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BOSTON UNIVERSITY

WHEELOCK COLLEGE OF EDUCATION & HUMAN DEVELOPMENT

Dissertation

RACE AND MENTAL HEALTH REFERRALS: THE RELATIONSHIP BETWEEN STUDENT DEMOGRAPHICS AND LIKELIHOOD OF TEACHER REFERRAL FOR SCHOOL-BASED MENTAL HEALTH SERVICES

by

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RACE AND MENTAL HEALTH REFERRALS:

THE RELATIONSHIP BETWEEN STUDENT DEMOGRAPHICS

AND LIKELIHOOD OF TEACHER REFERRAL FOR

SCHOOL-BASED MENTAL HEALTH SERVICES

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ABSTRACT

Purpose: Undiagnosed mental health disorders such as depression are increasing in prevalence. School staff serve as important gateway providers for students requiring mental health support, and understanding how teachers make decisions about referring students for mental health services in schools is critically important. Additionally, identifying how likelihood of referral for mental health services may differ given student demographics can provide insight on the support teachers need when making referrals for mental health services.

Methods: The current study used a quantitative analytical approach combining the use of vignettes with an accompanying survey (n=100), to determine how teachers make decisions to refer students for school-based mental health services.

Results: Results show that respondents self-identifying as White were significantly more likely to state their colleague would refer a student for mental health support as compared to teachers who identified as non-White. Further, teachers self-reporting higher levels of comfort with identifying symptoms of depression were significantly more likely to refer

students for mental health support as compared to teachers who reported lower levels of comfort. Additionally, general education teachers were significantly less likely to refer students for school-based services when the student was not displaying symptoms of depression, as compared to non-general education teachers. There are no significant differences in likelihood of referral as a function of student race.

Conclusion: To address disparities in mental health support for students with diagnoses of depression, teachers require continued mental health literacy to identify the symptoms of depression and make referrals for school-based mental health services.

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LIST OF ABBREVIATIONS

ASCA...................American School Counselor Association

CDC ....Centers for Disease Control and Prevention

DSM-V.................Diagnostics and Statistical Manual for Mental Disorders

ELL ....English Language Learners

GPM.....................Gateway Provider Model

IRB.......................Institutional Review Board

NASP ....National Association of School Psychologists

NIMH...................National Institute of Mental Health

PTSD....................Post-Traumatic Stress Disorder

SEL ....Social/Emotional Learning

YRBS ....Youth Risk and Behavior Survey

Chapter 1: Introduction

Studies note the increasing prevalence of mental health disorders, such as depression, among school-aged populations (YRBS 2019, 2021; Mental Health in America, 2021), and the key role that schools play in supporting the treatment of vulnerable student populations (Herman et al., 2004; Merrell, 2013, Costello et al., 2014, Goodwin, et al., 2022). Yet, current literature reports an unmet need for treatment of depression among school-aged youth (Lewandowski, 2013; McMorrow and Howell, 2010; Kataoka et al., 2002). According to Fox and Hanes (2023), recent estimates show that between 49.4% and 57.7% of adolescents self-report an unmet mental health need. Furthermore, at the conclusion of adolescence, one-in-five youth will have experienced at least one depressive episode, with the risk of diagnosis twice as high for females as for males (Brent and Maalouf, 2009; Merrell, 2013). It is possible that this lifetime prevalence estimate is an underrepresentation, however, given that, there are multiple challenges in identifying internalizing mental health disorders among school-aged youth (Rhode et al., 2013).

Highlighting the need for mental health treatment beginning at school age, data collected by the National Institute for Mental Health (NIMH) found that 13.3% (3.2 million) of youth aged 12–17 in the United States have diagnoses of depression (NIMH, 2019). Further, research suggests that almost half of all school-aged youth will show symptoms of a psychiatric disorder by adulthood (Merikangas et al., 2010). Students diagnosed with depression may require consistent intervention from both school-based and external mental health providers (Kern et al., 2017). Studies show that longitudinally,

students with depression are at greater risk for suicide, substance use and abuse, poor physical health (Gilman and Huebner, 2006; Patel et al., 2007) and poor educational attainment (Needham, 2008; Humensky, 2010; Breslau et al., 2008) than their peers who do not display symptoms of depression. Even more, youth are at particular risk for delayed treatment for mental health disorders because they may lack the ability to recognize the onset of a mental health disorder and seek treatment, which can lead to poorer outcomes overall (Jorm, 2012).

Understanding how race and gender may play roles in school-based mental health service referrals is critically important. When analyzing the prevalence of depression in youth of color, two-years of data from the Youth Risk and Behavior Survey (YRBS) conducted in 2019 and 2021 show an increase in suicidality among all youth, but particularly youth of color. Specifically, Black youth increased in reports of suicidality from 31.5% in 2019 to 39.3% in 2021. Further, 16.9% of Black youth in 2019 and 21.6% of Black youth in 2021 and 17% of Hispanic youth in 2019 and 22% of Hispanic youth in 2021 report considering suicide as compared to 19.1% of White peers in 2019 and 22.7% of White peers in 2021. Additionally, 11.8% of Black youth in 2019 and 14.5% of Black youth in 2021, and 8.9% of Hispanic youth in 2019 and 10.7% of Hispanic youth in 2021 report attempting suicide as compared with 7.9% of White youth in 2019 and 9% of White youth in 2021. Of reported Black youth suicide attempts, 3.3% in 2019 and 4.4% in 2021 resulted in injury. Of Hispanic youth suicide attempts, 3% in 2019 and 3.8% in 2021 resulted in injury. as compared with 2.1% of White youth attempts in 2019 and 2.4% in 2021 (Center for Disease Control, 2019; 2021). It is important to note that when

considering the COVID-19 pandemic, it is not surprising that youth reported feelings of sadness, hopelessness, suicidality and suicidal ideation would increase, however it is significant that the year-over-year trend from 2019–2021 mimics the increases in years prior.

Further looking at rates of self-reported depression symptoms for female adolescents, research shows that in 2021, 56.6% of female adolescents report ever feeling sad or hopeless, whereas 28.6% of males report having these feelings. Additionally, 30% of females reported that they had seriously considered suicide as compared to 14.3% of males. When asked if they had created a plan to attempt suicide, 23.6% of females report making a plan to attempt suicide, with 13.3% attempting suicide and 3.9% of these attempts resulting in injury, as compared to 11.6% of male students who report making a plan, 6.6% attempting and 1.7% of male students reporting injury from a suicide attempt (CDC, 2021). Given these statistics, and the finding that rates of depression diagnosis has more than doubled from 2009–2019 with a 12% increase in diagnosis for females as compared to a 3.7% increase in diagnosis for males (Daly, 2022), it is important to determine what supports teachers require to address depression symptoms in their classrooms for this vulnerable student population. It is important to note, however, that although rates of depression for female adolescents are higher as compared to males, females are also more frequently receiving treatment for mental health symptoms with 57.5% of females completing the National Survey on Drug Use and Health reporting receiving mental health treatment for depression or suicidal ideation as compared to 31.3% of males (Mojtabai and Olfson, 2020).

When considering experiences of youth of color with depression or suicidal ideation, research shows an underutilization of mental health services among Black and Hispanic youth (Lindsey et al, 2013; Stafford and Draucker, 2022). While Garland et al. (2005) report that there is a disparity in the delivery of mental health services for students of color. Most notably, youth of color are significantly less likely than their non-Hispanic white peers to receive mental health services, even when controlling for factors such as symptom severity and socio-economic status (Garland et al., 2005). Specifically, when considering symptoms of depression, Thomas et al. (2011) found that white students were more likely than their peers of color to have received a diagnosis of depression or been treated for symptoms of depression, even among adolescents of color who scored in the moderate or high range according to a depression screener.

Finally, in their study on trends in access to mental health treatment over time, Rodgers et al. (2022) found that even with the increased use of in- and out-patient mental health services from 2010–2017 (which is the time sample for the study), disparities continue to exist between use of mental health services by Black and White, and Latinx and White patients. Rodgers et al. (2022) suggest that through increased access to health insurance, training healthcare providers in culturally competent practices, and exploration of non-traditional healthcare models aimed at increasing access for communities of color, providers can better address disparities in mental health service utilization.

A central tenant of the current study is the impact of systemic racism on access to mental health services for youth of color. Researchers define systemic racism as the shaping of societies and ecological processes by social inequalities and implicit racial

bias (Schell et al., 2020). Youth of color have more harmful experiences with systemic racism than their White peers who may benefit from systemic racism in that they are afforded more opportunities than individuals of color. Among the many impacts of systemic racism are inequitable access to medical resources such as doctors and mental health professionals, and residential segregation into areas of low social investment, high concentrations of industry, and low concentrations of health providers. Regarding mental health services specifically, youth of color have greater experiences with "ambiguous, every day, institutional, and vicarious racism" (Brown, 2003; p 55), as compared to their White peers.

Youth of color are also more likely to experience the effects of generational trauma, a subconscious process where the negative effects of traumatic experiences are forwarded to the next generation (Haas, 1996; Doucet et al., 2010). For example, the effects of slavery or immigration can have trans-generational impacts on youth of color, despite youth not having experienced the event themselves. The effects of racial trauma can have significant impact on the developing psychopathology of youth with mental health disorders, specifically in that it fits the definition of post-traumatic stress disorder (PTSD; Saleem et al., 2019) which, left untreated, could significantly affect youth's ability to engage with schooling. As found in a study by Lindsay et al., (2013), more individuals of color reported a family member who had also received mental health treatment as compared to their White peers not receiving mental health treatment. Reporting family members who also receive treatment for mental health disorders could be an indication of generational trauma and the need for systems of support among communities of color

(Lindsay et al., 2013; Opara et al., 2021). Furthermore, in the continued pursuit of equity and social justice in mental health for youth of color, it is important, as Lindsay et al. (2013) point out, that screeners for depression are assessed to determine cultural sensitivity and that the lived experiences of youth of color are taken into account but not pathologized.

Even though depression is one of the most widely recognized and understood mental health conditions (Merrell, 2013), researchers know little about how educational professionals refer students for school-based mental health services. Some is known about referral rates for mental health services for students in general in public schools (Green et al., 2020; Green et al., 2017), but there is a dearth of research on how teacher referrals for mental health services differ for students of color as compared to their White peers. Researchers do know that schools are an important vector by which students with depression and other mental health disorders are identified and receive treatment (Splett et al., 2019). Studies show that early intervention in the school setting has critical importance for supporting youth with mental health needs (Kern, 2017), especially long term. Given that students of color are more likely to have inadequate access to mental health resources (Chavez et al., 2010, Rodgers et al., 2022), it is important for school staff to become adept in understanding and recognizing the symptomology of depression and how it manifests in racial minority populations. This skillset will support teachers' roles as gateway providers in identifying and referring youth for school-based mental health treatment.

When considering the lens of social justice, school staff play important roles as

gateway providers in the identification of and equitable service delivery for students in need of mental health services, however, one of the greatest school-based barriers to receiving mental health support lie in teacher perception of student mental health needs (Williams et al., 2007). Concerningly, studies find that educators often report challenges in identifying internalizing mental health disorders (Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007, Splett et al., 2019), such as depression, versus externalizing mental health disorders, thus complicating identification (Williams et al., 2007). Even more, teachers may possess different behavioral expectations for students of color, which could lead to overlooking symptoms of internalizing disorders in this population specifically (Alegría et al., 2012, Stiffman, Pescosolido and Cabassa, 2004). For example, studies show that youth of color are more likely to experience disproportionate surveillance, discipline and exclusion as compared to their White peers (Saleem et al., 2019). Given this disproportionate behavioral monitoring, youth of color are more likely than their White peers to experience psychological pain, such as development of poor self-esteem, which could lead to early onset of mental health disorders (Saleem et al., 2019).

Many variables may affect how a teacher chooses to act when working with a child they suspect of having a diagnosis of depression. Among these variables are school demographics, available school supports, and understanding of cultural norms (Stiffman, Pescosolido and Cabassa, 2004) such as eye contact or voice level. In this study specifically, I will consider the effect of student and teacher demographics on the likelihood of referral for school-based mental health services, paying particular attention

to the relationship between student race and teacher reported likelihood of referral for school-based mental health services. To achieve this goal, this study will explore teacher responses to fictitious vignettes describing a student both with and without depression, to understand if there are patterns in referral for school-based mental health services by student demographic, specifically student race (for a rationale on the use of vignettes, please see Chapter 3).

Specifically, I will explore the following main and two sub-questions:

Research question: What, if any, relationship exists between likelihood of mental health referral and student or teacher demographics?

Sub-question 1: Does the likelihood of referral for mental health services differ given teacher perceptions of student race?

Sub-question 2: How does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?

Given previous research, I expect to find that teachers refer students of color less frequently for mental health services than their White peers. This finding would be aligned with current research that reports teachers are less likely to refer students of color for mental health treatment as opposed to their non-Latinx White peers (Chang and Sue, 2003; Alegría et al., 2012). Similarly, research shows that teachers struggle to identify the internalizing mental health needs of students of color (Alegría, 2010) which could contribute to lower rates of referral to mental health services for students with depression. Given that a secondary aim of this study is to promote social justice in mental health

service delivery, it is important to identify if the rates of referral for school-based mental health services are disproportionate.

To address my primary research question and sub-questions, I used quantitative analytic methods to analyze data collected from middle and high school teachers after reading fictitious vignettes and responding to an accompanying survey. Through the vignettes and survey, I asked teachers to rate the likelihood of referring a student for mental health services, after reading a given vignette, using a 6-point Likert scale. I also collected data on various other measures of mental health literacy such as experience with professional development, confidence with identifying the symptoms of depression, and experience with mental health in schools. I also collected data on the degree to which teachers are involved with the mental health referral process in their schools as evidenced by perceptions of their own involvement and self-reported historic referral-making.

The vignettes used in the study were adapted from previously validated vignettes used by Green et al. (2017), Lapatin et al. (2012), and Chavez et al. (2010). Vignettes were adapted to make them applicable to the school setting, and I adjusted the name of the student in the vignette to indicate race as either Black, Hispanic/Latinx or White. I chose to focus on these three racial categories because they are aligned with current research on the impact of race on access to various social systems such as healthcare, housing, and employment (Gaddis, 2015 and 2017). To select the name associated with student race within the vignette, I referred to specific research on naming conventions that note race or ethnicity such as those employed by Chavez (2010), Gaddis (2017), and

Bertrand and Mullainathan (2004). For this study, the vignette couplet included one vignette describing a student with severe depression, referred to as the experimental vignette, and one vignette describing a student that does not display any symptoms of depression, referred to as the neutral vignette. I used a vignette that depicts a student with severe depression only, because research shows that teachers have self-reported challenges with identifying mild and moderate symptoms of internalizing disorders (Williams, 2017). Thus, by using only vignettes that show symptoms of severe depression I can avoid potential challenges with identifying the more nuanced symptoms of moderate depression.

When providing the vignettes to teachers, I randomized by student race using a randomizer embedded within the Qualtrics survey platform. For more information on vignette construction see Chapter 3. To gather information about teacher respondents, the accompanying survey also included a series of demographic questions for respondents to answer. Questions included asking teachers to identify what actions they would take to support the student described in the vignette given a list of options. I will further explain survey construction in Chapter 3. The questions included in the survey allowed me to gain insight into how teachers make decisions to refer students for mental health services, which actions teachers report taking to support a student with mental health needs, as well as if teachers can recognize the need for mental health services when presented with a narrative that includes symptoms of a mental health disorder, specifically depression.

Identifying how likelihood of referral for mental health services is related to student or teacher demographics, and if this likelihood is affected by student race or a

teacher's own personal experience, is important in addressing the gap in literature regarding referral rates for youth of color requiring mental health services and promoting social justice in mental health identification and service delivery. To explore my research question, I recruited participants using convenience sampling through both email and social media platforms (see Chapter 3 for more information on participant solicitation) using written solicitation (see Appendix D for recruitment language).

I analyzed the data using a series of step-wise regressions, as alluded to previously, to determine the relationship between likelihood of referral as noted on the 6-point Likert scale, and student and teacher demographics, and teacher mental health literacy (see Appendix A for a complete table of variables employed in the model, and Chapter 3 for further discussion of the quantitative methods used within the study). When running the stepwise regression, I first entered student level demographics, followed by teacher level demographics then, finally, variables related to the level of satisfaction with social/emotional supports, level of comfort with identifying symptoms of depression in school, self-report of possessing the skills to meet the social/emotional needs of students and finally, the number of estimated hours spent on professional development related to mental health, each of which I associated with mental health literacy.

As explained previously, one of the key components of my study was exploring how perceptions of student race may affect the likelihood of referral for school-based mental health services. Thus, it is important for me to explain how I identified student race within the study. For this study, I included fictitious students that were Black,

Hispanic/Latinx and White. I chose these three racial categories given the significant disparities in mental health service use among this specific population of students as explained previously.

Although in the context of this study I chose to group Hispanic and Latinx students together, I recognize that this grouping does not consider the significant differences between these two identities and instead implies that the two terms are interchangeable (Jaimes et al., 2013), which they are not. In making this grouping, I am ignoring the fundamental differences between each group and neglecting a wide range of cultural differences among Hispanic and Latinx youth. Furthermore, it ignores students who identify as both Black and Latinx, or both White and Latinx, and their unique experiences with mental health. The oversimplification of these categories, although not fully inclusive, is useful given that it mirrors how school districts report student race/ethnicity to state agencies (Massachusetts Department of Elementary and Secondary Education, 2021).

Statement of positionality

As a woman of color identifying as Puerto Rican and working in schools over the past 14 years that predominantly serve students of color, I recognize the critical importance of ensuring that teachers possess the skills necessary to understand and respond to symptoms of internalizing mental health disorders in students of color. In recognizing my areas of societal disadvantage, it is also important to acknowledge my privilege as an able-bodied, educated, and upper middle-class individual, because my identity markers influence my own understanding of race and racism in education.

In my roles as a special education teacher and administrator, I have worked with youth with a wide range of disabilities but have primarily focused on youth diagnosed with emotional and behavioral disorders. As such, I have witnessed firsthand what Jorm (2012) describes as poor mental health literacy among teachers who work with this population of students. In my early teaching experience, I also struggled with the identification of internalizing mental health disorders in the youth I served, often attributing their academic needs to learning disabilities, rather than the impacts of mental health on academic achievement.

Further, as a mother to a Black son who displays impulsivity and externalizing behaviors, and a White son with a disability that manifests in internalizing behaviors and communication challenges, both of whom were adopted from foster care, as well as being a foster parent to many other youth, I have a unique perspective on the challenges of securing referrals for special education and mental health services for Black and Latinx students as compared to White students. Given this experience and perspective, I bring a unique lens to the work of supporting students of color in need of mental health services. Through my experience as a mother to my sons, as a foster parent, and as an educator and administrator, I recognize the critical importance of equitable access to mental health services for all students, and the importance of identifying the ways in which student identity markers may interfere with access to mental health services.

Given my experiences, I am specifically interested in conducting my research using middle and high school students as a study population because a majority of my educational career has taken place in grades 5–12, thus, I have a particular sensitivity to

the mental health needs of adolescents. Further, research shows that the onset of depression and other mental health disorders begins mainly in early adolescence (Center for Disease Control, 2020; American Psychiatric Association, 2013; Merikangas, 2010; NIMH, 2019), and that the developmental progression of depression continues from adolescence to adulthood with early intervention critical to avoiding long-term side effects and related risks such as suicide (Bernaras, et al., 2019; Rikard-Bell, et al., 2022). Thus, given prior research, middle and high school is an ideal setting to explore teacher experiences with mental health.

An additional goal of this study, although not a research question, is to promote social justice in mental health identification and service delivery use. Given that prior research supports disproportionate experiences with mental health service use (Lindsay et al., 2013; Daly et al, 2022; Stafford and Draucker, 2018), I felt strongly that an outcome of this study would be to promote social justice in mental health. Specifically, I chose to promote this goal through the creation of a professional development plan that is geared towards informing and educating teaches about the symptoms of mental health and the experiences of youth of color when navigating systems of care related to mental health. Given my personal experience as an educator and administrator in public schools, and my role in supporting teachers working with youth of color who present with mental health diagnoses such as depression, I am passionate about increasing teacher knowledge in this area in order to benefit student outcomes.

Chapter 2: Literature Review

Current research notes that 13.3% of youth (3.2 million) aged 12–17 have diagnoses of depression (NIMH, 2019) and almost half of all school-aged youth will show symptoms of a psychiatric disorder by adulthood (Merikangas et al., 2010). According to prior research, rates of depression for adolescents are increasing (Goodwin, et al., 202; Bor et al., 2014, Goodwin et al., 2022), especially among girls (Daly, 2022; Mojtabai and Olfson, 2020). Schools play a key role in identifying the need for and supporting the treatment of students with depression (Herman et al., 2004; Merrell, 2013, Costello et al., 2014). Yet student demographic variables, such as race and ethnicity, could affect identification and service delivery for students displaying symptoms of depression in school. Thus, it is important to understand how a student's race affects access to mental health services in schools.

