LATENCY OF FIRST OFFICE DISCIPLINE REFERRALS AMONG YOUTH RECEIVING INDIVIDUAL THERAPY IN SCHOOLS

by

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Youth who experience mental illness can exhibit disruptive behavior in the school setting which is frequently not recognized as a result of internal struggle. For the estimated 20% of school-aged youth who experience mental illness, school-based mental health (SBMH) programs can increase access to therapeutic services which could ameliorate their symptoms and aid them in learning healthy ways to cope. Exclusionary punishments such as office discipline referrals (ODRs) can undermine the effort of school-based therapists because they can result in frequent removal from the classroom/school setting for the youth who receive them. Survival analysis methods were used to analyze the latency of the first, subsequent ODR after the onset of individual therapy. Results indicated that students who received individual therapy services experienced the highest probability of receiving and ODR early in treatment (i.e., during the time between the first three sessions). Additionally, the degree to which group differences (e.g., sex, race, and classification of symptoms) impacts the latency of first ODR were analyzed and only the sex variable resulted in significant results.

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CHAPTER I: INTRODUCTION & LITERATURE REVIEW

Adolescence is a critical stage for an individual's development socially, emotionally, and mentally (Patton et al., 2016; Snedker & Herting, 2016). Today's adolescents are faced with stressors that impact their lives and can result in mental illness (Suldo, Thalji, & Ferron, 2011). It is estimated that 20-25% of youth in the United States struggle with mental illness (Merikangas et al., 2010) and that only 36% of these individuals receive mental health services (Merikangas et al., 2011). One in 10 youth experience mental illness that is severe enough to impair their functioning (Masi & Cooper, 2006). Even if adolescents do not have underlying mental illness, stressors faced in their daily lives at home and at school can result in maladaptive behaviors such as skipping class, getting into verbal or physical fights with others, or self-harm (Suldo, Gormley, DuPaul, & Anderson-Butcher, 2014).

Mental illness can have an impact on all aspects of an individual's life. For youth, one of the most demanding duties is school, and future success is contingent upon successful academic performance (Patton et al., 2016). Mental illness that manifests in behavior problems can lead to negative school outcomes (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Stagman & Cooper, 2010). Students who experience mental illness are more likely than their peers to perform poorly academically, have high absenteeism, and be referred to the office for disciplinary reasons (Suldo et al., 2011).

Office discipline referrals (ODRs) can identify students who are at-risk for mental illness and require additional supports (Predy, McIntosh, & Frank, 2014). A chronic record of ODRs can lead to negative outcomes such as expulsion, school drop-out, and delinquency (McIntosh, Frank, & Spaulding, 2010). For youth who need additional support because they are experiencing mental illness, individual therapy can be beneficial. When individual therapy is

offered in the school setting, it increases access to this service for youth who might not otherwise receive it. ODRs lead to less time spent in the classroom due to exclusionary punishments (i.e., in- and out-of-school suspensions) (Skiba & Peterson, 2000). In this way, teachers and school personnel who frequently issue ODRs to youth who exhibit disruptive behavior may undermine the effort to increase access to mental health services in the school setting because it prevents clinicians from seeing the children who may need it the most.

Impact of Mental Illness on Youth

Diagnosable mental health disorders have an onset during early adolescence (Knapp, McCrone, Fombonne, Beecham, & Wostear, 2002; Merikangas et al., 2010). For adolescents, mental illness can negatively impact their well-being. Robust mental illness can have an impact on every part of an individual's life. Unaddressed symptoms can result in physical ailments (e.g., weight loss/gain, weakened immune system), interpersonal conflict, low self-esteem, poor academic achievement, drug abuse, and delinquency (McIntosh, Ty, & Miller, 2014). Additionally, adolescents who experience stressful events, depressive symptoms, and exhibit externalizing behaviors are more likely to attempt suicide compared to their peers (Fordwood, Asarnow, Huizar, & Reise, 2007).

Untreated mental illnesses lead to negative consequences that affect youth outside the school setting and impact their futures. Mental illnesses can influence various aspects of an adolescent's life. For example, depressive symptoms (e.g., lack of energy, withdrawal) can result in poor concentration and absenteeism. Alternatively, aggressive symptoms (e.g., talking back, fighting) can lead to suspensions and poor student/teacher relationships. Both aggression and depression can negatively impact academic achievement and lead to poor grades and school dropout (Suldo et al., 2014). In general, students with mental illnesses are twice as likely to drop

out of school compared to students who do not struggle with emotional or behavioral issues (Lehr et al., 2004). There are societal consequences that continue to impact individuals with mental illnesses into adulthood. For example, dropping out of school can lead to higher unemployment and poverty rates (Bains & Diallo, 2016). Additionally, stress and symptoms of depression have may lead to adolescents engaging in high-risk activities (Brooks, Harris, Thral, & Woods, 2002). Experiencing mental illness without effective coping skills can lead to complications in life such as chronic stress, substance abuse, conduct disorders, and learning difficulties (Bains & Diallo, 2016; Keyes, 2006; Knopf, Park, & Paul Mulye, 2008).

