Counselor	1	2	3	4	5	6	7
8)	School Mental Health Counselor (e.g., TIDES or MHRS therapist)	1	2	3	4	5	6	7
9)	Teacher/Aide	1	2	3	4	5	6	7
10)	Phone/texting help line	1	2	3	4	5	6	7
11)	Internet	1	2	3	4	5	6	7
12)	Other: _____	1	2	3	4	5	6	7

Appendix B

Past Help-Seeking Questionnaire

Below is a list of people who you might seek help or advice from if you were experiencing a personal or emotional problem.

Check any of these who you have gone to for advice or help in the **past 6 months** for a personal or emotional problem. Write the number of times you met with this person.

	I sought help from this person (✓)	**Number of times visited in past 6 months**
1. Partner (e.g., girlfriend or boyfriend)		
2. Friend (not related to you)		
3. Parent/Other relative or family member		
4. Family Doctor/ Pediatrician		
5. Mental health professional outside of school (e.g., counselor, psychologist, psychiatrist)		
6. School Psychologist		
7. School Academic Counselor		
8. School Mental Health Counselor (e.g., TIDES or MHRS therapist)		
9. Teacher/Aide		
10. Phone/texting help line		
11. Internet		
12. Other: _____		

Appendix C

Perceptions of Stigmatization of Others for Seeking Help (PSOSH) Scale

INSTRUCTIONS: Imagine you had an emotional or personal issue that you could not solve on your own. If you **sought counseling services at your school** for this issue, to what degree to you believe that the people you interact with **at school** would:

1 = Not at all 2 = A little 3 = Some 4 = A lot 5 = A great deal

1. React negatively to you
2. Think bad things of you
3. See you as seriously disturbed
4. Think of you in a less favorable way
5. Think you posed a risk to others

Appendix D

Barriers to Care in Schools

Please indicate the extent to which each of the following items would stop you from seeking mental health services at your school.

		Strongly Disagree	Disagree	Neutral/ Not sure	Agree	Strongly Agree
1.	Not knowing how to start, where to go or who to talk to get help.	1	2	3	4	5
2.	Feeling uncomfortable or embarrassed.	1	2	3	4	5
3.	Worrying that information about me or my family will be shared with other teachers or staff at school.	1	2	3	4	5
4.	Not knowing whom to talk to or whom to seek help from.	1	2	3	4	5
5.	Feeling like I have something to hide (e.g., living outside school boundaries, immigrant status, etc.)	1	2	3	4	5
6.	The term "mental health" makes me uncomfortable.	1	2	3	4	5
7.	I am not familiar with the school psychologist at my school.	1	2	3	4	5
8.	I am not familiar with the school counselor at my school.	1	2	3	4	5
9.	I don't know how to schedule an appointment or when walk-in hours are available for counseling services.	1	2	3	4	5
10.	I do not think people or services at my school will be helpful with my personal or emotional problem.	1	2	3	4	5

Appendix E

Adolescent Depression Knowledge Questionnaire (ADKQ)

Please indicate whether the following items are true (T) or false (F) by circling **T** or **F**.

1. Five percent of all teenagers will suffer a Major Depression. **T F**
2. Major Depression is a normal part of adolescence. **T F**
3. Depression runs in some families. **T F**
4. Depression can be controlled through willpower. **T F**
5. The cause of Major Depression is well known. **T F**
6. A change in behavior is a symptom of depression. **T F**
7. There are certain groups of people who are immune to depression. **T F**
8. Major Depression is a treatable medical illness. **T F**
9. A person with depression always feels sad. **T F**
10. The abuse of alcohol and drugs can be a sign of depression. **T F**
11. Bipolar Disorder is more common than Major Depression. **T F**
12. Major Depression is a curable illness. **T F**
13. Someone who has a major stress (like having parents get a divorce) always develop depressive symptoms. **T F**

Appendix F

Strengths and Difficulties Questionnaire (SDQ)

Instructions: For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months.

	Not True	Somewhat True	Certainly True
1. I try to be nice to other people. I care about their feelings			
2. I am restless, I cannot stay still for long			
3. I get a lot of headaches, stomach-aches, or sickness			
4. I usually share with others, for example CDs, games, food			
5. I get very angry and often lose my temper			
6. I would rather be alone than with people of my age			
7. I usually do as I am told			
8. I worry a lot			
9. I am helpful if someone is hurt, upset, or feeling ill			
10. I am constantly fidgeting or squirming			
11. I have one good friend or more			
12. I fight a lot. I can make other people do what I want			
13. I am often unhappy, depressed, or tearful			
14. Other people my age generally like me			
15. I am easily distracted, I find it difficult to concentrate			
16. I am nervous in new situations. I easily lose confidence			
17. I am kind to younger children			
18. I am often accused of lying or cheating			
19. Other children or young people pick on or bully me			
20. I often volunteer to help others (parents, teachers, children)			
21. I think before I do things			
22. I take things that are not mine from home, school, or elsewhere			
23. I get along better with adults that with people my own age			
24. I have many fears, I am easily scared			
25. I finish the work I'm doing. My attention is good			