To understand and interpret the current research base, I drew on the conceptual framework of the Gateway Provider Model. Throughout the following sections, I will highlight how this framework informed my understanding of how teachers make decisions regarding student referrals for mental health services in schools, and, how student demographics, specifically race and ethnicity, impact the likelihood of referral. For the purposes of this study, unless otherwise noted, I use the term mental health services to signify school-based mental health services, meaning services delivered in the school setting by trained guidance counselors, school adjustment counselors, school counselors, licensed school social workers, school psychologists or other school-based mental health providers.

Psychopathology and symptomatology of depression

As noted previously, depression is one of the most widely recognized and understood internalizing disorders by mental health professionals (Merrell, 2013), and studies note the increasing prevalence of internalizing mental health disorders, including depression, among school-aged populations (Herman et al., 2004; Merrell, 2013; Center for Disease Control, 2020; Bor et al., 2014). Data collected by the National Institute of Mental Health (NIMH) in 2019 shows that 13.3% (3.2 million) of youth aged 12–17 in the United States have diagnoses of depression (NIMH, 2019). The average onset of depression symptomatology is between the ages of 11 and 14 with the rate of diagnosis increasing steadily throughout adolescence (Merikangas, 2010). According to Brent and Maalouf (2009), at the conclusion of adolescence one-in-five youth will have experienced at least one depressive episode, and data collected by the NIMH shows the risk of diagnosis is greater than twice as high for female (20.0%) versus male (6.8%) adolescents. Longitudinally, diagnoses of depression can lead to poor outcomes such as lower educational achievement and attainment (Breslau et al., 2008), substance use and abuse, experiences with violence, health challenges, and increased risk of suicidality (Gilman and Huebner, 2006; Patel et al., 2007). Each of these potential outcomes is more likely to occur when there are delays in identification and treatment for youth exhibiting symptoms of depression in school (Jorm, 2012).

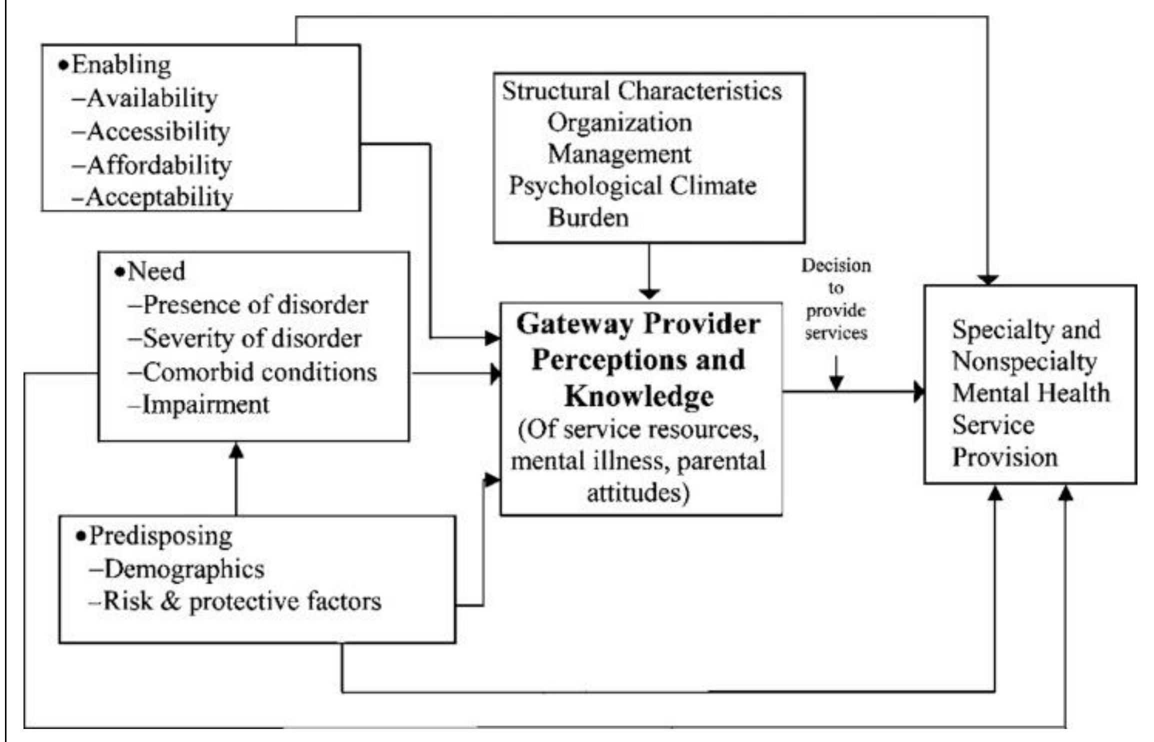
Theoretical Framework

Gateway Provider Model

To analyze the research base and results, I used the Gateway Provider Model (GPM). The GPM is a theoretical framework that describes mental health help-seeking and service use by paying particular attention to who gateway providers are, and what knowledge and perceptions of mental health these providers have that influences their likelihood of making mental health referrals (Stiffman et al., 2004, Jung, Lee and Kim, 2020). As explained by Stiffman et al. (2004), the GPM attempts to capture decision-making that may or may not result in referrals to mental health services. See figure one for a graphic representation of the Gateway Provider Model. Decisions are based on a few key factors such as an individual's need, and factors that would impact service use such as availability and accessibility of services, and risk and protective factors. Next, the GPM considers structural characteristics such as environmental organization and management which impact a gateway providers knowledge and perceptions of mental health and the need for services.

Figure 1

Graphic representation of the Gateway Provider Model created by Stiffman et al., 2004. Reproduced with permission.



There are two types of gateway providers, according to current literature. The first are considered informal providers such as family or friends, and the second are formal providers like mental health practitioners, primary care providers, teachers, juvenile justice workers, and other social service personnel (Jung, Lee and Kim, 2020; Stiffman et al., 2004). Despite availability of gateway providers, however, access to mental health support for youth in need is often dependent upon factors outside of their control. Such factors include providers understanding of and ability to recognize the symptoms of mental health disorders, and provider ability to use effective strategies and make referrals to relevant agencies (Splett et al., 2019; Jung, Lee and Kim, 2020;

Stiffman, Pescosolido and Cabassa, 2004). Further, it is also important that gateway providers examine and account for the ways in which race may impact access to mental health treatment and care. Specifically, individuals with a lack of resources often receive less care, as explained by studies such as DeNard et al., (2017) and Brown (2003), often communities of color are those with less access to resources as a result of residential segregation.

Existing research on the GPM shows that teachers differ from each other in their perceptions of internalizing mental health disorders and the need for intervention (Splett et al., 2019). Specifically, in their review of existing literature on the GPM, Splett et al. (2019) found in multiple studies (such as Loades and Mastroyannopoulou, 2010; Pearcy, Clopton and Pope, 1993) that while teachers were able to identify student externalizing and internalizing mental health needs, they more frequently referred students with externalizing behaviors, even though they noted internalizing behaviors to be of equal concern. These differences in likelihood of referral for mental health services point to variances in perception among teachers as to which behaviors warrant the need for services or intervention. This directly affects the ability of gateway providers to make referrals for mental health services. In fact, as noted by Stiffman et al. (2000, 2001, 2004), recognition of the need for mental health support is complicated by multiple factors, including culture and socio-economic status. Further, teachers and other gateway providers may lack the confidence necessary to help individuals with mental health challenges (Jung, Lee and Kim, 2020). Studies show increasing provider mental health literacy can address the gap in provider knowledge and confidence, but that even after

addressing the gap, there will continue to be a lack of resources available to specific marginalized communities, which limits access to mental health services (Stiffman et al., 2004).

While the Gateway Provider Model (GPM) can be applied to other social sciences such as juvenile justice, and adult mental health service use, in this study I use the GPM to understand how school staff serve as important vectors for mental health service delivery when students are unable to, or not yet accessing, outside mental health treatment. Further, I will use this lens to explore how oppressive systems of healthcare and education, built on the foundation of systemic racism, provide much greater access to mental health treatment and services to some while complicating access for others. For this study, I will operate with the following assumption: the perceived race of a student affects access to mental health identification, intervention, and treatment in school.

When considering social justice, as described by Creswell & Guetterman (2019), the purpose of a social justice lens is to analyze data collected with the intent to transform and improve society for certain marginalized classes. Although typically used for mixed methods studies, I use a social justice lens when analyzing my quantitative data to see how gateway providers contribute to an equitable system of mental health support and create a plan for addressing equity in school-based mental health identification and service delivery. One key outcome of a social justice model is the call to action which is a specific plan for reforming society. For this culminating social justice plan, I created a professional development aimed at supporting middle and high school educational professionals aimed at increasing mental health literacy through instructing professionals

on the indicators of depression and how racial and ethnic identities could lead to disparities in mental health referrals. Please see Chapter 6 for the social justice action plan.

Factors related to the likelihood of mental health referral

There are various factors related to the likelihood of referral for students exhibiting symptoms of depression in schools. I will address student and teacher level factors, and teacher mental health literacy and experiences related to identification and service delivery in the following sections.

Student level factors

Mental health referrals and service use for youth of color. Youth of color have unique mental health service needs given their experiences with generational and systemic racism. Yet, research continues to suggest and undertreatment of depression even among the population of individuals seeking support for depression diagnoses (Goodwin et al., 2022). When considering the experiences of youth of color specifically, the need for mental health services is significantly higher among populations considered at risk, of which a majority are youth of color (Alegría et al., 2010). Further, despite this greater need, youth of color are less likely to receive mental health care as compared to their non-Latino White peers, representing the highest rate of unmet need for mental health services (Alegría et al., 2010, Alegría et al., 2012). For students identifying as Black specifically, adolescents with mental health disorders are less like to receive treatment as compared to their White peers often due to negative perceptions of providers and lack of access to appropriate services (Lindsay et al, 2013)

In their study, Garland et al. (2005) conducted interviews with 1,256 youth with diagnoses of emotional disturbance to better understand racial differences in mental health service utilization. Researchers found that while there is no disparity in the need for mental health services, a disparity does exist in the delivery of mental health services, specifically for students of color. Most notably, students of color were less likely to receive mental health services than their White peers (percent of students receiving mental health services by race: Asian American 59%, African American 64%, Latinx 70%, White 79%), even when controlling for important factors such as severity of reported symptoms and an individual's socio-economic status (Garland et al., 2005).

A second study, conducted by Alegría et al. (2012), explored the relationship between race or ethnicity and access to mental health services for youth. Researchers in this study conducted diagnostic interviews with 9,244 adolescents and found that among youth who met Diagnostic and Statistical Manual of Mental Disorders, 5th edition, (DSM-V) diagnostic criteria, non-Latinx Black youth with low-severity internalizing disorders were less likely than non-Latinx White youth to be identified as needing, or encouraged to, receive mental health services (odds ratio 0.4, 95% confidence interval 0.2–0.7). This finding was consistent with prior research that shows teachers may have different behavioral expectations for Black youth and as a result, may overlook symptoms of internalizing mental health disorders, further delaying identification and treatment for students of color exhibiting symptoms of depression in school. Similarly, the results of this study show the possibility that internalizing mental health disorders may present differently in Black youth as compared to non-Black youth, which further complicates

the identification of mental health disorders in the school setting.

A third study, conducted by Stafford and Draucker (2018), using a sample of 25 Latinx adolescent females found that a variety of factors impact mental health service use for this population specifically. Among the barriers to mental health service use are beliefs about depression and treatment, specifically regarding concerns regarding confidentiality, addictiveness of medication prescribed and beliefs that others would view their depression symptoms as made up. Additionally, researchers found that Latinx female adolescents were less likely to seek services if they had previous negative experiences with providers. Conversely, researchers did find that facilitators to treatment include positive experiences with mental health providers and when their reported mental health symptoms are acknowledged and validated.

As mentioned previously, data collected by the Center for Disease Control (CDC) using the Youth Risk and Behavior Survey (YRBS) in 2019 and 2021 showed in a nationally representative sample of youth across the United States, increasing numbers of youth report feelings of sadness or hopelessness, suicidal ideation, suicide attempts, and attempt related injuries from the years 2019 to 2021. Using an analysis of YRBS data, Lindsey et al. (2019) found that over time, Black youth have experienced an increase in suicide attempts. Further, Black male students are reporting increasing rates of harm resulting from a suicide attempt, pointing to a need for mental health support in this subgroup specifically. Additionally, Lindsey et al. (2019) found that suicide attempts in female adolescents have decreased over time, although the percentage of females attempting suicide, 13.3% (CDC, 2021) is a high rate, and still concerning. Despite the

high percentage of youth self-reporting depression symptomology (sadness or hopelessness) or suicidality (considering suicide, attempting suicide, or becoming injured as a result of an attempt), little is known about how demographics, specifically race, affect referral rates for youth of color experiencing depression in schools, presenting a startling gap in the current research base.

Left untreated or undiagnosed, unmet mental health needs in youth can contribute to poor negative outcomes in adulthood such as lower educational achievement and attainment (Breslau, 2008), substance use and abuse, experiences with violence, health challenges and increased risk of suicidality (Gilman and Huebner, 2006; Patel et al., 2007). Given students of color are more likely to have inadequate access to mental health resources in general (Chavez et al., 2010; Alegría, 2010), the role of school staff as gateway providers for mental health services is integral in providing resources and strategies for students with depression in schools.

Mental health referrals for female adolescents. Current research notes increasing disparities in diagnosis of depression from 2009–2019 with rates of diagnosis more than doubling for female adolescents as compared to males (Daly, 2022). Studies show that females are twice as likely as males to be diagnosed with depression by the time they reach adulthood (Brent and Maalouf, 2009; Merrell, 2013). Specifically, according to data provided by the Center for Disease Control, Black females in grades 9–12 were 60% more likely to attempt suicide in 2019 as compared to same-aged Hispanic/Latinx adolescents (CDC, 2022). Furthermore, females are more likely that males to be diagnosed with internalizing mental health disorders (Brent and Maalouf, 2009; Merrell,

2013). In fact, when looking at the experiences of females as compared to males, according to YRBS data collected in 2021, 56.6% of female adolescents report ever feeling sad or hopeless, whereas 28.6% of males report having these feelings. When asked if they had seriously considered suicide, 30% of females reported that they had, whereas 14.3% of males reported seriously considering suicide. Further, 23.6% of females report planning to attempt suicide with 13.3% attempting suicide and 3.9% of these attempts resulting in injury, as compared to 11.6% of male students who report planning, 6.6% attempting and 1.7% of male students reporting injury from a suicide attempt (CDC, 2021).

Further, when considering the rates of self-reported feelings of sadness, females of color have similar experiences as their White peers. YRBS data from 2021, shows that 54.4% of Black females and 62.2% of Hispanic/Latinx females surveyed reported ever feeling sad or hopeless as compared to 55.1% of White females. When asked if they had seriously considered suicide, 30.5% of Black females, 28.7% of Hispanic/Latinx females and 31.4% of White females reported that they had. Additionally, 24.3% of Black females and 24.8% of Hispanic/Latinx female students report planning to attempt suicide as compared to 22.9% of White female students. When considering suicide attempts, 17.8% of Black females and 13.8% of Hispanic/Latinx females report attempting suicide as compared to 12.4% of White females. When attempted, 5.5% of suicide attempts by Black females, 4.7% of attempts by Hispanic/Latinx females and 3.5% of attempts by White females result in injury (CDC, 2021). This data shows that among females, self-reports of depression symptoms and suicidality is similar for Black, Hispanic/Latinx or

White female students, however there is a stark difference in the reports between female and male students.

According to current research, exploring the intersection between race and gender specifically has important policy implications (Sen et al., 2009). In their quantitative study, Hahm et al. (2015) examined the interaction between race and gender in screening and treatment for depression among adults through the analysis of public health records. Using multivariate logit regression models and estimating goodness of fit, researchers found that women of color were less likely to access (Black women) or utilize (Black and Asian women) depression care as compared to White women. Further, Hahm et al. found that in general, Black and Asian women were less likely to be screened for or receive depression care, as compared to White women. Although this study focuses on adult rather than adolescent women, the discrepancy in mental health service access in adulthood is important to consider when evaluating interventions at the school-based level. Given the disproportionate experiences of females, and specifically females of color, with regards to depression, I specifically chose to focus on female students only when creating the vignettes for the study (for more information on vignette construction, see Chapter 3).

Teacher level factors

Teacher knowledge regarding identification of depression and referral for services. In their review of literature, Pas, Bradshaw, and Cash (2014) found that teachers report lacking the knowledge necessary to manage students' mental health needs and that they require support through professional development or coaching to bridge this

gap. Echoing this finding, Reinke et al. (2011) similarly noted that although 89% of 292 teachers surveyed from five school districts in a nationally representative sample, reported they felt it was important that schools be involved in providing for the mental health needs of students, only 34% of teachers reported feeling that they had the skills necessary to provide this support themselves. Further, Williams et al. (2007) in their phenomenological study of elementary school teachers' perspectives on student mental health service needs found that while teachers were able to identify symptoms of externalizing mental health disorders, they were unable to identify symptoms of internalizing mental health disorders, other than sadness and withdrawal. Additionally, they noted that teachers surveyed at two participating elementary schools identified interpersonal, contextual, and systemic barriers such as lack of school or classroom resources, large class sizes and zero-tolerance behavior policies, as significant challenges to providing adequate mental health services (Williams et al., 2007)

Looking specifically at lack of resources, teacher participants in the study conducted by Williams et al., (2007) noted that there were not enough teachers to support students in school, which contributed to larger class sizes. Additionally, teachers reported that while they may have access to certain mental health resources, lack of parental consent significantly stifled how teachers were able to support students with mental health needs. Finally, according to teacher reports, zero-tolerance behavior policies meant that teachers spent significant time managing the behavior of the students in their classrooms, which left little time for supporting student mental health.

Further, teachers may struggle to support students with unmet mental health needs well because school mental health services are often underfunded. In fact, according to data collected by the National Association of School Psychologists (NASP) in 2013, the recommended ratio of school psychologists to students is 250:1, meaning one school counselor per every 250 students. However, data reviewed by the American School Counselor Association (ASCA) shows that in practice, the actual ratio of school counselors to students is 450:1, meaning one school counselor for every 450 students (National Center for Education Statistics, 2020). Given this disparity, it is very likely that schools lack sufficient personnel to support students with depression well. Thus, the onus of supporting students falls on classroom teachers, who, according to their own self-reports, lack training to work with students with internalizing mental health disorders (Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007; Splett et al., 2019).

Mental health literacy. Increasing teacher confidence in working with students with depression in school (Jung, Lee and Kim, 2020; Jorm, 2012), as well as providing professional development targeting referral procedures, and evidence-based practices for mental health disorders, may positively impact teachers' ability to support youth with depression in school (Jorm et al., 2010; Moor et al., 2007). As defined by Jorm et al. (2010), mental health literacy is a set of "knowledge and beliefs about mental disorders which aid in their recognition, management or prevention" (Jorm et al., 1997, p. 182). By increasing teacher mental health literacy, it is possible that there will be positive effects on the identification and resultant provision of school-based supports for students with depression.

As explained previously, given that several studies have noted teachers' self-reported challenges identifying the symptoms of internalizing mental health disorders (such as Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007; Splett et al., 2019), it follows, that teachers may require support and training on mental health. Training could address topics such as how to recognize and manage observed symptoms of mental health in the classroom, make appropriate referrals to school-based mental health practitioners, provide general support with evidence-based strategies to students experiencing acute or prolonged mental health concerns, or how to approach an individual in crisis (Jorm, 2012; Kelly, 2007). According to prior research conducted by Jorm (2010 and 2012), mental health literacy had a positive effect on teachers' ability to identify and address the needs of students exhibiting symptoms of depression in schools. This finding has significance for the development of policies related to training for teachers currently working with youth currently experiencing or at greater risk of experiencing depression in school-based capacities.

School structures

In-school structures and systems addressing student mental health service delivery. As noted previously, increasing teacher knowledge surrounding mental health identification and service delivery could positively affect student referrals for school-based mental health support. However, often structural barriers exist that prevent individuals of color from accessing mental health services and treatment, among these are poor access to resources and lack of funding for mental health and social work support (Constance-Huggins, 2012). According to Kutash, Duchnowski and Lynn (2006), school-

based mental health systems are composed of three spheres: systems of prevention, systems of early intervention, and systems of care. In systems of prevention, schools are primarily responsible for supporting students through universal intervention such as scripted social/emotional curriculum. In systems of early intervention, schools identify students that are at-risk and displaying a need for service and offer targeted support. Finally, for systems of care, schools engage with both internal and external providers to offer intensive support for students demonstrating a severe need.

Additional primary structural barriers to mental health services include funding, insurance, and availability of providers. Little is known about how schools primarily fund mental health services, though some studies show that school district budgets are allocated, at least in part, to fund school-based initiatives and provider salaries (Foster et al., 2005). State funding such as Medicaid reimbursement programs can provide some funding for mental health services depending on the availability of eligible providers delivering services to eligible clients (Kutash, Duchnowski and Lynn, 2006, Bundy, 2000). Lastly, as mentioned previously, the effectiveness of school-based mental health services relies on the availability of service providers. As reported by ASCA in 2020, the current student-to-school psychologist ratio far surpasses 250:1 as recommended by NASP (National Center for Education Statistics, 2020), which complicates the availability of eligible service providers.

Chapter 3: Plan of Inquiry

Introduction

As noted in Chapters 1 and 2, the goal of this study is to fill the gap in research on referrals for mental health services in public schools for students of color. To shed light on disparities in referral rates for students of color in need of mental health services, this study collected data via surveys and vignettes to explore how teachers make decisions regarding referrals for school-based mental health services for students with depression. I will provide a more explicit description of the methods used to investigate this research question in the sections that follow.

Hypothesis

I derived the research questions and hypotheses from a review of the relevant literature related to the availability of, and access to, mental health services in public schools, and teacher knowledge and perceptions of the mental health needs of students of color. To that end, I addressed the following primary research question and sub-questions, for each, I will state the question as well as the null and alternate hypotheses.

Primary Research question: What, if any, relationship exists between likelihood of mental health referral and student or teacher demographics?

Research sub-questions:

1. Sub-question one: Does the likelihood of referral for mental health services differ given teacher perceptions of student race?
2. Sub-question two: How does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of

depression for school-based mental health services?

See Appendix A for a table showing research questions, related variables, and associated methods.

Methods

To answer my primary research question and sub-questions, I conducted a quantitative study targeting teachers working in middle and high school settings in either general education, special education or as a related service provider.

Setting and Participants

The target population for the study is middle and high school teachers. I specifically chose to focus on middle and high school teachers because, according to the DSM-V, emerging psychopathology for depression often coincides with pubescence, which typically occurs in the late middle to high school years (American Psychiatric Associate, 2013). Further, there is an increase in student report of depressive symptoms from middle to high school (Reddy et al., 2003; Newman et al., 2007; Centers for Disease Control, 2020). Thus, middle and high school teachers provide an ideal survey population because they are more likely to have recent or current experience with students exhibiting symptoms of depression (Baker, Grant and Morlock, 2008; Weyns, Colpin and Verschueren, 2021). Although not a part of this study, future research could investigate the relationship between elementary school teachers' ability to identify symptoms of depression in their students and their reported likelihood of referral to school-based mental health services. For more information see Chapter 5.

Given this, to acquire a population of middle and high school teachers for the

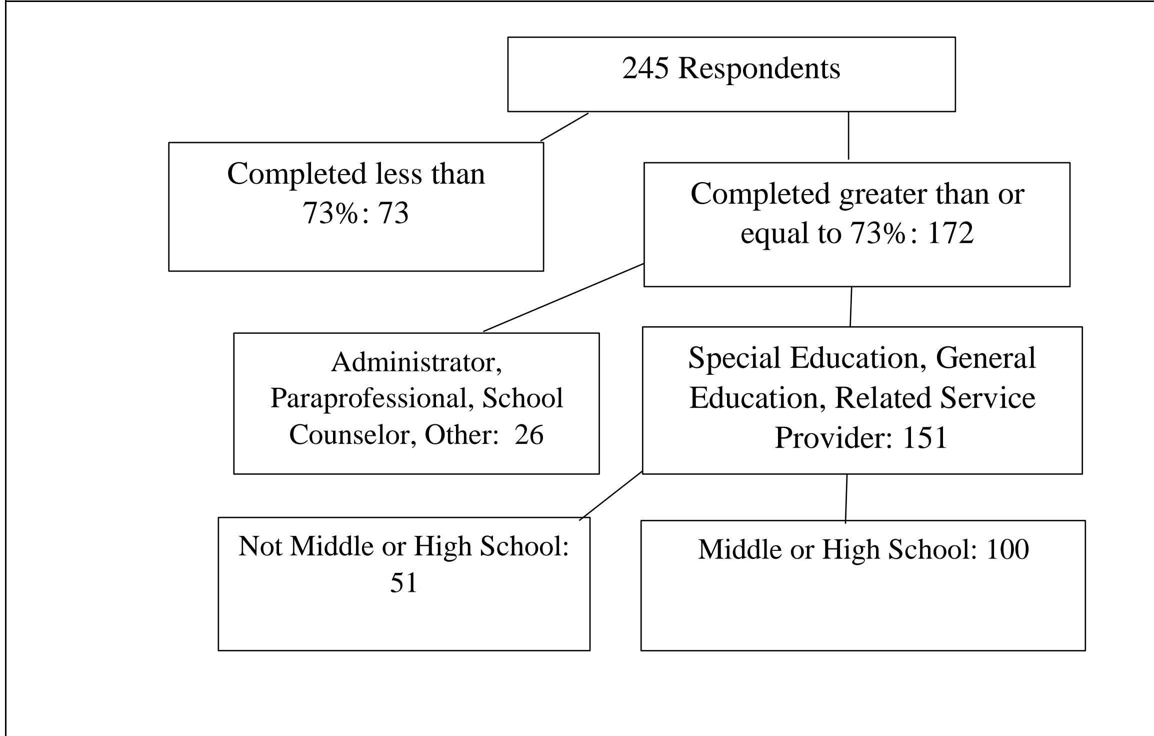
study, I shared an anonymous link to the vignettes and survey on social media, specifically targeting social groups created for teachers. I also shared the anonymous link via my personal networks and among connections who are currently working in schools, and prior colleagues at my previous places of employment. In the solicitation for participation, teachers were informed that the survey was to explore how teachers "think about behavior in their classrooms." This language was specifically chosen to appeal to the largest possible group of teachers possible. The survey was described as confidential and a link to the survey was included. All responses collected were assigned a personal identification number that was not traceable to the respondent because email addresses were not collected. See Appendix D for the text of the email and social media solicitations.

Survey participants

After reading the vignettes, a total of 245 respondents completed all or part of the accompanying survey. After applying exclusion criteria (see Figure 2 and Table 1) a total of 100 responses were included in the survey (n=100).

Figure 2:

Flow chart of inclusion and exclusion criteria to arrive at a total participant amount of 100.



To arrive at the final sample of n=100, I applied various inclusion and exclusion criteria. Participants were not made aware of the exclusion or inclusion criteria prior to being solicited for participation in the study. Participants were included in the sample if they completed at least 73% of the survey. I chose 73% as the cut point because participants who completed this percentage received both the neutral and experimental vignette, the likelihood question and most of the mental health literacy questions. Given that the variables I was particularly interested relied on respondents answering the likelihood and mental health literacy questions, 73% completion gave me a sample of sufficient size (n=172). From the participants who completed 73% I then selected only special

education, general education, or related service providers. I chose these three teacher categories because these teachers were most likely to be in a setting where they were the lead teacher, meaning they had greater opportunities to interface with students throughout the day. After applying these criteria, I was left with a sample size of 151. Next, I selected only respondents who were currently teaching in middle or high school settings. As explained previously, given that depression symptomatology is more likely to occur in early adolescence (Center for Disease Control, 2020; American Psychiatric Association, 2013; Merikangas, 2010; NIMH, 2019), teachers in these grade spans had a greater likelihood of working with students displaying symptoms of depression in their classrooms. All excluded data was retained for potential use in future studies.

Table 1

Inclusion and exclusion criteria for quantitative participant selection.

Inclusion Criteria	**Exclusion Criteria**
• Completed at least 73% of the survey • Special Education Teacher • General Education Teacher • Related Service Provider • Middle School setting (5–8) • High School setting (9–12)	• Completed less than 73% of the survey • Paraprofessional, administrator, "other" • Grade span Preschool through 4 or post-secondary • Not currently teaching

Most teachers surveyed identified their race as White (86%; Black 5%, Asian 1%; Native American 1%, American Indian 1%, Other 7%, prefer not to identify 2%), ethnicity as non-Hispanic (91%, 9% Hispanic), and gender as female (87%, 11% male, 1% non-binary; See Table 2).

Table 2

Mean demographic variables for teacher respondents and mean and standard deviation for mental health literacy variables.

Variable	Mean (SD) %
Student Demographics	
Student race	
Black	31%
Hispanic/Latinx	32%
White	34%
Teacher Demographics	
Race	
White	87%
Non-white	13%
Gender	
Female	88%
Non-female	12%
Grade Span	
Middle	65%
High	35%
Years in teaching	
Less than 10	43%
10 or more	57%
Role	
General Educator	44%
Not General Educator	56%
Mental Health Literacy	
Satisfaction with social/emotional support	3.44 (1.653)
Possess the skills to meet social/emotional needs of students	3.85 (1.536)
Comfort in identifying symptoms of depression	4.43 (1.235)
Hours spent in professional development	5.69 (6.583)

*percentages for each category do not add to 100% due to missing data and participants being allowed to select more than one category for grade span and role.

Respondents ranged in experience from one to thirty-eight years in education (Mean 12.4, SD 8.5) with the majority (54%) of respondents reporting that they have been in education for greater than 10 years (45.6% reported less than 10 years). Most teachers surveyed reported working in middle schools (grades 5–8; 64.1%, High School 35%). Most teachers reported teaching 21–50 students weekly (29.1%), 21.4% reported

teaching 51–100 students, 25.2% reported teaching greater than 100 students, and 22.3% reported teaching less than 20 students weekly (Table 3).

Table 3:

Self-reported demographics of respondents. Total sample size n=100.

Race		
	Asian/Asian American	1.0%
	Black	4.9%
	White	86.4%
	Native American	1.0%
	American Indian	1.0%
	Other	6.8%
	Prefer not to identify	1.9%
Hispanic		
	No	91.3%
	Yes	8.7%
Gender		
	Male	10.7%
	Female	87.4%
	Non-Binary	1.0%
Years in Education		
	Greater than 5	54.4%
	Less than or equal to 5	45.6%
Level		
	Middle School	64.1%
	High School	35.0%
Role		
	General Educator	43.7%
	Special Educator	58.3%
	Related Service Provider	1.0%
	School Adjustment Counselor	1.0%

*percentages for each category do not add to 100% due to missing data as a result of participants skipping questions.

Instrumentation

As described previously, I used a vignette-based construction with an embedded survey as the primary mode of data collection. Both the vignettes and survey were imported into the Qualtrics platform for dissemination to teacher participants in the study.

Justification for this study design as well as specifics on the creation of the instrument will be expounded upon below.

Survey Construction

According to prior quantitative research, surveys often accompany vignettes (Lapatin, 2012) to gather demographic information from respondents, as well as information that could potentially illuminate the rationale for respondent decision-making. Lapatin (2012) also notes that the use of surveys is beneficial to discern the believability and validity of results through use of evidence-based rating scales (Lapatin, 2012). The current study uses a survey that includes questions related to respondent demographic information, such as that used by Green et al. (2017). At the teacher level, demographic variables include race, ethnicity, gender, number of years in teaching, grade level taught, number of students taught, and current role. A full description of the variables and cut points used in the quantitative analysis will follow.

Aligned with prior research using survey methods (Lapatin, 2012; Green et al., 2017; Chavez et al., 2010), to explore how teachers make decisions to refer students for school-based mental health services, provided respondents with a randomly assigned vignette couplet and an accompanying survey using various response methods such as binary – yes/no, multiple choice, open response, select all that apply, and Likert scale (see Appendix B for the full survey).

Given the randomly assigned vignette couplet, respondents were asked to rate how likely they were to refer the fictional student described in the vignette for school-based mental health services using a 6-point Likert scale. Next, respondents were asked

how likely they believe their colleagues would be to refer the student in the same vignette to school-based mental health services. The goal of this question was specifically to avoid the social desirability bias inherent in asking a participant how they would respond in a specific scenario. Social desirability bias will be further explained in the sections that follow.

Following the presentation of each vignette, respondents were asked to note which actions they would take to support the student, such as: referring the student to the school counselor/social worker/school psychologist, consulting with the school counselor without making a referral, referring the student to the behavior specialist/interventionist, referring the student for special education services, providing extra support to the student themselves, such as tutoring or advising, contacting the student's parent, speaking to the student, referring the student to the student support or child study team for tiered intervention, or taking no action at this time.

Use of vignettes in research

Although less developed, the use of vignettes in social care research, which includes mental health and education, seeks to determine how a respondent would act in a real situation by offering a fictional example as a model (Wilks, 2004). In quantitative research, vignettes are often paired with surveys or questionnaires that provide predetermined responses or Likert scales, which allow researchers to analyze the data collected by comparing respondent choices, other variables such as demographics, and the interactions between each (Wilks, 2004).

According to Atzmüller and Steiner (2010), a vignette study consists of two key pieces, first, the experimental core element, which is the vignette, and second, the follow-up survey to measure responses to specific characteristics presented in the vignette. Given the goal of the current study was to understand how teachers respond to fictitious student scenarios and decide to refer students for mental health services, the use of vignettes allowed for a highly controlled setting to test my hypotheses. This design also allowed for comparisons across groups of respondents, thus allowing me to determine if referrals for mental health services varied based on student race.

To gather hypothetical responses from teachers, I used a between subject vignette-based research design meaning each respondent was exposed to only one condition in the study. In the case of this study that means each participant received only one condition of both the experimental and neutral vignette, which was differentiated by race. According to Charness, Gneezy, and Kuhn (2012), if assignment to condition is random, it is possible to draw causal estimates by comparing the responses of participants across condition. Meaning that, for the current study, the responses of participants who received the student described as White were compared to the responses of participants who received either the Black or Hispanic/Latinx condition.

Further, the use of between-subject design allows for statistically simple analyses, which although easier to perform, could potentially lead researchers to miss important statistical findings that could be possible with the use of more complex analyses. Additionally, it is challenging to achieve statistical power because participants are only providing a single independent data point (Charness, Gneezy, and Kuhn, 2012).

Benefits to the use of vignettes in research

According to Lapatin (2012), vignettes are fictional depictions of real-world situations based on fact or experience, designed to mimic people and their behaviors in specific situations. The short descriptions of a person or social situation provided in a vignette give explicit references to the most important factors relevant to the decision-making or judgment processes of respondents (Alexander and Becker, 1978; Atzmüller and Steiner, 2010). Through vignettes, research participants can respond by sharing what they would hypothetically do in a specific situation or, what a third person would or should do in response to the situation described in the vignette.

There are several benefits to the use of vignettes in research. Most significantly, the use of vignettes provides an alternative to the typical research design by combining experimental with survey research. This combination offers a counterbalance to the weaknesses present in both research designs because the use of vignettes provides an element of control to the researchers, the results of which can be validated through follow-up surveys (Atzmüller and Steiner, 2010). The controls available to researchers include both explanatory as well as contextual factors such as different demographic variables like race or ethnicity, that are important to the study, (Lapatin, 2012, Atzmüller and Steiner, 2010) thus providing a more realistic scenario. Additionally, the use of a fictitious individual in a vignette represents a counterfactual population (Lapatin, 2012) because it provides a believable comparison to a real-world example, which allows researchers to gain insight into how respondents would act in similar situations (Wilks, 2004). By varying vignette characteristics, researchers can make causal estimates about

the effect of changes in the combination of variables used in the vignettes, and the impact on participant responses (Alexander and Becker, 1978; Atzmüller and Steiner, 2010), ideally avoiding the presence of confounding variables that may sway survey results.

Barriers to the use of vignettes in research

There are also several barriers to the use of vignettes in research that must be addressed through research construction. Most significantly, when using a vignette-based design, researchers must intentionally construct vignettes that create believable situations and characters. Given that the vignette represents a hypothetical scenario designed to mirror reality, researchers must intentionally construct vignettes that present, as closely as possible, the scenario researchers are seeking to study (Wilks, 2004). To address this challenge, researchers can create vignettes that consider each foundational aspect of the research population, and include positive personal as well as pathological attributes (Lapatin, 2012). The addition of both pieces will create a more realistic vignette. When creating the vignettes, researchers must also ensure that they have included all possible variations of the manipulated variable to avoid confounding effects (Alexander and Becker, 1978), which would complicate the researcher's ability to determine which of the variables was the cause of a single, or pattern, of responses.

As discussed in Chapter 1, another challenge to the use of vignettes is the impact of social desirability on participant answers. Ideally, given the vignette is fictional and therefore non-personal, and, perceived to be less threatening (Wilks, 2004), the impacts of social desirability will be minimized because the participant is asked to respond to the hypothetical scenario, rather than a real experience. Thus, respondents are less likely to

consciously bias their responses (Alexander and Becker, 1978; Wilks, 2004). However, given that the situation is hypothetical, there is no guarantee that the participants will respond in ways that mirror what their real-life actions may be (Wilkes, 2004). This is an inherent limitation in vignette-based studies.

Vignette construction

According to Atzmüller and Steiner (2010), there are five important steps in a vignette-based study design: 1) construction of the vignette; 2) determination of the number of vignettes and number provided to each respondent; 3) construction of vignette sets; 4) sampling of respondents and data collection; and 5) analysis of vignette data and interpretation of results. I will address each of these steps in turn for the present study. When constructing the vignettes used in the current study, I focused on the demographic variables of student race and gender. I will explore each aspect of vignette construction below.

Gender. The vignettes used in the study included only female gendered students representing the race/ethnicities Black, White and Hispanic/Latinx. I chose to exclude male gendered students from the study to increase power and to analyze effects for each racial/ethnic category of student, which is my primary variable of analysis. The exclusion of male gendered students from the study could pose a limitation as research does show that male gendered students also have disproportional experiences with school based mental health, especially in the overrepresentation of male gendered students facing exclusionary discipline, and the underrepresentation of male gendered students receiving school-based mental health support (Odenbring, 2019; Pearson, 2023). Teacher

perceptions of mental health service needs for male gendered students, although not addressed in this study, could be a beneficial direction for future research.

Race. For the current study, I chose not to differentiate between race and ethnicity. I used the term race/ethnicity to signify students identifying as White, Black, or Hispanic/Latinx. Although race and ethnicity can be conceptualized as separate categories, they are both social constructions of difference, which leads them to operate similarly by categorizing individuals who identify as non-White. Thus, for the purpose of this study I combined both race and ethnicity into a single category: race/ethnicity.

Additional racial and ethnic categories were excluded from this study because, although an important population, students identifying as Asian, Pacific Islander, American Indian/Alaskan Native or two or more races is a significantly smaller percentage than students identifying as Black, White or Hispanic/Latinx (National Center for Education Statistics, 2022).

Naming conventions. When constructing the vignettes used in the study, I critically analyzed and considered the presentation of student race/ethnicity in the fictional description. To indicate student race within the vignette, I chose to rely on student names. Prior research has found that to make causal claims between race and the actions of the respondent (Gaddis, 2017), researchers must ensure that the name chosen for the student in the vignette is uniquely and unequivocally associated with the specific race/ethnicity implied and assumed.

Further, to ensure that researchers can make causal claims between a name and race, the vignette must use a chosen name that is clearly and distinctly associated with

only one racial category, however, as Gaddis (2017) notes, "at best, first names can only be imperfect proxies of race" (Gaddis et al., 2017, p. 471). This means that even if a strongly associated name is chosen, there still exists a margin of error when drawing racial assumptions. To understand the best methods to signify race/ethnicity within a vignette, I explored the use of names with assumed associations to race through a review of correspondence audits. Prior research using correspondence audits has studied the impact of racial or ethnic perceptions of names on applications for jobs (Gaddis, 2015; Bertrand and Mullainathan, 2004; Darolia et al., 2016), access to medical care and treatment (such as Hughes, 1998; Hughes, 2001; Spalding and Philips, 2007) and access to mental health resources (Dolphin and Hennessy, 2017). These audits created fictional profiles for two individuals with nearly identical characteristics, the only variable changed being race, as signified by applicant name (Gaddis, 2017; Gaddis, 2017; Gaddis, 2015).

Much research into the use of vignettes in quantitative research has occurred in health and social science research. General findings from previous vignette studies have found that job applicants who identified as Black are less likely to be invited for an interview and, when hired, are more likely to be underpaid for their work as compared to their White colleagues (Gaddis, 2015; Bertrand and Mullainathan, 2003, Darolia et al., 2016). Further, previous studies have also found that Hispanic/Latinx applicants for rental properties are also less likely to be chosen as tenants by potential property owners as compared to White applicants (Hanson and Santas, 2014). One key theme throughout each of these studies is that when the race of an individual is implied and assumed,

respondents are more likely to display discriminatory practices, preferring White-presenting individuals to individuals who are Black or Hispanic/Latinx. The implications of this theme for my study are relevant for the development of vignettes, specifically as it relates to the selection of student names.

Prior research also discusses the importance of naming fictional subjects to minimize the impacts of social desirability while providing the opportunity for researchers to identify and analyze discriminatory practices (Gaddis, 2017). As described by Grimm (2010), social desirability is the tendency for respondents to answer questions in a way considered favorable by society, rather than in a way that reflects a respondent's true beliefs. Given that vignettes provide hypothetical scenarios, the effects of social desirability are minimized (Wilks, 2004) because respondents are commenting on fictional events. Asking respondents to select answers given a hypothetical situation, removes the pressure to choose correctly or as expected and provides the participant with the freedom to answer.

When generating the list of first names used in the vignettes for the current study, I reviewed relevant literature on the use of names to signify race in correspondence audits, as explained previously (such as Gaddis, 2017; Gaddis, 2017; Gaddis, 2015; Bertrand and Mullainathan, 2004; and Chang and Sue, 2003). However, I ultimately relied on a specific set of field-tested names generated by Gaddis (2017). As noted by Gaddis (2017), the use of similar names in my study will allow for future comparisons across studies that use vignettes depicting individuals with the same first names. For vignettes where the implied race is Black, I used the names Tanisha and LaToya, which through

field tests, respondents identified as associated with Black individuals in greater than 95% of cases (Gaddis, 2017). For vignettes where the implied race is White, I used the first names Katelyn and Kristen, which were perceived as associated with individuals identifying as White by greater than 97% of respondents (Gaddis, 2017) and 96% of respondents respectively (Bertrand and Mullainathan, 2004). For vignettes where the implied ethnicity is Hispanic/Latinx I used the first names Mariana and Esmeralda, which were noted by Gaddis (2017) to be recognizable as Hispanic/Latinx to nearly 100% of respondents in a field test when combined with a Hispanic/Latinx surname. For the current study I chose not to include a Hispanic/Latinx surname. This exclusion does reduce the recognizability of each name to between 75–80% according to Gaddis (2017), however, for the purposes of the current study, the exclusion of a Hispanic/Latinx surname mirrored the construction of the other two vignettes where only first names associated with Black and White individuals were used.

In addition to intentionally selecting names that imply student race, I chose to use previously validated vignettes constructed by Green et al. (2017) and Chavez et al. (2010). These vignettes present two distinct student profiles, one displaying symptoms of moderate depression according to the DSM-V (American Psychiatric Association, 2013; Green et al., 2017) and referred to as the experimental vignette, and the other displaying no symptoms of depression, referred to as the neutral vignette (Chavez et al., 2010). I chose to use the specific vignettes employed by Green et al. (2017) and Chavez et al. (2010) because they depicted female middle and high school students, which is the target population for the current study. In addition, vignettes in previous studies conducted by

Green et al. (2017) and Chavez et al. (2010) were delivered to respondents in writing, which is the method used in the current study to deliver vignettes to survey respondents. Lastly, the vignettes used by Green et al. (2017) were validated by school psychologists as accurately displaying realistic symptoms of depression in school-based settings. The neutral vignette, created by Chavez et al. (2010) was also validated by a team of expert child clinicians to determine reliability (for sample vignettes see Appendix C).

Determination of the number of vignettes

I used a total of six vignettes in the current study. Three vignettes represented the experimental (depression) condition, and three represented the neutral (non-depression) condition. All vignettes included female gendered students only and were randomized by race/ethnicity (Black, Hispanic/Latinx, White). The use of randomization ensured that each vignette was represented equally in the study sample. Participants received two vignettes, one neutral and one experimental, both vignettes were racially matched meaning both students presented are either Black, Hispanic/Latinx, or White. The assignment of two vignettes, one in each condition, to each participant allowed for direct comparisons between likelihood of referral given student and teacher demographics when the student was displaying symptoms of depression (experimental), versus when they were not displaying symptoms of depression (neutral vignette).

Construction of vignette sets

I used a randomizer embedded within the Qualtrics survey platform to randomize the assignment of vignette sets. One challenge with the random assignment of vignette sets to participants is that the division of vignettes may not be in equal proportion due to

respondent survey completion. In the current study, of 100 respondents, 34.6% were assigned the White condition, 31.7% the Black condition and 33.7% the Hispanic/Latinx condition, representing roughly a roughly one-third division each vignette, which satisfied the concern regarding a disproportionate representation of one racial/ethnic category over the others.

Analysis and interpretation of results

I analyzed data using a stepwise regression model, which allowed for the analysis of each level of data — student, teacher, followed by the responses to the mental health literacy questions — as noted in Chapter 2. I specifically chose to use regression models because they can be an effective model for identifying the impact of intersectional data outcomes since they analyze the role that multiple identities play in influencing statistical outcomes. For a complete list of variables, see Table 3.

Variables

In the following sections I will discuss both the independent variables and the dependent variable included in the stepwise regression model.

Independent variables

To explore my primary research question, I examined several independent variables through a stepwise regression model. I will explain each variable and the rationale (student and teacher; see Table 2). At the student level, I examined the independent variable of student race. For the student race variable, vignettes included students who depicted as White, Black or Hispanic/Latinx. I included the variables for Black and Hispanic/Latinx in the model and set White as the reference category. Given

that the goal of my study was to determine if there was a relationship between the likelihood that teachers report referring students for mental health services given student race, and my alternate hypothesis that students of color are less likely to be referred than their White peers, I determined that holding student race as White as the reference category was appropriate.

At the teacher level, I included variables such as number of years teaching, grade level taught, current teaching role, number of students taught, and teacher race and gender, which helped me see what, if any, relationship existed between teacher demographics and likelihood of referral for school-based mental health services (see appendix B for the full survey). For the variable teacher race, I created a dichotomous variable where race as White was coded as 1, and race as non-White was coded as 0. The category non-White included all responses where the respondent race was indicated as non-White, such as Black, Hispanic/Latinx, Asian/Pacific Islander, American Indian, Alaskan Native, other or prefer not to identify. Given that the majority of the teaching workforce in the United States is White (National Center for Educational Statistics, 2023), as mentioned previously, and that the majority of the sample for this study also noted their race as White, setting race as non-White as the reference category allowed me to draw relationships among likelihood of referral when the teacher indicated their race as White versus non-White.

I similarly coded the variable teacher gender as a dichotomous variable. As noted previously, gender was broken into the following categories: male, female, non-binary or prefer not to say. For the dichotomous variable I coded female as 1 and non-female as 0. I

chose to set female as the reference category given that the majority of the United States teaching force is female (National Center for Educational Statistics, 2023). Drawing this specific comparison allowed me to analyze relationships between teachers who self-reported their gender identity as female versus those who self-reported their gender identity as non-female, thus creating a sample where responses could more closely mirror those of the national teaching force.

To create the variable representing number of years in teaching, I first collected the raw number of years that a respondent has been teaching. I then clustered the responses into two groups, teaching for five years or less, or teaching for six years or more. I chose this specific division because research notes that teacher effectiveness significantly increases after the first five years of teaching (Atteberry, Loeb and Wyckoff, 2013), further, prior research notes that novice teachers often report lacking the skills necessary to support students with mental health needs well, especially if their teacher preparation programs do not have sufficient instruction in recognizing and responding to the mental health needs of students (Reinke et al., 2011). Given this, for the regression model, I set teaching for five or less years as the reference category.

With regards to respondent role, I asked survey participants to report what their role was in the school they currently work at. I provided options that included: general education teacher, special education teacher, administrator, related service provider, school adjustment counselor, paraprofessional or other. I then reviewed the responses and included only general education, special education, related service provider or school adjustment counselor in the final sample. I chose to exclude paraprofessionals because

their roles are not considered direct teaching positions with the same level of teacher education and training. I also chose to exclude administrators because I was looking for survey responses only from participants currently in the classroom. Lastly, I excluded participants who selected other if the role reported was non-teaching role. When analyzing the data, I chose to compare general education teachers to all other teachers. Given that the largest subset of my sample is that of general education teachers, I chose to set the reference category as non-general educator. Additionally, the other categories in the sample were much smaller, making general education teachers a logical choice for reference category.

Lastly, I surveyed teachers on the grade span they were currently teaching. Teachers were provided the option to select any of the following grades: 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th or other. I then grouped responses into middle school (grades 5–8), high school (grades 9–12) and excluded those respondents who reported teaching a grade other than grades 5–12. When analyzing the data, I chose to compare the responses of middle school teachers to high school teachers. I chose this comparison because my sample contained a majority middle school teachers (64.1%) versus high school teachers (35%). Additionally, I chose to set high school as the reference category because research shows the onset of depression symptomology most commonly occurs between ages 11–14 (Merikangas, 2010), which is aligned with the age of a middle school student.

Lastly, I selected questions from the survey that represented a teacher's level of mental health literacy. These responses were included in only model three of the stepwise regression. Using the same process as described previously, I quantified the Likert scale

responses to the following questions:

1. I am satisfied with the social/emotional support provided at my school.
    a. Likert scale 1–6
2. I feel that I have the skills to meet the social/emotional needs of the students with whom I work.
    a. Likert scale 1–6
3. How comfortable are you identifying the symptoms of depression if they manifested in a student in your class?
    a. Likert scale 1–6

I also included a variable related to number of hours spent in professional development in the third model. Although this variable is considered highly subjective because it does not require respondents to provide documentation of the professional development, it does serve as a useful variable when determining the level of mental health literacy exhibited by teachers. Responses to each of these four questions on the survey were included in the regression as separate variables.

Dependent variables

For this study, I analyzed the dependent variables likelihood of referral and colleague likelihood of referral. These variables were included in all three models of the stepwise regression. I created the variable likelihood of referral by quantifying respondent selections on the 6-point Likert scale. For example, extremely unlikely received a rating of one, somewhat unlikely received a two, unlikely a three, likely a four, somewhat likely a five and extremely likely received a six. I repeated this same process

for the variable representing the assumed likelihood that a respondent's colleague would refer a student for mental health services. As discussed previously, colleague likelihood of referral was included to address social desirability bias. I will discuss the results of the stepwise regression in the following chapter.

Teacher perceptions of race

Lastly, although not a variable in the stepwise regression, I asked teachers to identify how they felt referral rates compared for students of color versus their White peers. The results of this question provided insight into the primary research question: What, if any, relationship exists between likelihood of mental health referral and student or teacher demographics? Additionally, through this question, I was able to consider if there was a relationship between self-reported likelihood of referral and how teachers noted that student referral rates compared when considering race. Results for this question will be shared in Chapter Four.

Chapter 4: Results

To present the results of the current study, I have divided this chapter into three sections. The first section will present descriptive statistics not represented in the regression model, the second section will present models one and two of the stepwise regression to answer research sub-question one ("does the likelihood of referral for mental health services differ given teacher perceptions of student race?"). The final section will present model three of the stepwise regression to answer research sub-question two (how does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression for school-based mental health services?).

Descriptive results

To answer research sub-question one, "Does the likelihood of referral for mental health services differ given teacher perceptions of student race?" and sub-question two, "How does teacher experience and mental health literacy effect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?" I delivered a couplet of randomly assigned vignettes to respondents. After reading the vignettes, respondents were asked a series of questions to determine the likelihood of referral. I then analyzed participant responses to determine what, if any, relationship likelihood of referral had to teacher perception of student when controlling for various teacher demographics.

To determine how teachers' responses to the fictitious vignettes compared with the likelihood of referral for school-based mental health services, respondents reported if

they felt students of color were significantly over-referred, somewhat over-referred, significantly under-referred, somewhat under-referred or referred at the same rate as their peers. According to teacher responses, 46% of teachers noted that they felt students of color were referred for school-based mental health services at the same rate as their peers, whereas 11% reported feeling that students of color are significantly under-referred, 9% reported feeling that students of color are somewhat under-referred, 10% reported feeling that students of color are somewhat over-referred and 2% of respondents reported feeling that students of color are significantly over-referred. For a complete table of percent of responses related to respondent perceptions of the frequency of referral given student race, see Table 4.

Table 4

Reported frequency and percentages of respondent's perception of the relationship between referral rates for students of color and their White peers.

50%
40%
30%
20%
10%
0%
Siginificantly over-referred
Somewhat over-referred
Referred at the same rate
Significantly under-referred
Somewhat under-referred
Missing

	Percent
Students of color are significantly over-referred	2%
Students of color are somewhat over-referred	10%
Students of color are significantly under-referred	11%
Students of color are somewhat under-referred	9%
Students of color are referred at the same rates as their White peers	46%
Missing	22%

N = 100

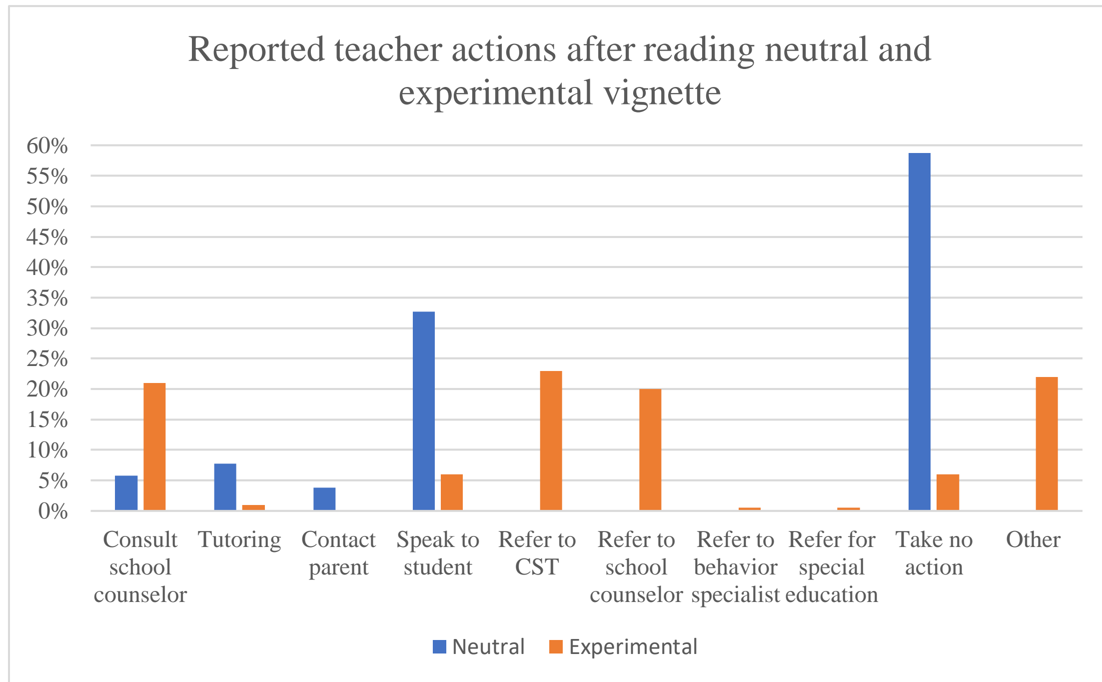
How does teacher experience with mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?

To explore sub-question two ("how does teacher experience and mental health literacy effect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?"), I used a variety of analytical means. First, I used frequency analysis to determine the actions teachers would be most likely to take in response to the neutral vignette describing a student without depression, and experimental vignette describing a student with depression. I will first describe the results for possible actions taken after respondents read the neutral vignette. When answering this question, the respondents were allowed to select more than one action, so the total percentages do not add to 100%.

According to respondent self-reports, after reading the neutral vignette 58.7%, a majority of respondents, stated they would take no action after reading the neutral vignette. An additional 32.7% of respondents reported speaking to the student, and the remaining 17.4% of respondents reported taking various other actions such as consulting with the school counselor without making a referral, providing extra support via tutoring, contacting the student's parent, or referring to the student support or child study team for tiered intervention. None of the respondents reported that they would refer the student described in the neutral vignette to the school counselor/social worker or school psychologist, refer to the behavior specialist or interventionist, or refer the student for special education services (Table 5).

Table 5

Teacher reported actions after reading the experimental and neutral vignettes.



Possible action	Neutral Vignette	Experimental Vignette
Consult with school counselor without making a referral	5.8%	21%
Provide extra support yourself (tutoring, advising, etc.)	7.7%	1%
Contact the parent	3.8%	0%
Speak to the student	32.7%	6%
Refer to student support/child study team	0.1%	23%
Refer the student to the school counselor/social worker/psychologist	0%	20%
Refer student to the behavior specialist/interventionist	0%	0.5%
Refer the student for special education services	0%	0.5%
Take no action	58.7%	6%
Other	Not asked	22%

Please note that the total percentage for selected actions after reading the experimental vignette does not equal 100% because respondents were allowed to select more than one option.

Similarly, after reading the experimental vignette, respondents were asked to report their proposed first and second action in response to the student described in the

vignette. I chose to have respondents choose two actions after reading the experimental vignette to determine what teachers report they would do first and what they would do second after reading the vignette. Ultimately, I combined the first and second actions reported by teachers into a single variable representing all possible actions taken. I then combined teacher reported first and second actions into a single variable representing teacher reported next steps.

After reading the experimental vignette describing a student displaying symptoms of depression, 23% of teachers reported referring the student to the child study team or student support team for tiered intervention. An additional 21% of teachers reported talking with the school counselor without making a referral, and 22% of teachers reported they would take another action not stated. The remaining 14% of teachers reported they would take another action such a providing extra support themselves via tutoring or advising, speaking to the student, referring to the behavior specialist or interventionist, referring to special education or taking no action. No teachers reported that they would speak to the student's parent regarding their concerns (Table 5).

Secondly, to determine how teacher experience with mental health literacy affected the likelihood that a teacher would refer a student displaying symptoms of depression to school-based mental health services, I asked a series of questions to determine teacher experience with mental health. Through frequency analysis, results showed that in general, respondents were equally likely to be satisfied and dissatisfied with the level of social/emotional support provided at their school (18% strongly disagree, 12% somewhat disagree, 19% disagree, 18% agree, 20% somewhat agree, 12%

strongly agree, 1% no response). Respondents also reported that they felt they had the skills necessary to meet the social/emotional needs of the students they work with (9% strongly disagree, 13% somewhat disagree, 14% disagree, 23% agree, 30% somewhat agree, 11% strongly agree, 2% no response), and in general reported that they were clear on the process for referring students for social/emotional support within the school (7% strongly disagree, 11% somewhat disagree, 12% disagree, 22% agree, 19% somewhat agree, 29% strongly agree, 1% no response; for a complete table of percentages see Table 6).

Table 6
Level of self-reported agreement with social/emotional support, possession of skills to support social/emotional needs of students and clarity on process for referring students to social/emotional supports within the school. N=100

Level of agreement	I am satisfied with the social/emotional support provided at my school	I feel that I have the skills to meet the social/emotional needs of the students with whom I work	I am clear on the process for referring students to receive social/emotional support within my school
Strongly disagree	18%	9%	7%
Somewhat disagree	12%	13%	11%
Disagree	19%	14%	12%
Agree	18%	23%	22%
Somewhat agree	20%	30%	19%
Strongly agree	12%	11%	29%
No response	1%	2%	1%

The next questions associated with mental health literacy was teacher reported comfort with identify the symptoms of depression as displayed within students in their class. With regards to reported comfort level, 1% of respondents reported feeling

extremely uncomfortable with identifying the symptoms of depression as manifesting in their classrooms. An additional 6% of respondents reported feeling somewhat uncomfortable, 7% of respondents reported feeling uncomfortable, 23% of respondents reported feeling comfortable, 34% of respondents reported feeling somewhat comfortable, and 14% of respondents reported feeling extremely comfortable (see Table 7). This represented 86% of the total population surveyed in the sample (n=86). The missing data represented respondents who did not answer the specific question related to comfort with identifying symptoms of depression in their classrooms.

Table 7

Level of self-reported comfort with identifying the symptoms of depression manifesting in a student within the respondent's classroom. N=86

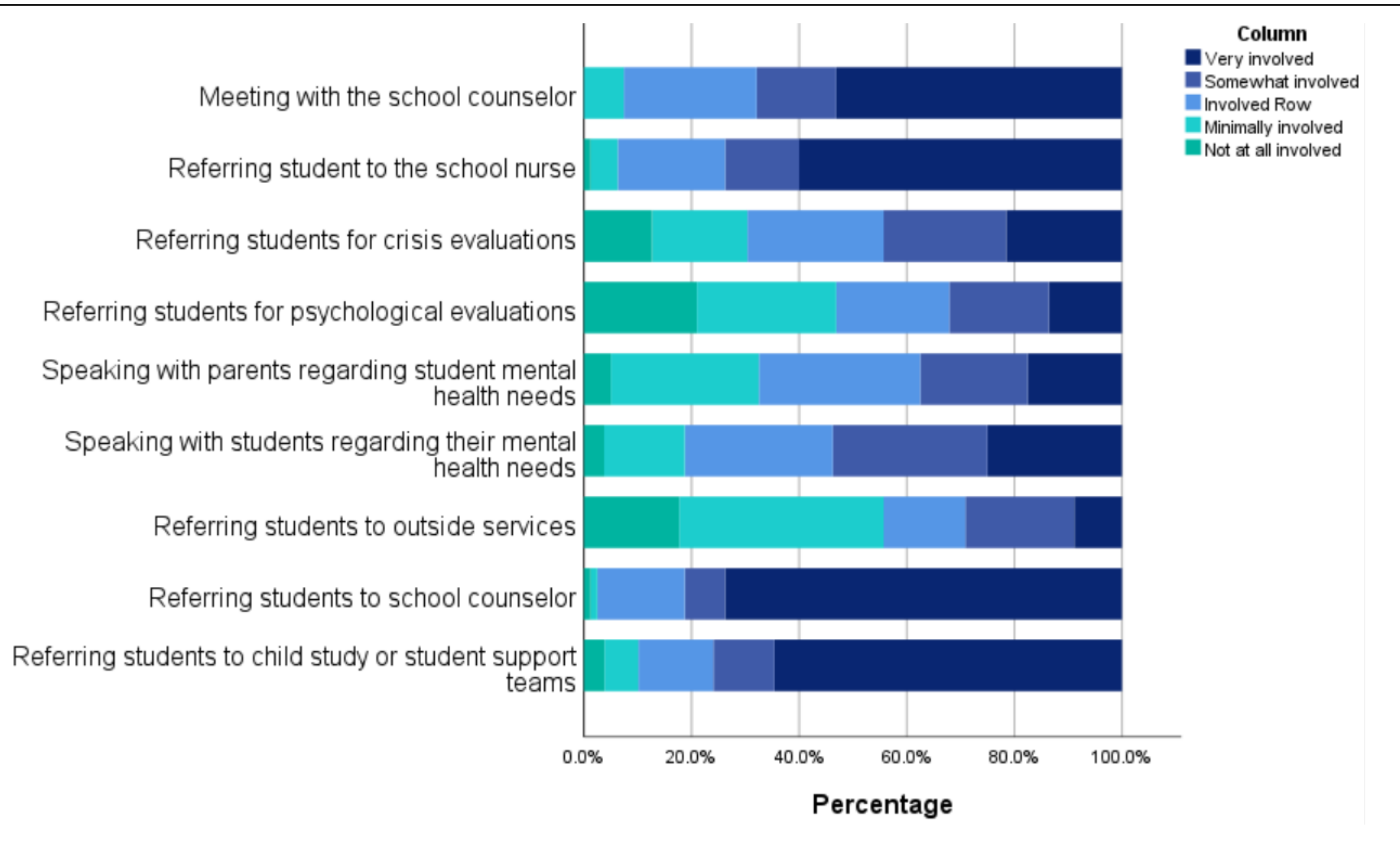
Level of comfort	How comfortable are you identifying the symptoms of depression if they manifest in a student in your class.
Extremely uncomfortable	1%
Somewhat uncomfortable	6%
Uncomfortable	7%
Comfortable	23%
Somewhat comfortable	34%
Extremely comfortable	14%
No response	16%
Sample size	n=86

In addition to reporting the level of comfort with identifying symptoms of depression in school settings, respondents were also asked to identify the level of involvement they felt teachers should have in various school-based mental health supports. Potential supports included referring the student to the child study team or

student support team to complete a tiered intervention, referring to the school counselor, referring to an outside agency, speaking with the student, speaking to the parent, referring the student for a crisis evaluation, referring the student to the school nurse or meeting with the school counselor. In general, teachers noted that they felt they should be very involved with making referrals to the school counselor (59%) and the child study or student support team (50%) and least involved with referring a student to an outside agency (7%). Teachers noted varying levels of desired involvement with the remaining other mental health supports provided at the school-based level. (For complete information on teacher reported levels of involvement see complete Table 8, please note that the sample size for this question is N=79 due to non-responses).

Table 8:

Teacher ratings of perceived level of involvement in various mental health supports provided at the school-based level. N=79



Involvement	Referring to child study team	Referring to school counselor	Referring to outside agency	Speaking to the student	Speaking to the parent	Referring for psychological evaluations	Referring for a crisis evaluation	Referring to the school nurse	Meeting with the school counselor
Not at all involved	3.0%	1.0%	13.7%	2.9%	3.9%	21.0%	9.8%	1.0%	0.0%
Minimally involved	5.0%	1.0%	29.4%	11.8%	21.6%	20.6%	13.7%	3.9%	5.9%
Somewhat involved	8.8%	5.9%	15.7%	22.5%	15.7%	14.7%	17.6%	10.8%	11.8%
Involved	10.8%	12.7%	11.8%	21.6%	23.5%	16.7%	19.6%	15.7%	19.6%
Very involved	50.0%	59.0%	6.9%	19.6%	13.7%	10.8%	16.7%	47.1%	42.2%

As noted in Table 8 above, when comparing the level of involvement in various mental health referral processes noted by teachers, in general, teachers felt they should be involved to some degree with each aspect of the mental health referral process. Teachers noted that they felt they should be most frequently involved in internal school structures such as the child study or student support teams, which is a school-based avenue for raising concerns regarding specific student needs and initiating tiered interventions. Teachers also felt they should be most involved in making referrals to and meeting with the school counselor and making referrals to the school nurse. When analyzing teacher responses, teachers note that they should be least involved with referring students for mental health services outside of the school setting. These services include referring for crisis evaluations, psychological evaluations, and external mental health services.

An additional quantifiable component of teacher's perceived involvement in the mental health referral process is the number of students that teachers report referring for school-based mental health services in the past year. On average, teachers reported referring four students for school-based mental health services (SD 1.9, range 1–7). While this number does not directly determine teacher competence with identifying mental health needs among students in general, it is important to consider the experience teachers have with referring students for school-based mental health services when analyzing the relationship between likelihood of referral, student race, teacher demographics and mental health literacy.

Lastly, given that mental health literacy is related to the amount and quality of professional development an individual has participated in, I surveyed teachers on the

amount of professional development they had received, and the content of the professional development itself. The range of reported hours in professional development was from 0–200 with most respondents spending five hours in professional development focused on mental health during the school year (9.8%, n=10). The average number of hours spent engaging in professional development related to mental health was 14.9 with a standard deviation of 30.9 (n=50). In terms of the content of the professional development, respondents shared topics that included signs of suicide and suicide prevention, social emotional learning, Youth Mental Health First Aid, Zones of Regulation, mandated reporting, crisis, or de-escalation training, and working with students with trauma.

Results of models one and two in the stepwise regression

Next, to address my primary research question and determine the likelihood that a teacher would refer a student displaying symptoms of depression in school, respondents were asked to read two vignettes, and via a survey, were asked to rate their likelihood of referral given a 6-point Likert scale with ratings from extremely likely to extremely unlikely. The first vignette represented the neutral condition where the student described did not display symptoms of depression. The second vignette represented the experimental condition where the student described displayed symptoms of moderate depression. To account for social desirability, which, as described previously, is a limitation of the use of vignette-based research designs, respondents were asked to rate both their own likelihood of referral and then rate the likelihood that a colleague would refer the same student for mental health services. This second rating accounts for social

desirability bias because it lessens the risk that teachers will inaccurately report the likelihood of referral because they are reporting what they would assume a colleague would do, rather than what they themselves would do after reading the vignette.

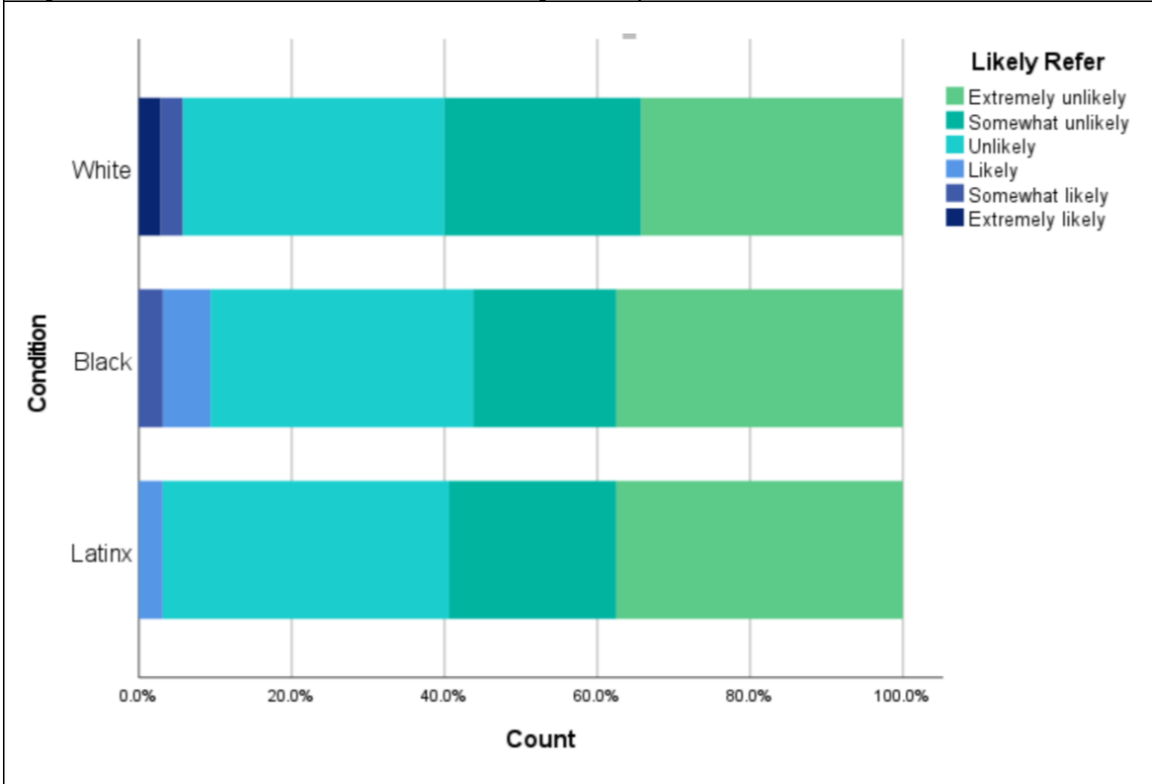
To analyze the relationship between likelihood of referral and student race, I created a continuous variable representing the quantified Likert scale responses showing likelihood of referral as reported by the teacher. I then analyzed the relationship between variables using a stepwise regression model entering first the student variables, followed by teacher variables and finally the variables representing mental health literacy as described in Chapter 3. I repeated the process for both the neutral vignette describing a student who does not display symptoms of depression, and the experimental vignette that descried a student that was presenting with symptoms of depression (see Table 9 for the results of the stepwise regression model, and Table 10 for the results with mean and standard deviation).

Neutral Vignette

For the neutral vignette, describing a student who does not demonstrate symptoms of depression, there is no significant relationship between likelihood of referral and student race as Black or Hispanic/Latinx as compared to White. This means that teachers report being no more or less likely to refer a student who is not displaying symptoms of depression for school-based mental health services when considering student race (see Figure 3). When adding in the additional variables of teacher race, gender, number of years teaching, and grade level, there is no significant relationship between likelihood of referral when controlling for student and teacher demographic variables (see Table 9).

Figure 3:

Reported likelihood that a teacher would refer a student not displaying symptoms of depression as described in the neutral vignette by race.



Teacher ethnicity was excluded as a variable from the stepwise regression because it was highly associated with teacher race. Specifically, teachers that reported their race as White were most often also reporting their ethnicity as non-Hispanic. Therefore, the variable was excluded. As described in Chapter 3, the number of students taught was also excluded because it was highly correlated with grade span taught being middle (5th–8th) or high school (9th–12th), meaning that teachers reporting larger class sizes were more frequently teaching in high schools. The r-square values for model one and two of the neutral vignette both reflect low effect sizes meaning that the model

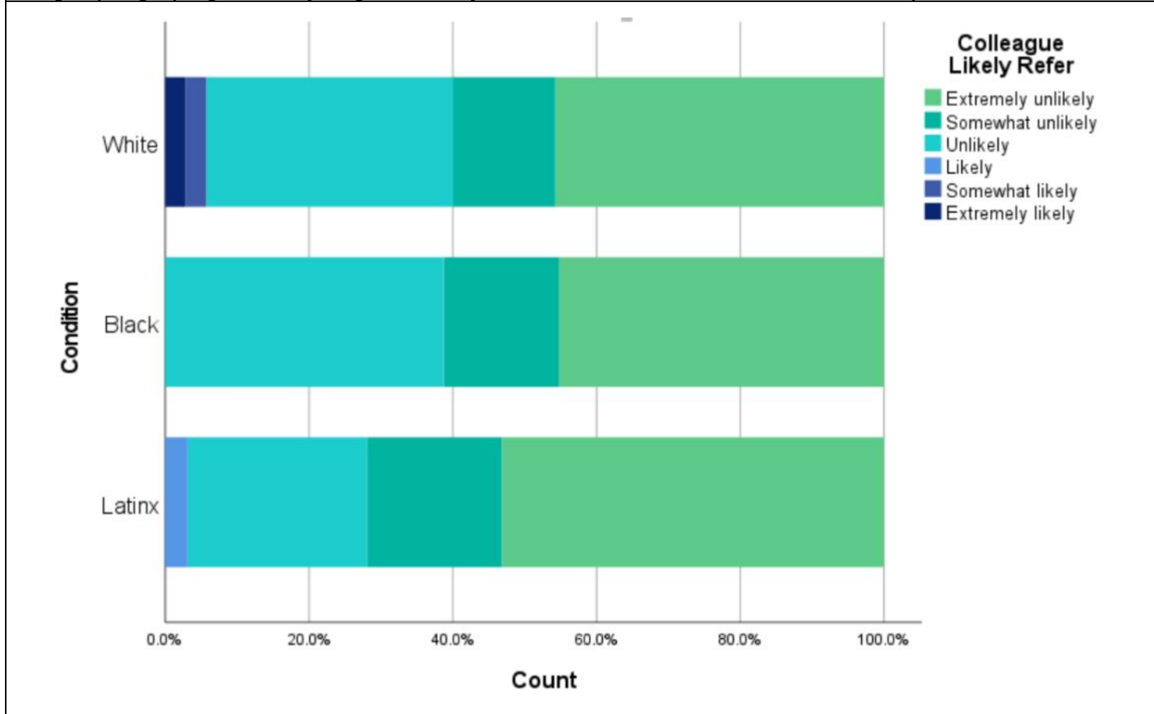
accounts for only a small percent of variance in dependent variables (model one r-square 0.001, model two r-square 0.205).

I then repeated the stepwise regression to determine the likelihood that a teacher reports their colleague would refer the student in the vignette for school-based mental health services. Like the previous regression, there is no significant relationship between various teacher and student demographics, and the likelihood a colleague would refer a student for school-based mental health services when they are not displaying symptoms of depression. The r-square values for model one and two of the neutral vignette both reflect a small percent of variance in dependent variables (model one r-square 0.003, model two r-square 0.128, see Figure 4).

When considering additional teacher demographic data, there was a significant relationship between teacher role as general educator or non-general educator (related service provider or special educator) and likelihood of referral. Specifically, teachers who self-identified their role as general educator were significantly less likely to refer students for school-based mental health services when the student was not demonstrating symptoms of depression ($\beta = -0.342$, SD 0.315) as compared to teachers who did not identify their role as general education teacher (special education teacher or related services provider). See Table 9 for complete regression results.

Figure 4

Teacher reported likelihood that their colleague would refer a student for not displaying symptoms of depression for school-based health services by race.

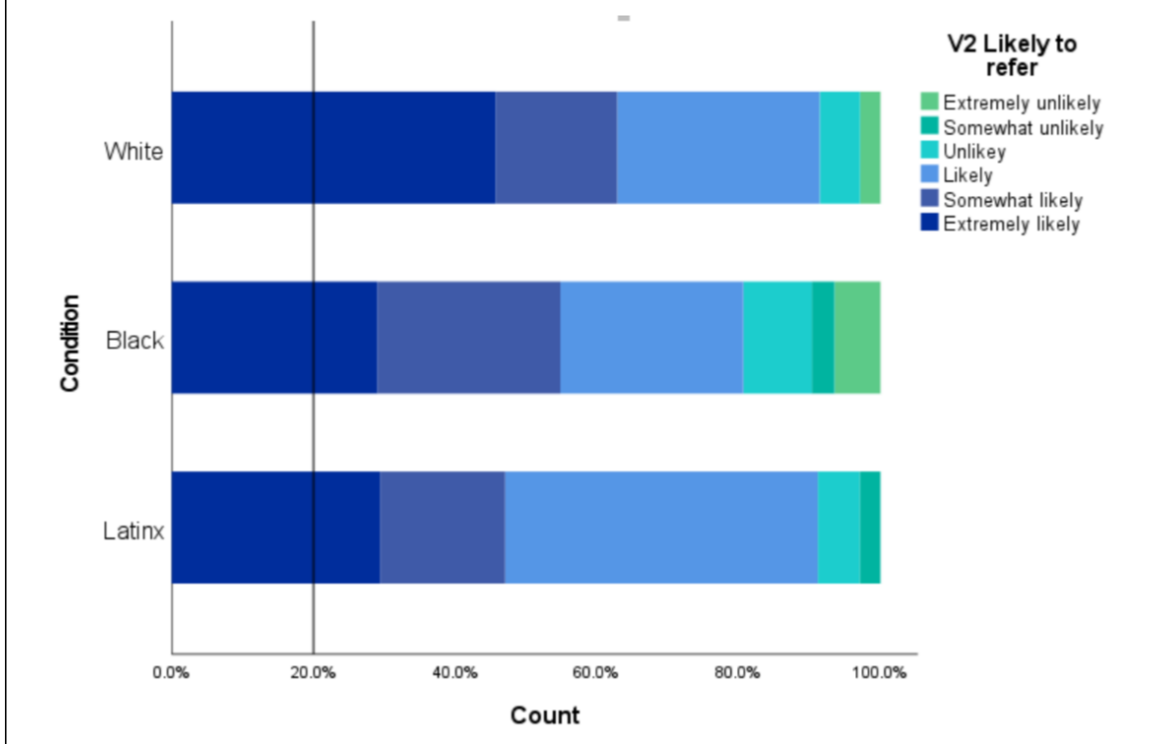


Experimental Vignette

The second series of regressions I ran were to determine the relationship between student and teacher demographics, and the likelihood that a teacher would refer a student for school-based mental health services after reading the experimental vignette where the student was demonstrating symptoms of depression. Results of the stepwise regression showed that there was no significant relationship between the likelihood of referral for students with or without depression when considering student race as Black or Hispanic/Latinx, as compared to students that were White. There was also no significant relationship between the likelihood that a colleague would refer a student for school-based mental health services and student race (see Figure 5).

Figure 5

Teacher reported likelihood of referral for school-based mental health services by student race when the student is displaying symptoms of depression in school.



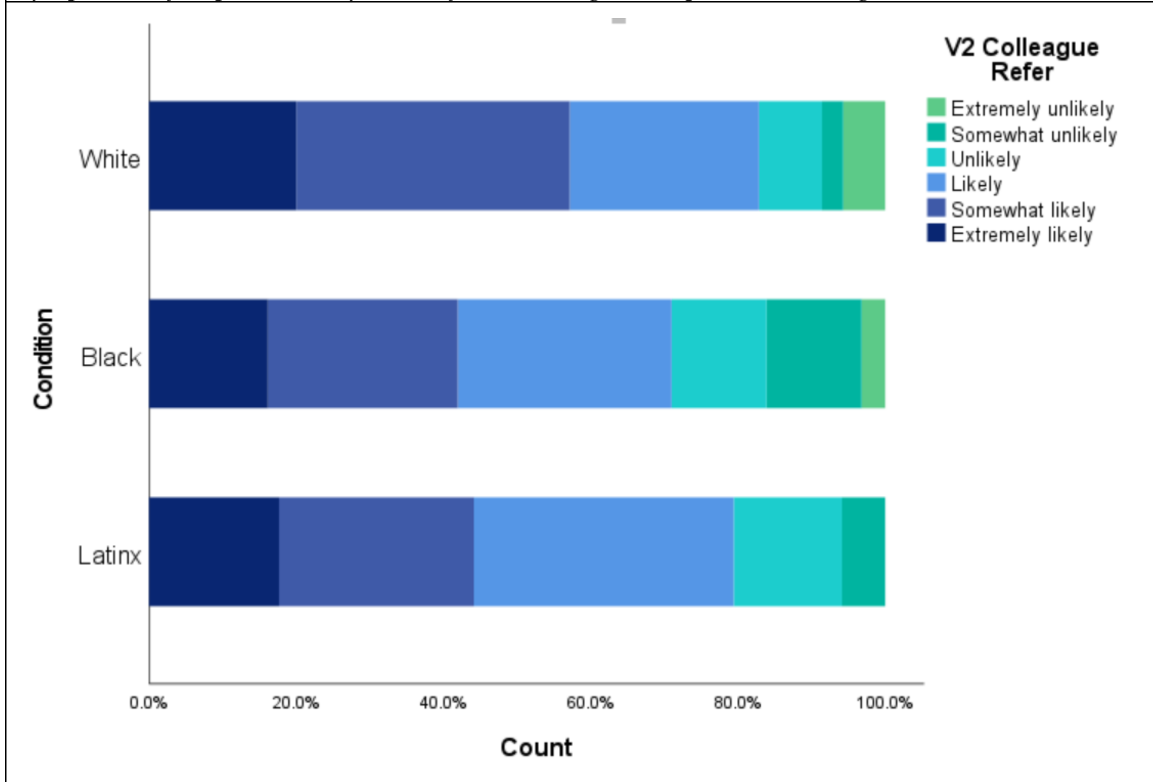
In model two, I again added in the teacher demographic variables. The results of the regression showed that there is no significant relationship between student race, teacher race, teacher gender, grade taught, or number of years teaching and likelihood of referral. The r-square values for model one and two of the stepwise regression for the experimental vignette reflected a small percent of variance in dependent variables accounted for within the model (model one r-square 0.001, model two r-square 0.162).

When considering the relationship between the likelihood a colleague would refer a student for school based mental health services, there was no significant relationship between student race and likelihood of referral in model one (see Figure 6). In model

two, there was a significant relationship between likelihood of referral and teacher race. Specifically, if the respondent self-identified their race as White, they reported that their colleague was significantly less likely to refer the student described in the experimental vignette for school-based mental health services, as compared to responses from teachers who reported their race as non-White. The r-square value for model one of the experimental vignettes reports a low effect size meaning that there is variability not accounted for within the data (model one r-square 0.038). Whereas the r-square value for model two reports an r-square 0.528, meaning that 52.8% of the variance is accounted for within the regression model.

Figure 6

Teacher reported likelihood that a colleague would refer the student displaying symptoms of depression by race after reading the experimental vignette.



Results of model three in the stepwise regression

Teacher reported likelihood of referral

The third model in the stepwise regression analysis depicted teacher responses to survey questions related to mental health literacy (see Chapter 3). To run this final regression model, I added in the variables representing teacher mental health literacy to the stepwise regression for both the experimental (depression) and neutral (non-depression) vignettes. The mental health literacy variables included questions about satisfaction with social/emotional supports, perception of ability to meet the social/emotional needs of students, level of comfort with identifying the symptoms of depression and estimated number of hours spent in professional development. After reading the experimental vignette there is no significant relationship between likelihood to refer and satisfaction with social/emotional support in school, or perception that the teacher possesses the skills to meet the social/emotional needs of their students. There is also no significant relationship between likelihood to refer the student in the vignette for school-based mental health services and the number of hours that a teacher has spent in professional development.

There is a significant relationship between a teacher's reported comfort in identifying the symptoms of depression and the likelihood of referral for students displaying symptoms of depression in schools. Specifically, teachers who noted that they were more comfortable with identifying symptoms of depression, were significantly more likely to refer students for mental health services, as compared to teachers who self-reported lower levels of comfort with identifying symptoms of depression (see Tables 9

and 10). The r-square values for model three of the experimental vignette show an r-square 0.616, meaning that 61% of variance within the data set was accounted for within the regression model.

Teacher reported likelihood of colleague referral

When considering the likelihood that a teacher reported their colleague would refer a student displaying symptoms of depression for school-based mental health services, as before, there is a significant relationship between teacher race and likelihood they would report a colleague refers a student with depression. Specifically, teachers who self-report their race as White are significantly less likely to state their colleagues would refer a student for school-based mental health services, as compared to teachers who self-report their race as non-White. The r-square value for this model is 0.704, meaning that 70% of the variance is accounted for within the regression model.

There is no significant relationship between the aforementioned variables and likelihood of referral after reading the neutral (non-depression) vignette. When considering the likelihood that a teacher notes their colleague would refer the student described in the vignette for school-based mental health services, there is also no significant relationship between the mental health literacy variables and likelihood of referral for both the neutral and experimental vignettes.

Table 9

Stepwise regression model showing teacher reported likelihood of referral and likelihood a colleague would refer the student described in the vignette for school-based mental health services given a description of a student with depression and a student without depression.

Likelihood of referral	Student without Depression (neutral)			Student with Depression (experimental)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Student Demographics	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Student race (Black 0=no, 1=yes)	0.037 (0.359)	0.052 (0.360)	0.082 (0.404)	-0.274 (0.746)	-0.095 (0.707)	-0.173 (0.762)
(Hispanic/Latinx 0=no, 1=yes)	0.006 (0.359)	0.052 (0.385)	0.061 (0.416)	-0.260 (0.722)	-0.225 (0.666)	-0.289 (0.686)
Teacher Demographics						
Race (White=1, Non-White=0)		-0.227 (0.454)	-0.237 (0.521)		-0.265 (0.715)	-0.354 (0.724)
Gender (Female=1, Non-Female=0)		0.055 (0.569)	0.003 (0.639)		0.421 (1.361)	0.370 (1.490)
Grade (Middle School=1, High School=0)		-0.044 (0.340)	-0.041 (0.355)		-0.357 (0.577)	-0.170 (0.639)
Years in teaching (6 years or more=0, 5 years or less=1)		-0.095 (0.458)	0.040 (0.499)		-0.075 (0.630)	-0.077 (0.710)
Role (General Educator= 1, Non-General Educator=0)		-0.342* (0.315)	-0.359* (0.338)		-0.253 (0.554)	-0.090 (0.573)
Mental Health						
Satisfaction with Social/emotional support			0.044 (0.103)			-0.134 (0.206)

Possess the skills to meet social/emotional needs			-0.058 (0.125)			-0.184 (0.204)
Comfort with identifying symptoms of depression			0.068 (0.173)			0.483* (0.234)
Hours of professional development			-0.162 (0.005)			0.080 (0.041)
R Square value	0.001	0.162	0.188	0.048	0.411	0.585

Colleague Likelihood of referral	Student without Depression			Student with Depression		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Student Demographics	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Student race (Black 0=no, 1=yes)	0.026 (0.333)	0.058 (0.341)	0.072 (0.384)	-0.040 (0.785)	0.152 (0.663)	0.155 (0.751)
(Hispanic/Latinx 0=no, 1=yes)	-0.040 (0.333)	0.076 (0.365)	0.095 (0.395)	0.168 (0.759)	0.193 (0.625)	0.099 (0.677)
Teacher Demographics						
Race (White=1, Non-White=0)		-0.112 (0.430)	-0.062 (0.496)		-0.399* (0.671)	-0.446* (0.714)
Gender (Female=1, Non-female=0)		-0.054 (0.540)	-0.049 (0.608)		0.324 (1.277)	0.195 (1.469)
Grade (Middle School=1, High School=0)		0.044 (0.323)	0.037 (0.338)		-0.293 (0.541)	-0.319 (0.630)
Years in teaching (6 years or more=0, 5 years or less=1)		-0.237 (0.434)	0.207 (0.475)		0.236 (0.591)	0.146 (0.700)
Role (General Educator= 1, Non-General Educator=0)		-0.290 (0.298)	-0.319 (0.322)		-0.401 (0.520)	-0.295 (0.565)

Mental Health						
Satisfaction with Social/emotional support			-0.014 (0.098)			0.287 (0.204)
Possess the skills to meet social/emotional needs			-0.108 (0.119)			-0.112 (0.201)
Comfort with identifying symptoms of depression			-0.070 (0.165)			0.108 (0.230)
Hours in professional development			-0.052 (0.005)			0.251 (0.040)
R Square value	0.003	0.126	0.148	0.038	0.528	0.632

Note: *p<0.05, **p<0.01

Chapter 5: Discussion

The primary aim of this study was to explore how teachers make decisions to refer students displaying symptoms of depression for school-based mental health services. As noted in previous literature, studies show an increasing prevalence of mental health disorders among school-aged populations. For depression specifically, studies note that 1 in 5 youth will have experienced at least one depressive episode by the conclusion of adolescence (Brent and Maalouf, 2009; Merrell, 2013). Furthermore, according to data collected by the National Institute for Mental Health (NIMH), 13.3% of youth, approximately 3.2 million individuals aged 12–17 have diagnoses of depression (NIMH, 2019). Studies show that longitudinally, students with depression are at greater risk for suicide, substance use and abuse, poor physical health (Gilman and Huebner, 2006; Patel et al., 2007) and poor educational attainment (Needham, 2008; Humensky, 2010; Breslau et al., 2008). Further, delay in treatment for students with mental health disorders leads to poorer outcomes overall (Jorm, 2012). The high numbers of youth diagnosed with depression and the resultant risk factors over time, highlights the need for training and support for school professionals in understanding, recognizing, and supporting youth with depression in schools.

A secondary aim of the current study is understanding the role that student demographics may play in referrals for school-based mental health services. Studies show that high rates of youth of color self-report symptoms of depression, suicidal ideation, or suicide attempts (YRBS 2019, 2021), however, research also notes an underutilization of mental health services among this same population, specifically Black and Hispanic

youth (Lindsay et al., 2013, Stafford and Draucker, 2022). Therefore, despite self-reported high mental health needs, youth of color are reportedly not utilizing mental health services at the same rate as their White peers.

Specifically with regards to students exhibiting symptoms of depression, Thomas et al. (2011) found that students who identify as White were more likely than their peers of color to have received a diagnosis of depression or been treated for symptoms of depression. This finding was true even among adolescents of color that scored in the moderate or high range on a depression screener. Thus, endorsing the statement that although there is no disparity in the need for mental health services among youth of color and their White peers, there is a disparity in the delivery of mental health services for students of color (Garland et al., 2005).

Additionally, research shows that there is a disproportionality in experiences with depression among female and male adolescents. Specifically, females self-report higher rates of feelings of sadness and hopelessness, planning to and attempting suicide, and injuries resulting from suicide (CDC, 2021). Furthermore, according to prior research, female adolescents are more likely to be diagnosed with depression (57.5%) as compared to male adolescents (31.3%; Mojtabai and Olfson, 2020) and an increasing prevalence from 2009–2019 (Daly, 2020).

Even given the wide recognition of depression as a mental health disorder (Merrell, 2013), little research exists on exploring how educational professionals refer students for school-based mental health services, and further, how teacher referrals for school-based mental health services differ for students of color as compared to their

White peers. Thus, the current study sought to fill this gap in the research base by specifically exploring how teachers make decisions to refer students for school-based mental health services when given a vignette depicting a fictional student showing signs of depression. Further, this study sought to determine if the likelihood of referral differs given student or teacher demographic variables, especially student race.

Educators often face many variables when determining how to respond if a student is suspected of having a diagnosis of depression. Among these variables are school demographics, available school supports, and understanding of cultural norms (Stiffman, Pescosolido and Cabassa, 2004). For this study, I analyzed data through the lens of the gateway provider model paying particular attention to the relationship between likelihood of referral for school-based mental health services and student and teacher demographics.

Given that school staff play important roles as gateway providers in the identification of, and service delivery for, students in need of school-based mental health supports, it is concerning that educators often report challenges in identifying internalizing mental health disorders (Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007, Splett et al., 2019, Reinke et al., 2011) such as depression. Even more challenging, teachers may possess different behavioral expectations for students of color, which could lead to overlooking symptoms of internalizing disorders in this population of students (Alegría et al., 2012, Stiffman, Pescosolido and Cabassa, 2004).

This study sought to answer one primary research question as well as two research sub-questions, reprinted below:

Research question: What, if any, relationship exists between likelihood of mental health referral and student or teacher demographics?

Sub-question One: Does the likelihood of referral for mental health services differ given teacher perceptions of student race?

Sub-question Two: How does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?

In the following sections, results will be explained and connected to the larger scope of the current research base.

Sub-Question One: Does the likelihood of referral for mental health services differ given teacher perceptions of student race?

Results from the current study show that there is no significant relationship in likelihood of referral given student race. This means that considering the likelihood of referral, students identifying as Black or Hispanic/Latinx are no more or less likely to be referred for school-based mental health services as compared to students who are White for students in both the neutral and depression conditions. This result supports the earlier findings of Garland et al. (2015) that determined there is no disparity between students of color and their White peers, with regards to the need for mental health services. Additionally, results from the current study show that teachers are more likely to refer the student in the experimental vignette displaying symptoms of depression, over the student in the neutral vignette who is not displaying symptoms of depression.

It is possible that no relationship between student race and likelihood of referral

was identified due to a variety of different factors, which are explained in the limitations section (see Chapter 5). Specifically, lack of significant relationship between likelihood of referral and student race in model one and two could be due to the size of the sample (n=100), the homogeneity of the sample (majority White, Non-Hispanic, Female teachers), the high number of special education teachers in relation to general education teachers, or additional unknown confounding variables. Regardless, the lack of significant relationship between student race and teacher likelihood of referral is important when considering the relationship between mental health access, service use and treatment. Specifically, that while need is not always disproportionate (Garland et al., 2015), access and utilization of mental health services often is disproportionate due to a variety of external factors (see Chapter 2, Lindsay et al., 2013; Stafford and Draucker, 2020).

As noted in Chapter 4, when examining for teacher demographics, results of the current study show that teachers who self-identify as White are significantly less likely to state their colleagues would refer the student in the experimental vignette for school-based mental health services. Although this result is significant, it is important to note that 86.4% of the current study sample identified as White. Future research with a more diverse sample population would be beneficial to determine if this continues to be true when White respondents are not overly represented within the study sample.

When considering research showing the importance of racially matched teachers and students, and referral rates for students displaying symptoms of externalizing or internalizing mental health disorders, the above finding becomes especially noteworthy.

Specifically, prior research shows that there may be a relationship between teacher and student shared identity markers and recognition of internalizing or externalizing mental health needs (such as Weathers, 2023; Downey and Pribesh, 2004; Redding, 2019) which, through the lens of the current study, could impact likelihood of referral for school-based mental health services. Additionally, with regards to teacher race, prior research has found that teachers are more likely to make referrals for school-based mental health services when they are familiar with and have a pre-existing relationship with the student (Auger, 2004). Specifically, in their research on teacher ability to identify symptoms of depression in middle school students, Auger (2004) found that when a teacher spent at least five hours per week with a student, they were significantly more likely to identify symptoms of depression as compared to teachers who spent less than five hours per week with a student.

The value of student and teacher relationships becomes increasingly important when considering the various aspects of an individual's identity that hold social power and intersect to affect ones' experiences within a larger social system (Bauer et al., 2021; Atewologun, 2018; Crenshaw, 1989; Cho, Crenshaw, and McCall, 2013) specifically when considering the history of social capital and oppression for students of color. Given this, it is especially important that teachers seek to build relationships and find commonality with students in their classrooms to increase the likelihood that they will be able to identify symptoms of depression as they arise.

In addition, to explore teacher perception of the relationship between student race and mental health referrals, teachers were asked to report their perception of referral rates

for students of color versus their White peers. Results showed that teachers largely reported they felt students of color were referred at the same rate as their White peers (45.1%, see Table 4). This finding is interesting to note considering previous research which notes that teachers report challenges with identifying the internalizing mental health needs of their students (Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007; Splett et al., 2019). It is possible, that given teachers are not as adept at identifying these needs in their students, that the rates of referral are in fact different, but teachers are not able to recognize the difference or not able to differentiate between youth who require mental health referrals and those who do not.

Lastly, results of the current study show that teachers identifying their role as a general education teacher are significantly less likely to refer students for school-based mental health services after reading the neutral vignette. This finding is in line with Auger (2004) who found that general education teachers were significantly better at detecting symptoms of depression as compared to special education teachers. More specifically, Auger (2004) found that sixth grade teachers were best able to identify symptoms of depression among their students. Given that, as mentioned previously, symptomology of depression most commonly emerges in middle school (Merikangas, 2010), it follows that general education middle school teachers are likely better able to identify symptoms of depression as compared to their colleagues working in high schools.

Sub-question two: How does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?

According to the results of the current study, Teachers who self-reported higher levels of comfort with identifying symptoms of depression are significantly more likely to refer students displaying symptoms of depression for school-based mental health services, as compared to teachers reporting lower levels of comfort with identifying symptoms of depression. These results echo previous findings such as Jorm et al. (2010), who notes that possessing mental health literacy, defined as knowledge and beliefs about mental health that aid in the ability for practitioners to identify the presence of and make determinations to support mental health, can have an impact on gateway providers ability to support students with mental health needs. While the specific significant measure in the current study was comfort with identifying symptoms of depression, teacher comfort level is an important measure of mental health literacy in that it describes a teacher's self-reported ability to identify mental health needs in their classroom. Further, as reported by Jung, Lee and Kim (2020), teacher confidence relates to ability to support mental health needs in general, thus increasing confidence is likely to increase teacher comfort with identifying symptoms of depression, therefore supporting the ability of gateway providers to support students with mental health needs in schools.

While research such as Jorm et al. (2010) discusses the importance of a gateway provider's ability to identify and respond to mental health needs, there is an additional body of research that points to teachers self-reporting limited knowledge of the

internalizing and externalizing symptoms of depression students may exhibit in schools (Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007; Splett et al., 2019). Given this, and the findings of the current study that show a significant relationship between teacher self-reported comfort level with identifying symptoms of depression and likelihood of referral for school-based mental health services, it is important that educators receive professional development targeting mental health literacy. According to prior research, professional development on referral procedures and evidence-based practices for students with mental health needs is frequently lacking or absent in schools (Jung, Lee and Kim, 2020; Jorm, 2012; Jorm et al, 2010; Moor et al., 2007). In fact, results from the present study show a wide range of experiences with school-based mental health professional developments. According to teacher self-report, the average number of hours spent in professional development is 14.9 (range 0–200, SD 30.91) on topics such as suicide prevention, signs of suicide, social/emotional learning, youth mental health first aid, zones of regulation, de-escalation training and teaching students with trauma, among others.

An additional layer of mental health literacy is a teacher's perception that they have the skills necessary to meet the social emotional needs of the students with whom they worked, many teachers reported that they agreed or somewhat agreed with this statement, noting that they felt they possessed the necessary skills. Responses from teachers in the current study echo those of Reinke et al., (2011) who found that 30% of teachers reported agreeing and 32% disagreeing with the statement that they felt they had the skills required to meet the mental health needs of students in their classes. Although

the relationship between a teacher's reported likelihood of referring a student with mental health needs for school-based services, and their report of feeling that they have the skills to meet mental health needs is not significant according to the findings of the current study, it is important to note that research shows, when coupled with strong support systems in schools, teachers report feeling more equip to manage the mental health needs of students in their classrooms (Mazzer and Rickwood, 2015).

An additional key piece in mental health literacy is the degree to which teachers feel they should be involved in various aspects of the mental health referral process. Given that several studies note teachers self-report challenges in identifying internalizing mental health disorders (such as Rhode et al., 2013; Chang and Sue, 2003; Williams et al., 2007; Splett et al., 2019), it could prove beneficial for teachers to have increased involvement in all aspects of the mental health referral process to gain more knowledge about how to support students with mental health needs in their classrooms. Results of the current study show that teachers feel they should be most frequently involved with internal school structures for mental health such as involvement on child study or student support teams, making referrals to the school counselor and school nurse, and meeting with the school counselor after a referral is made. Increasing teacher involvement in the referral process could address some concerns raised by Jung, Lee and Kim (2020) which note that teachers and other gateway providers may lack the confidence necessary to help individuals with mental health needs. Thus, it is clear that mental health literacy is related to a teacher's ability to serve students with mental health needs well. Further, to support students in their classroom demonstrating symptoms of depression, teachers need an

adequate knowledge of both internalizing and externalizing mental health disorders and their symptoms, as well as methods for managing student mental health needs in school settings.

A final factor related to a teacher's role as a gateway provider is their ability to identify and access supports for students with mental health needs. Results from the current study show that when provided options, there is not one single action most teachers would take when a student in their classroom is displaying symptoms of depression. Rather, teachers report that they would take a variety of steps such as consulting with a school counselor, referring to the student support or child study team, or referring the student to the school counselor, social worker, or psychologist. While these reported next steps are appropriate, the lack of a clear majority highlights the need for a transparent and structured mental health support system within the school setting. In cases where staffing these positions is challenging due to budget or shortages of trained personnel, research shows that teachers, at times, may take on the added role of providing mental health services to students (Franklin et al., 2012), despite lacking the knowledge of mental health symptomology and interventions to do this well. Current research on the availability of service providers or budget to support mental health practitioners in the school setting (such as Kutash, Duchonowsky and Lynn, 2006 and National Center for Education Statistics, 2020) further supports the importance of training in mental health literacy for teachers and other educational professionals.

Recommendations for practice

While analyzing the survey results, multiple areas of need for supporting teachers

arose. Specifically, the need for additional professional development on a variety of topics related to student mental health. This aligns with previous research which shows that teachers frequently report lacking the knowledge and skills to support students with mental health needs and, that they both require and desire ongoing support and professional development to serve this population of students effectively (Pas, Bradshaw and Cash, 2014; Reinke et al, 2011; Williams et al., 2007; Rhode et al., 2013; Chang and Sue, 2003; Splett et al., 2019). One vector by which to improve teacher knowledge and skills is targeted development in mental health literacy, specifically recognition of symptoms of internalizing and externalizing mental health disorders (Jung, Lee and Kim, 2020; Jorm, 2012), and how these symptoms manifest in ethnically diverse students.

Limitations

There are several potential limitations to the current study. With regards to the creation of the vignettes, it was not possible to identify the impact that gender had in teacher responses given that only female gendered students were depicted in the vignettes. As mentioned previously, replications of the study could vary vignettes by both race and gender to determine if there is an intersectional relationship between demographic variables and likelihood of referral.

During the analysis of data, I did not use a pre-established mental health literacy variable when analyzing the relationship between mental health literacy and likelihood of referral. Given that there was a lack of an established and previously validated variable related to mental health explored in this study, it is possible that the specific survey

questions that I chose to associate with mental health literacy may not be solely related to a mental health literacy variable.

Similarly, a limitation exists in the homogeneity of the respondent sample. 87.4% of respondents self-identified as female, and 86.4% self-identified as White. While these demographic descriptors mirror a nationally representative sample of teachers, it does not allow for conclusions to be drawn between access to mental health support for students if their teachers were more diverse in terms of race or gender, or if a racial match exists between students and teachers. A replication of the current study should use methods to recruit a more racially/ethnically diverse sample as well as a sample with a more equivalent amount of male and female identified teachers.

Additionally, since I examined data from hypothetical scenarios and not actual data collected during the school year, it is possible that teacher reports are not aligned with the reality of mental health referrals in school settings. To address this, future studies could couple teacher responses with data collected on mental health referrals in the school setting.

A further limitation of this study is that the study is cross-sectional which means that it collected data from one specific moment in time. Thus, I am not able to determine causality between teacher and student characteristics and reported referral for school-based mental health services over time, such as if the referrals teachers make are legitimate or if the students referred receive services.

With regards to participants, I did not collect geographic data, therefore, and additional limitation in the study is that it is not possible to draw conclusions based on

teacher location such as if mental health literacy varies by region or state. This could be further explored using comparative analyses where geographic data is collected and analyzed and school structural and economic differences by region considered.

A further limitation of the study is that I recruited participants using convenience sampling, meaning participants came from my own personal social circles and networks, as well as social media groups I was a part of myself. As a result of this, the sample responding to the study shared many of the same characteristics that I did, leading to an overrepresentation of special education teachers in the study sample. Given this overrepresentation of special education teachers, while the sample is nationally representative in terms of race and gender, it is not representative in terms of the ratio of general education to special education teachers in the United States. Further, given the use of convenience sampling, it was not possible to generalize the results of this study to the larger population of educators. Future replications of the study could seek to address this by recruiting a sample with a more representative division of general education and special education teachers.

Directions for future research

In addition to suggestions noted previously, future research could explore how teachers make referrals for mental health supports for students exhibiting symptoms of depression in elementary student populations. Although research shows that the onset of depression symptomology is most common between the ages of 11 and 14 (Merikangas, 2010), there are reports of youth as young as three years old displaying symptoms of depression in schools (CDC, 2020). Thus, future research could explore elementary

teacher perceptions of mental health and its impact on referrals for students demonstrating symptoms of depression in elementary school settings.

Additionally, research could explore the relationship between race and gender when making referrals for mental health services in schools. The current study created only vignettes that depicted female students — this meant that it was not possible to determine if there is a difference in likelihood of referral if the student was not female. Future research could replicate the study with vignettes that describe both male and female students.

Taking an intersectional lens to analyzing mental health service referrals would allow researchers to determine what, if any, impact the perceived race and gender of a student has on the likelihood a teacher would refer the student for school-based mental health services. Prior research has shown that the intersection between race and gender specifically, has important policy implications in health care settings (Sen et al., 2009). Further, Villatoro et al. (2018) found that given the interaction of race and ethnicity with socioeconomic status or gender, non-Latino and Black men are less likely to perceive a need for mental health care than non-Latino and Black women. Future research could examine this relationship and extend its applicability to educational settings as well.

Finally, future research could repeat the study protocols with a larger sample size. Given that the current study was a sample size of 100 participants total, although patterns were identified in referral rates, it was not possible to clearly determine if significant relationships existed between the likelihood of referral for school-based mental health services and some variables in the data set. A replication of the study could further

explore the relationships identified in this study as well as use sampling strategies to permit generalization inferences.

Chapter 6: Social Justice Action Plan

One significant outcome of this research is a plan to promote social justice within school-settings with regards to student mental health. Although not a documented aspect of quantitative studies, the use of a social justice lens to data analysis operates with the intent of transforming and improving society for marginalized classes (Creswell and Guetterman (2019). Operating from my current positionality as an educator working with diverse student populations, and my experience working with teachers and educators to support students with mental health needs in middle and high school settings, I felt an important outcome of this study was the creation of a call to action in the form of a professional development plan for educators and school professionals working with students with mental health needs. The goal of this professional development is to increase mental health literacy, specifically an ability to recognize the symptoms of depression that would lead to a mental health referral and understand how racial and ethnic identity impacts rates of referral for students who identify as Black or Hispanic/Latinx.

Considering the results of this study, the professional development plan will specifically target the challenges identified by teachers in recognizing internalizing and externalizing mental health needs and building the capacity of teachers to support those student needs. Further, given that the goal of this study is to look specifically at how teachers make decisions to refer students for school-based mental health services given student race, the professional development plan will also discuss teacher perceptions of race and its impact on mental health help-seeking behaviors.

The intended audience of this professional development are teachers working in middle and high school settings. Unlike the current study, participation in the professional development is open to all school staff. Ideally the professional development will be delivered to staff during a mandatory professional development session delivered in person.

The following sections will outline a professional development plan including aims, readings, practice, implementation, output and evaluation of effectiveness.

Professional Development Plan

Aims

1. Educators will review symptoms of depression and determine if a student requires a referral for school-based mental health services.
2. Educators will identify symptoms of mental health as internalizing or externalizing.
3. Educators will interrogate racial and ethnic biases and apply these biases to case studies of students with depression identifying as Black or Hispanic/Latinx.

Readings

The following readings are recommended to be completed either prior to the professional development as pre-work or during the professional development using jigsaw methods.

Recommended readings:

Alegría, M., Lin, J. Y., Green, J. G., Sampson, N. A., Gruber, M. J., and Kessler, R. C. (2012). Role of referrals in mental health service disparities for racial and ethnic minority youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *51*(7), 703–711.

Summary: This study used data from a national sample of adolescents aged 13–17 and their caregivers. The goal of the study was to investigate racial/ethnic differences

related to teacher and parent identification of and encouragement to seek treatment for internalizing or externalizing mental health disorders recognized in their children/students. Results showed that there were no racial/ethnic differences in the proportion of parents reporting encouragement to or seeking treatment for youth with externalizing disorders. There was a marginally significant result showing that non-Latino black youth with low severity internalizing disorders were found to be less likely to be identified as in need of or encouraged to seek/receive services than their non-Latino White peers.

Chavez, L. M., Shrout, P. E., Alegría, M., Lapatin, S., and Canino, G. (2010). Ethnic differences in perceived impairment and need for care. *Journal of Abnormal Child Psychology*, *38*(8), 1165–1177. doi:10.1007/s10802-010-9428-8

Summary: This study used an experimental vignette design to understand why Latino youth have higher rates of unmet needs for mental health services and if this unmet need was related to biases among providers and caregivers. The results of this study found that parents and providers rated vignettes describing Latino youth with mental health needs as more in need of service than vignettes depicting White youth if the youth displayed symptoms of mild depression.

Pottiger, M. (2022). Schools and Black Students' Mental Health: The Kids Aren't Alright. *Word in Black*. https://wordinblack.com/2022/05/schools-black-students-mental-health/

Summary: This article presents the current challenge of access to school-based resources, specifically mental health related resources for Black students. Citing previous surveys, Pottinger explains that Black and Latinx students were less likely than their peers to report that their schools offered services targeting mental health. Mental health services for Black students must be approached differently than services delivered to their White peers due to the lived experiences of Black students, specifically experiences with microaggressions, generational trauma and mental health stigmas.

Practice and implementation

1. Leader breaks participants into six small groups by grade level teaching teams.
2. Leader says, "today we will work together to learn about the symptoms of depression, categorize them as internalizing or externalizing and apply the symptomology to our decision making when referring students for mental health services."

a. Circulate vignettes describing students with depression and the DSM-V description of depression.

b. "In your small groups, review the DSM-V description of depression and apply the symptomology to the vignette. Make a list of the symptoms you observe."

i. Total time: 15 minutes

3. Bring groups back together. Leader says: "We will now make a combined list of the symptoms of depression that were present in the vignettes."

a. Create list on board or google slide.

4. "Looking at this list and considering the vignette and the symptomology present in the DSM-V, what other symptoms of depression have you seen in your classroom?"

a. Make a list while participants are speaking.

5. These symptoms of depression are what we consider internalizing. Internalizing means symptoms that occur within the person and may be hard to see such as suicidal ideation. They can be viewed as distress turned inwards.

6. Now that we have this list of the symptoms of depression we read in the vignette or that we might observe in our classrooms, we will discuss what symptoms we have experienced in our own classrooms.

a. Direct participants back to their small groups to discuss the list of symptoms and which they have experienced in their classrooms.

7. Upon calling groups back together, Leader: "Now that we have learned about depression and its symptomology, we will apply these symptoms to a series of vignettes to determine if the student would benefit from a referral for school-based mental health services.
    a. Leader circulates a new batch of four vignettes, one each neutral, mild, moderate, and severe.
    b. "In your small groups, read the vignette and determine if you would refer the student for school-based mental health services and why."
        i. 15 minutes
8. Leader: "As we are making decisions to refer students for mental health services in schools, it is also important to interrogate how our own biases with regards to race impact our likelihood of referring a student. To do this, we will review research that discusses racial bias in service delivery use and referral."
    a. Assign each small group one study to review. There are three studies, so two groups will review each study.
9. In small groups answer the following questions:
    a. What was the goal of the study?
    b. What was your main takeaway from the study?
    c. What implications does this study have for your practice?
10. After 20 minutes, bring the groups back together and create three groups, pairing the groups that read the same study.
11. In small groups discuss the following questions:

    a. Share your findings from the study.
    b. What implications does this have for our larger school community?

12. Share out- “to close our session today, we are going to discuss the implications for our larger school community and begin to brainstorm ways that we can address racial bias in referral rates for students with mental health needs.
    a. Have participants share out their takeaways.
    b. Invite participants to share ideas for ways to address racial bias.

Output

Our output/check for understanding today includes a short google quiz as well as the creation of an action plan for your grade level. The action plan should include one specific action you will commit to taking to ensure that, as a team, you are making equitable decisions about referring students for mental health services. This could include adding a section to the grade level team meeting where you check in on student concerns, instituting a short social/emotional learning (SEL) block daily to bring in organic conversations with students, etc. You will submit this action plan and the timeline for implementation as part of your exit ticket. You will not be assessed on the plan, but it will allow the school team to support you with implementation.

Quiz questions:

1. Define internalizing.
2. Define externalizing.
3. Identify the following symptoms as internalizing or externalizing.
4. Read the following vignette, decide if you would refer the student and why.

5. Submit your grade level action plan.

Evaluation of effectiveness

Effectiveness of the professional development will be evaluated in the following ways:

1. The quality of grade level action plans
2. Observations of the initiatives that teams create including feedback to the teams to improve their practice.
3. Analysis of mental health referral data over the school year and a two-year comparison to determine if referral rates increased or decreased school-wide and per subgroup.

Appendices

Appendix A:

Research questions with related hypotheses, proposed sample, independent and dependent variables and proposed analytic method

Research Question	Hypothesis	Sample	Independent Variables and Response Options	Dependent Variables and Response Options	Analytic Method(s)
What, if any, relationship exists between likelihood of mental health referral and student or teacher demographics? *Sub-question 1: does the likelihood of referral for mental health services differ given teacher perceptions of student race?*	Exploratory no hypothesis Sub-question 1: teachers are more likely to refer students of color than students that are White	Teachers in a public school district Vignettes	Student level: race Teacher level: gender, years teaching, grade level taught (middle/high), number of students taught Mental health literacy and mental health involvement variables	Likelihood of referral on a Likert scale 1–6, Unsure omitted	Stepwise regression
Sub-question 2: How does teacher experience and mental health literacy affect the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services?	Sub-question 3: teacher experience and mental health literacy is related to the likelihood that a teacher will refer a student displaying symptoms of depression to school-based mental health services. Specifically, the more reported mental health literacy, the more likely the teacher	Teachers in a public school district Vignettes	Student level: race Teacher level: gender, years teaching, grade level taught (middle/high), number of students taught Mental health literacy and mental health involvement variables	Length of time in teaching Mental health literacy experiences: professional development, previous work setting, personal history (if divulged)	Stepwise regression

	is to refer the student. Likewise-the more experience the teacher has with mental health needs, the more likely the teacher will refer the student for mental health services.				

Appendix B:

Survey administered to study participants with answer choices and question type.		
Question	**Answer Choices**	**Question type**
The following series of questions asks you to share information regarding your demographics and teaching experience.		
1. Which of the following best describes your racial or ethnic identity (Select all that apply)	Black White Asian/Asian American Native American or Pacific Islander American Indian/Alaskan Native Other Prefer not to identify	Select all that apply
2. Are you Hispanic/Latinx?	No Yes	Binary
3. What is your gender	Male Female Non-binary Another gender Prefer not to identify	Multiple Choice
4. What is the number of years you have been teaching?		Open response
5. What grade level(s) do you teach?	5 6 7 8 9 10 11 12 Other	Multiple choice
6. Is your role a	General educator Special educator Administrator Related Service Provider School Counselor Paraprofessional/aide Other	Multiple choice

7. What is the total number of students you work with in one week (approximately)	Less than 20 21–50 51–100 Greater than 100	
The following questions ask you to reflect upon the vignettes provided.		
This first set of questions will follow the neutral vignette.		
8. After reading the first vignette, how likely would you be to refer this student for school-based mental health services?	Extremely Unlikely Somewhat unlikely Unlikely Likely Somewhat likely Extremely Likely	Likert Scale (6 point)
9. After reading the first vignette, how likely do you think **your colleagues** would be to refer this student for mental health support?	Extremely Unlikely Somewhat unlikely Unlikely Likely Somewhat likely Extremely Likely	Likert Scale (6 point)
13. Given the first vignette, which action would you take first?	-Refer the student to the school counselor/social worker/psychologist -Refer the student to the behavior specialist/interventionist -Refer the student for special education services -Provide extra support yourself for the student (such as tutoring, advising, etc.) -Contact the student's parent -Speak to the student -Take no action at this time	Select all that apply
14. Given the first vignette, which action would you take second?	-Refer the student to the school counselor/social worker/psychologist -Refer the student to the behavior specialist/interventionist -Refer the student for special education services -Provide extra support yourself for the student (such as tutoring, advising, etc.) -Contact the student's parent -Speak to the student -Take no action at this time -Other (please explain)	Multiple choice

This second set of questions will follow the experimental vignette.		
15. After reading the second vignette, how likely would you be to refer this student for school-based mental health services?	Extremely Unlikely Somewhat unlikely Unlikely Likely Somewhat likely Extremely Likely	Likert Scale (6 point)
16. After reading the second vignette, how likely do you think your colleagues would be to refer this student for mental health support?	Extremely Unlikely Somewhat unlikely Unlikely Likely Somewhat likely Extremely Likely	Likert Scale (6 point)
17. Given the second vignette, which action would you take first	-Refer the student to the school counselor/social worker/psychologist -Refer the student to the behavior specialist/interventionist -Refer the student for special education services -Provide extra support yourself for the student (such as tutoring, advising, etc.) -Contact the student's parent -Speak to the student -Take no action at this time -Other (please explain)	Multiple choice
18. Given the second vignette, which action would you take second?	-Refer the student to the school counselor/social worker/psychologist -Refer the student to the behavior specialist/interventionist -Refer the student for special education services -Provide extra support yourself for the student (such as tutoring, advising, etc.) -Contact the student's parent -Speak to the student -Take no action at this time -Other (please explain)	Multiple choice
19. Would you be willing to participate in follow-up interview either in-person or on zoom?	Yes No	Binary

The follow series of questions as you to reflect on your experiences with the available social/emotional support for students at your current school.		
20. I am satisfied with the social-emotional supports provided at my school.	Strongly Disagree Somewhat disagree Disagree Agree Somewhat agree Strongly Agree	Likert Scale (6 point)
21. I feel that I have the skills to meet the social-emotional needs of the students with whom I work.	Strongly Disagree Somewhat disagree Disagree Agree Somewhat agree Strongly Agree	Likert Scale (6 point)
22. I am clear on the process for referring students to receive social/emotional supports within my school.	Strongly Disagree Somewhat disagree Disagree Agree Somewhat agree Strongly Agree	Likert Scale (6 point)
23. Have you done any professional development work in the last year related to mental health?	Yes No	Binary
24. SKIP OUT If you answered yes: Please estimate how many hours you spent in professional development work related to mental health.		Open response
25. SKIP OUT Please describe the professional development that you received		Open response
26. How comfortable are you identifying the symptoms of depression if they manifested in a student in your class?	Very uncomfortable Somewhat uncomfortable Uncomfortable Comfortable Somewhat comfortable Very comfortable	Likert Scale (6 point)

27. To what extent should teachers be involved in each of the following:	Referring students to child study or student support teams Referring students to school counselor Referring students to outside services Speaking with students regarding their mental health needs Speaking with parents regarding student mental health needs Referring students for psychological evaluations Referring students for crisis evaluations Referring student to the school nurse Meeting with the school counselor	Rate individually
28. Select all that apply: In the past year, which of the following actions have you taken when you were concerned about a student's mental health:	-Spoken to a school counselor about your concerns -Spoken to the student about your concerns -Spoken to the parent about your concerns -Spoken to a special education teacher about your concerns -Spoken to a general education teacher about your concerns -Spoken to a school nurse about your concerns -Referred the student to a student support team -Other (please explain)	Multiple choice with a fill in
29. How many students have you referred for mental health support in the past year?	0 1 2 3 4 5 More than 5	Multiple choice

When answering the following questions please reflect on how you feel your colleagues would respond. For these set of questions, we define colleagues as someone that you work with in your current role, this could be a co-teacher, administrator or other professional in your current school.		
30. Do you feel that student race or ethnicity impacts your colleagues' decisions to make referrals for mental health services? Please explain	Open response	Short answer
31. How do you feel the referral rates for students of color at your school compares to students who are white?	-Students of color are significantly over-referred -Students of color are somewhat over-referred -Students of color are significantly under-referred -Students of color are somewhat under-referred -Students of color are referred at the same rates as their white peers	Multiple choice
32. After reading the vignette, how do you think your response would change if the student in the vignette was of a different race?	Open response	Short answer

Appendix C: Sample vignettes

Sample vignette 1 (neutral; Lapatin et al, 2012; Chavez et al, 2010):
Kristen/LaToya/Esmeralda is an 11-year-old girl. In the last few months, she has sometimes appeared moody with her parents but is usually respectful and follows rules. She is usually in a good mood around her friends, enjoys their company, and is very interested in her favorite hobbies. She finds it easy to make friends and typically has good energy to engage in all of the activities of daily life, eats well, and sleeps a normal amount for a child her age. Kristen/LaToya/Esmeralda has no trouble concentrating on what she is doing both in school and at home, and recently asked her mother: “I wonder what high school will be like?”

Sample vignette 2 (experimental):
Katelyn/Tanisha/Mariana is a student in your class. She is always kind with other people and follows instructions during class. In the last few months, Katelyn/Tanisha/Mariana has been increasingly moody, and you have noticed that she often puts her head down on her desk. She also seems to have lost interest in many of her friends and classwork, including participating in class activities that she used to enjoy. Everyday Katelyn/Tanisha/Mariana says that she feels very tired, but when you ask, she also says that she is sleeping more than normal at night. In addition, the last few months, Katelyn/Tanisha/Mariana seems to have trouble concentrating in class.

Appendix D: Email and social media solicitation language

Email solicitation:

Dear Educators,

We would like to invite you to participate in a research project seeking to understand how teachers think about behavior in their classrooms. I am writing to invite you to be a part of this research.

Participation includes an online survey which is included here. The online survey will take between 5–10 minutes to complete.

All interviews will be confidential and your administrators or schools will not be provided with any of the information regarding you participation in the study.

If you have questions or concerns please feel free to contact me via email at rmuller@bu.edu. The link to the survey is located here:

<INSERT SURVEY LINK>

Thank you so much,

Becky Muller
Doctoral Candidate
Boston University

Social Media Solicitation:

Are you currently teaching? Then I want to hear from you! I am currently conducting research to understand how teachers think about behavior in their classrooms. Click the link below to complete a survey and share your experience!

<INSERT SURVEY LINK>

References:

Alegría, M., Lin, J. Y., Green, J. G., Sampson, N. A., Gruber, M. J., and Kessler, R. C. (2012). Role of referrals in mental health service disparities for racial and ethnic minority youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *51*(7), 703–711. https://doi.org/10.1016/j.jaac.2012.05.005

Alegria, M., Vallas, M., & Pumariega, A. J. (2010). Racial and ethnic disparities in pediatric mental health. *Child and Adolescent Psychiatric Clinics*, *19*(4), 759-774. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3011932/

Alexander, C. S., and Becker, H. J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly*, *42*(1), 93–104.

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

Atewologun, D. (2018). Intersectionality theory and practice. In *Oxford Research Encyclopedia of Business and Management*.

Atteberry, A., Loeb, S., and Wyckoff, J. (2013). Do First Impressions Matter? Improvement in Early Career Teacher Effectiveness. Working Paper 90. *National Center for Analysis of Longitudinal Data in Education Research (CALDER)*. https://files.eric.ed.gov/fulltext/ED587158.pdf

Auger, R. W. (2004). The accuracy of teacher reports in the identification of middle school students with depressive symptomatology. *Psychology in the Schools*, *41*(3), 379–389.

Baker, J. A., Grant, S., and Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly*, *23*(1), 3.

Bauer, G. R., Churchill, S. M., Mahendran, M., Walwyn, C., Lizotte, D., and Villa-Rueda, A. A. (2021). Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods. *SSM-Population Health*, *14,* 100798. https://doi.org/10.1016/j.ssmph.2021.100798

Bernaras, E., Jaureguizar, J., & Garaigordobil, M. (2019). Child and Adolescent Depression: A Review of Theories, Evaluation Instruments, Prevention Programs, and Treatments. *Frontiers in Psychology*, *10*, 543.

Bertrand, M., and Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, *94*(4), 991–1013.

Bor, W., Dean, A. J., Najman, J., and Hayatbakhsh, R. (2014). Are child and adolescent mental health problems increasing in the 21st century? A systematic review. *Australian and New Zealand Journal of Psychiatry*, *48*(7), 606–616. https://doi.org/10.1177/0004867414533834

Brent, D. A., and Maalouf, F. T. (2009). Pediatric depression: is there evidence to improve evidence-based treatments? *Journal of Child Psychology and Psychiatry*, *50*(1-2), 143–152.

Breslau, J., Lane, M., Sampson, N., and Kessler, R. C. (2008). Mental disorders and subsequent educational attainment in a US national sample. *Journal of Psychiatric Research*, *42*(9), 708–716.

Brown, T. N. (2003). Critical race theory speaks to the sociology of mental health: Mental health problems produced by racial stratification. *Journal of Health and Social Behavior*, 292–301.

Bundy, A. L. (2000). Maximizing Medicaid Funding to Support Health and Mental Health Services for School-Age Children and Youth. Tools for Out-of-School Time and Community School Initiatives. *Strategy Brief,* Volume 1, Number 5. Washington, D.C.: The Finance Project, October 2000. https://archive.org/details/ERIC_ED447924/mode/2up

Centers for Disease Control and Prevention, National Center for Injury Prevention and Control (2020). Data and statistics on children's mental health. Retrieved from https://www.cdc.gov/childrensmentalhealth/data.html#ref

Centers for Disease Control and Prevention (CDC) (2019). Youth risk behavior survey (YRBS).

Centers for Disease Control and Prevention (CDC) (2021). Youth risk behavior survey (YRBS).

Centers for Disease Control and Prevention (2020). *Anxiety and depression in children: Get the facts*. https://www.cdc.gov/childrensmentalhealth/features/anxiety-depression-children.html

Centers for Disease Control and Prevention (CD) (2022). National Center for Injury Prevention and Control. Web Based Injury Statistics Query and Reporting System (WISQARS). https://www.cdc.gov/injury/wisqars/index.htm

Chang, D. F., and Sue, S. (2003). The effects of race and problem type on teachers' assessments of student behavior. *Journal of Consulting and Clinical Psychology*, *71*(2), 235.

Charness, G., Gneezy, U., and Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior and Organization*, *81*(1), 1–8.

Chavez, L. M., Shrout, P. E., Alegría, M., Lapatin, S., and Canino, G. (2010). Ethnic differences in perceived impairment and need for care. *Journal of Abnormal Child Psychology*, *38*(8), 1165–1177. doi:10.1007/s10802-010-9428-8

Costello, E. J., He, J. P., Sampson, N. A., Kessler, R. C., and Merikangas, K. R. (2014). Services for adolescents with psychiatric disorders: 12-month data from the National Comorbidity Survey–Adolescent. *Psychiatric Services*, *65*(3), 359–366.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum*, no. 1, 139–167. https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1052&context=uclf

Creswell, J.W. (2015). *A Concise Introduction to Mixed Methods Research.* SAGE Publications.

Creswell, J. W., Guetterman, T. C. (2019). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. United Kingdom: Pearson.

Daly, M. (2022). Prevalence of depression among adolescents in the US from 2009 to 2019: Analysis of trends by sex, race/ethnicity, and income. *Journal of Adolescent Health*, *70*(3), 496–499.

Darolia, R., Koedel, C., Martorell, P., Wilson, K., and Perez-Arce, F. (2016). Race and gender effects on employer interest in job applicants: new evidence from a resume field experiment. *Applied Economics Letters*, *23*(12), 853–856.

Dolphin, L., and Hennessy, E. (2017). Labelling effects and adolescent responses to peers with depression: an experimental investigation. *BMC Psychiatry*, *17*(1), 1–10.

Doucet, M., and Rovers, M. (2010). Generational trauma, attachment, and spiritual/religious interventions. *Journal of Loss and Trauma*, *15*(2), 93–105.

Downey, D. B., and Pribesh, S. (2004). When Race Matters: Teachers' Evaluations of Students' Classroom Behavior. *Sociology of Education, 77*(4), 267–282. https://doi.org/10.1177/003804070407700401

Foster, S., Rollefson, M., Doksum, T., Noonan, D., Robinson, G., and Teich, J. (2005). School Mental Health Services in the United States, 2002–2003. *Substance Abuse*

and Mental Health Services Administration. http://files.eric.ed.gov/fulltext/ED499056.pdf

Franklin, C. G., Kim, J. S., Ryan, T. N., Kelly, M. S., and Montgomery, K. L. (2012). Teacher involvement in school mental health interventions: A systematic review. *Children and Youth Services Review*, *34*(5), 973–982.

Gaddis, S. M. (2017). How black are Lakisha and Jamal? Racial perceptions from names used in correspondence audit studies. *Sociological Science*, *4*, 469–489.

Gaddis, S. M. (2017). Racial/ethnic perceptions from Hispanic names: Selecting names to test for discrimination. *Socius*, *3*, https://doi.org/10.1177/2378023117737193

Gaddis, S. M. (2015). Discrimination in the credential society: An audit study of race and college selectivity in the labor market. *Social Forces*, *93*(4), 1451–1479.

Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., and Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, *162*(7), 1336–1343.

Gilman, R., and Huebner, E. S. (2006). Characteristics of adolescents who report very high life satisfaction. *Journal of Youth and Adolescence*, *35*(3), 293–301.

Goodwin, R. D., Dierker, L. C., Wu, M., Galea, S., Hoven, C. W., & Weinberger, A. H. (2022). Trends in US depression prevalence from 2015 to 2020: the widening treatment gap. *American Journal of Preventive Medicine*, *63*(5), 726–733.

Green, J. G., Guzmán, J., Didaskalou, E., Harbaugh, A. G., Segal, N., and LaBillois, J. (2017). Teacher identification of student emotional and behavioral problems and provision of early supports: A vignette-based study. *Journal of Emotional and Behavioral Disorders*, *26*(4), 225–242.

Green, J. G., Levine, R. S., Oblath, R., Corriveau, K. H., Holt, M. K., and Albright, G. (2020). Pilot evaluation of preservice teacher training to improve preparedness and confidence to address student mental health. *Evidence-Based Practice in Child and Adolescent Mental Health*, *5*(1), 42–52.

Grimm, P. (2010). Social desirability bias. *Wiley International Encyclopedia of Marketing*.

Guz, S., Kattari, S. K., Atteberry-Ash, B., Klemmer, C. L., Call, J., and Kattari, L. (2021). Depression and suicide risk at the cross-section of sexual orientation and gender identity for youth. *Journal of Adolescent Health*, *68*(2), 317–323.

Haas, A. (1996). *In the shadow of the Holocaust: The second generation*. Cambridge University Press.

Hahm, H. C., Cook, B. L., Ault-Brutus, A., & Alegría, M. (2015). Intersection of race-ethnicity and gender in depression care: screening, access, and minimally adequate treatment. *Psychiatric Services*, *66*(3), 258–264.

Hanson, A., and Santas, M. (2014). Field experiment tests for discrimination against Hispanics in the US rental housing market. *Southern Economic Journal*, *81*(1), 135–167.

Herman, K. C., Merrell, K. W., Reinke, W. M., and Tucker, C. M. (2004). The role of school psychology in preventing depression. *Psychology in the Schools*, *41*(7), 763–775.

Hughes, R. (1998). Considering the vignette technique and its application to a study of drug injecting and HIV risk and safer behaviour. *Sociology of Health and Illness*, *20*(3), 381–400.

Hughes, R., and Huby, M. (2002). The application of vignettes in social and nursing research. *Journal of Advanced Nursing*, *37*(4), 382–386.

Humensky, J., Kuwabara, S. A., Fogel, J., Wells, C., Goodwin, B., and Voorhees, B. W. V. (2010). Adolescents with depressive symptoms and their challenges with learning in school. *The Journal of School Nursing*, *26*(5), 377–392.

Jaimes, N., Londono, V., and Halpern, A. C. (2013). The term Hispanic/Latino: a note of caution. *JAMA Dermatology*, *149*(3), 274–275.

Jorm, A. F. (2012). Mental health literacy: empowering the community to take action for better mental health. *American Psychologist*, *67*(3), 231.

Jorm, A. F., Kitchener, B. A., Sawyer, M. G., Scales, H., and Cvetkovski, S. (2010). Mental health first aid training for high school teachers: a cluster randomized trial. *BMC Psychiatry*, *10*(1), 1–12.

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., and Pollitt, P. (1997). “Mental health literacy”: A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*(4), 182–186.

Jung, H., Lee, S., and Kim, Y. (2020). Factors Influencing Gateway Providers’ Confidence in Helping People with Mental Illness. *Social Work in Public Health*, *35*(6), 358–367.

Kataoka, S. H., Zhang, L., and Wells, K. B. (2002). Unmet need for mental health care among US children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, *159*(9), 1548–1555.

Kelly, C. M., Jorm, A. F., and Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *The Medical Journal of Australia*, *187*(S7), S26–S30.

Kern, L., Mathur, S. R., Albrecht, S. F., Poland, S., Rozalski, M., and Skiba, R. J. (2017). The need for school-based mental health services and recommendations for implementation. *School Mental Health*, *9*(3), 205–217.

Kutash, K., Duchnowski, A. J., and Lynn, N. (2006). *School-based mental health: An empirical guide for decision-makers*. Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies., Research and Training Center for Children's Mental Health. http://rtckids.fmhi.usf.edu/rtcpubs/study04/SBMHfull.pdf

Lapatin, S., Gonçalves, M., Nillni, A., Chavez, L., Quinn, R. L., Green, A., and Alegría, M. (2012). Lessons from the use of vignettes in the study of mental health service disparities. *Health Services Research*, *47*(3pt2), 1345–1362.

Lewandowski, R. E., Acri, M. C., Hoagwood, K. E., Olfson, M., Clarke, G., Gardner, W., et al. (2013). Evidence for the management of adolescent depression. *Pediatrics*, *132*(4), e996–e1009. https://doi.org/10.1542%2Fpeds.2013-0600

Lindsey, M. A., Sheftall, A. H., Xiao, Y., and Joe, S. (2019). Trends of suicidal behaviors among high school students in the United States: 1991–2017. *Pediatrics*, *144*(5), e20191187. https://doi.org/10.1542/peds.2019-1187

Loades, M. E., and Mastroyannopoulou, K. (2010). Teachers' recognition of children's mental health problems. *Child and Adolescent Mental Health*, *15*(3), 150–156.

Massachusetts Department of Elementary and Secondary Education. (2023. *Massachusetts school and District Profiles*. Enrollment Data (2022–23) - Massachusetts (00000000). Retrieved October 29, 2023, from https://profiles.doe.mass.edu/profiles/student.aspx?orgcode=00000000andorgtypecode=0and

Mazzer, K. R., and Rickwood, D. J. (2015). Teachers' role breadth and perceived efficacy in supporting student mental health. *Advances in School Mental Health Promotion*, *8*(1), 29–41.

McMorrow, S. and Howell, E. (2010). State mental health systems for children: A review of the literature and available data sources. Washington, D.C.: Urban Institute.

https://www.urban.org/sites/default/files/publication/29126/412207-state-mental-health-systems-for-children-a-review-of-the-literature-and-available-data-sources.pdf

Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... and Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*, *49*(10), 980–989.

Merrell, K. (2013) *Helping students overcome depression and anxiety: A practical guide* (2nd ed.). New York, NY: Guilford.

Mojtabai, R., & Olfson, M. (2020). National trends in mental health care for US adolescents. *JAMA Psychiatry*, *77*(7), 703–714.

Moor, S., Ann, M., Hester, M., Elisabeth, W. J., Robert, E., Robert, W., and Caroline, B. (2007). Improving the recognition of depression in adolescence: Can we teach the teachers? *Journal of Adolescence*, *30*(1), 81–95.

National Center for Education Statistics (2020). Common Core of Data: Public Elementary/Secondary School Universe Survey Data. Retrieved December 12, 2020 from https://nces.ed.gov/ccd/pubschuniv.asp

National Center for Education Statistics, Common Core of Data (CCD) (2020) “State Nonfiscal Public Elementary/Secondary Education Survey,” 2018–2019 v.1a.

National Center for Education Statistics (Ed.). (2021, May). *Characteristics of Public School Teachers*. Coe - characteristics of Public School Teachers. Retrieved December 21, 2021, from https://nces.ed.gov/programs/coe/indicator/clr

National Center for Education Statistics. (2022). Racial/Ethnic Enrollment in Public Schools. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved 4/16/2023, from https://nces.ed.gov/programs/coe/indicator/cge.

National Center for Education Statistics. (2023). Characteristics of Public School Teachers. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved 12/30/2023, from https://nces.ed.gov/programs/coe/indicator/clr.

National Institute of Mental Health. (2019, February). *Major Depression*. https://www.nimh.nih.gov/health/statistics/major-depression.shtml

Needham, B. L. (2009). Adolescent depressive symptomatology and young adult educational attainment: an examination of gender differences. *Journal of Adolescent Health*, *45*(2), 179–186.

Newman, B. M., Newman, P. R., Griffen, S., O'Connor, K., and Spas, J. (2007). The relationship of social support to depressive symptoms during the transition to high school. *Adolescence*, *42*(167), 441–459.

Odenbring, Y. (2019). Strong boys and supergirls? School professionals' perceptions of students' mental health and gender in secondary school. *Education Inquiry*, *10*(3), 258–272.

Office of Management and Budget. (1997). Revisions to the standards for the classification of federal data on race and ethnicity. *Federal Register*, *62*(210), 58782–58790.

Opara, I., Weissinger, G. M., Lardier Jr, D. T., Lanier, Y., Carter, S., & Brawner, B. M. (2021). Mental health burden among Black adolescents: the need for better assessment, diagnosis and treatment engagement. *Social Work in Mental Health*, *19*(2), 88–104.

Pas, E. T., Bradshaw, C. P., and Cash, A. H. (2014). Coaching classroom-based preventive interventions. In *Handbook of school mental health* (pp. 255–267). Springer, Boston, MA.

Patel, V., Flisher, A. J., Hetrick, S., and McGorry, P. (2007). Mental health of young people: a global public-health challenge. *The Lancet*, *369*(9569), 1302–1313.

Pearcy, M. T., Clopton, J. R., and Pope, A. W. (1993). Influences on teacher referral of children to mental health services: Gender, severity, and internalizing versus externalizing problems. *Journal of Emotional and Behavioral Disorders*, *1*(3), 165–169.

Pearson, R. (2023). Masculinity and emotionality in education: critical reflections on discourses of boys' behaviour and mental health. *Educational Review*, *75*(6), 1101–1130.

Pottiger, M. (2022). Schools and Black Students' Mental Health: The Kids Aren't Alright. *Word in Black*. https://wordinblack.com/2022/05/schools-black-students-mental-health/

Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., and Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. *JAMA Pediatrics*, *175*(11), 1142–1150.

Redding, C. (2019). A Teacher Like Me: A Review of the Effect of Student–Teacher Racial/Ethnic Matching on Teacher Perceptions of Students and Student Academic and Behavioral Outcomes. *Review of Educational Research, 89*(4), 499–535. https://doi.org/10.3102/0034654319853545

Reddy, R., Rhodes, J. E., and Mulhall, P. (2003). The influence of teacher support on student adjustment in the middle school years: A latent growth curve study. *Development and Psychopathology*, *15*(1), 119–138.

Reinke, W. M., Stormont, M., Herman, K. C., Puri, R., and Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, *26*(1), 1.

Rikard-Bell, C., Hunt, C., McAulay, C., Hay, P., Morad, A., Cunich, M., & Touyz, S. (2022). Adolescent Depression from a Developmental Perspective: The Importance of Recognizing Developmental Distress in Depressed Adolescents. *International Journal of Environmental Research and Public Health*, *19*(23), 16029.

Rodgers, C. R., Flores, M. W., Bassey, O., Augenblick, J. M., and Lê Cook, B. (2022). Racial/Ethnic Disparity Trends in Children's Mental Health Care Access and Expenditures From 2010 to 2017: Disparities Remain Despite Sweeping Policy Reform. *Journal of the American Academy of Child and Adolescent Psychiatry, 61*(7), 915–925. https://doi.org/10.1016/j.jaac.2021.09.420

Rohde, P., Lewinsohn, P. M., Klein, D. N., Seeley, J. R., and Gau, J. M. (2013). Key Characteristics of Major Depressive Disorder Occurring in Childhood, Adolescence, Emerging Adulthood, Adulthood. *Clinical Psychological Science*, *1*(1). https://doi.org/10.1177/2167702612457599

Saleem, F. T., Anderson, R. E., and Williams, M. (2020). Addressing the "myth" of racial trauma: developmental and ecological considerations for youth of color. *Clinical Child and Family Psychology Review*, *23*(1), 1–14.

Schell, C. J., Dyson, K., Fuentes, T. L., Des Roches, S., Harris, N. C., Miller, D. S., ... and Lambert, M. R. (2020). The ecological and evolutionary consequences of systemic racism in urban environments. *Science*, *369*(6510), eaay4497. https://doi.org/10.1126/science.aay4497

Sen, G., Iyer, A., and Mukherjee, C. (2009). A methodology to analyse the intersections of social inequalities in health. *Journal of Human Development and Capabilities*, *10*(3), 397–415.

Spalding, N. J., and Phillips, T. (2007). Exploring the use of vignettes: From validity to trustworthiness. *Qualitative Health Research*, *17*(7), 954–962.

Splett, J. W., Garzona, M., Gibson, N., Wojtalewicz, D., Raborn, A., and Reinke, W. M. (2019). Teacher recognition, concern, and referral of children's internalizing and externalizing behavior problems. *School Mental Health*, *11*(2), 228–239.

Stafford, A. M., & Draucker, C. B. (2020). Barriers to and facilitators of mental health treatment engagement among Latina adolescents. *Community Mental Health Journal*, *56*(4), 662–669.

Stiffman, A. R., Pescosolido, B., and Cabassa, L. J. (2004). Building a model to understand youth service access: The gateway provider model. *Mental Health Services Research*, *6*(4), 189–198.

Stiffman, A. R., Hadley-Ives, E., Doré, P., Polgar, M., Horvath, V. E., Striley, C., and Elze, D. (2000). Youths' access to mental health services: The role of providers' training, resource connectivity, and assessment of need. *Mental Health Services Research*, *2*(3), 141–154.

Stiffman, A. R., Striley, C., Horvath, V. E., Hadley-Ives, E., Polgar, M., Elze, D., and Pescarino, R. (2001). Organizational context and provider perception as determinants of mental health service use. *The Journal of Behavioral Health Services and Research*, *28*(2), 188–204.

Taie, S., and Lewis, L. (2022). Characteristics of 2020–21 Public and Private K–12 School Teachers in the United States: Results from the National Teacher and Principal Survey First Look (NCES 2022-113). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Thomas, J. F., Temple, J. R., Perez, N., and Rupp, R. (2011). Ethnic and gender disparities in needed adolescent mental health care. *Journal of Health Care for the Poor and Underserved*, *22*(1), 101–110. https://doi.org/10.1353/hpu.2011.0029

Villatoro, A. P., Mays, V. M., Ponce, N. A., and Aneshensel, C. S. (2018). Perceived need for mental health care: The intersection of race, ethnicity, gender, and socioeconomic status. *Society and Mental Health*, *8*(1), 1–24.

Weathers, E. S. (2023). Bias or Empathy in Universal Screening? The Effect of Teacher–Student Racial Matching on Teacher Perceptions of Student Behavior. *Urban Education, 58*(3), 427–456. https://doi.org/10.1177/0042085919873691

Weyns, T., Colpin, H., and Verschueren, K. (2021). The role of school-based relationships for school well-being: How different are high-and average-ability students? *British Journal of Educational Psychology*, *91*(4), e12409. https://doi.org/10.1111/bjep.12409

Wilks, T. (2004). The use of vignettes in qualitative research into social work values. *Qualitative Social Work*, *3*(1), 78–87.

Williams, J. H., Horvath, V. E., Wei, H. S., Van Dorn, R. A., and Jonson-Reid, M. (2007). Teachers' perspectives of children's mental health service needs in urban elementary schools. *Children and Schools*, *29*(2), 95–107.

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