Youth are still developing during their teenage years and are learning how to overcome adversities (Patton et al., 2016). Some youth will develop unhealthy coping mechanisms to deal with negative feelings, such as smoking or using drugs. Youth who experience mental illnesses are more likely to engage in drug use to cope with their problems when compared to their typically developing peers (Brooks et al., 2002; Reiff, 2001; Stagman & Cooper, 2010). Healthy coping skills are learned adaptive behaviors (Zeitlin, 1985). When children are young, they typically imitate coping mechanisms from others in their environment, both implicitly and explicitly (Schneider & Scher, 2000). Over time, this knowledge assists them in learning how to cope with difficult situations and regulate emotions. Emotion regulation is a term used to describe an individual's ability to respond to an emotional situation in a way that is socially acceptable and appropriate to the situation (Gross & John, 2003). Youth who experience constant stressors or are ill-equipped to deal with challenges that are presented to them might exhibit poor emotion regulation.

In summary, mental illnesses can have a significant impact on adolescents. Youth experiencing mental illness have an increased risk for school failure or dropout and have more

involvement with the criminal justice system than their typically developing peers (Bains & Diallo, 2016; Stagman & Cooper, 2010). The occurrence and impact of mental illness varies due to individual factors such as sex, race, and the type of presenting symptoms (e.g., internalizing/externalizing). Below is a brief review of each of these critical factors and how they relate to mental health outcomes.

Internalizing and externalizing symptoms differences. Behavioral research has categorized general types of mental illness by symptoms and this has resulted in groupings of internalizing problems (e.g., anxiety, depression, somatic complaints) and externalizing problems (e.g., aggressive and disruptive behavior, attention/hyperactivity) (Caspi et al., 2014; Merrell, 2008). Adolescents who experience internalizing symptoms tend to worry and ruminate when presented with stressors, and these types of symptoms can lead to physical ailments such as headaches and stomach aches. Their behavior typically only affects themselves and does not impact others (McIntosh et al., 2014). For this reason, it is sometimes difficult for adults to identify youth with internalizing problems and their problems can go unnoticed until it affects their interpersonal relationships or their school performance (Suldo et al., 2011). In contrast, adolescents with externalizing disorders typically express the disordered behavior outwardly, and their problematic behaviors tend to be directed at other people or objects (McIntosh et al., 2014). Thus, these youth are more likely to be deemed behavior problems, to have disciplinary infractions, and to be referred for services when compared to their peers who experience internalizing symptoms (Flisher et al., 1996; Flaherty, Weist, & Warner, 1996).

Youth with mental illness exhibit different types of symptoms in mental illness when comparing adolescents with internalizing and externalizing problems. Some studies have found that youth with internalizing problems are more likely to drop out of school compared to their

peers who do not struggle with internalizing issues (Suldo et al., 2011). Adolescents with externalizing problems are more likely to have poorer school achievement and higher rates of ODRs compared to their peers who do not exhibit these types of behaviors (Pas, Bradshaw, & Mitchell, 2011). Some adolescents face a combination of internalizing and externalizing problems. For these individuals, mental illness tends to be pronounced and affect their academic achievement and peer relationships (Ansary & Luthar, 2009). Additionally, youth experiencing either internalizing or externalizing symptoms are more likely to have higher rates of absenteeism compared to their peers who do not experience mental illness (Dembo, Wareham, Schmeidler, Briones-Robinson, & Winters, 2016). Furthermore, internalizing and externalizing behaviors and stressful life experiences are associated with an increased risk for attempting suicide during adolescence (Burnett-Zeigler et al., 2012; McLone, Kouvelis, Mason, & Sheehan, 2016). Suicide was the second leading cause of death for adolescents, according to a 2014 national report (Centers for Disease Control and Prevention, 2018).

Sex differences. There is some variability in the occurrence of mental illness related to an individual's sex. Girls are 1.78 times more likely to experience mental illness than boys (Burnett-Zeigler et al., 2012). Additionally, there are differences in the types of mental illness that girls and boys experience. For example, girls are significantly more likely to experience symptoms related to mood disorders (e.g., depression, anxiety) than boys (47% vs. 25%) (Brooks et al., 2002). Similarly, boys are more likely than girls to exhibit behavior disorders (e.g., aggression, hyperactivity) and substance abuse disorders (Merikangas et al., 2011; Vincent, Grisso, Terry, & Banks, 2008). In short, biological sex can play a role in the types of mental health symptoms individuals experience. Girls are more likely than boys to experience issues

with depression and anxiety, and boys are more likely than girls to display aggressive and impulsive behaviors.

Biological sex and gender are two separate constructs and it is likely that gender roles could also influence mental illnesses. For example, expectations of certain roles imposed by societal norms result in a different presentation of symptoms for boys and girls. In a society that promotes stereotypical views of masculinity, boys who are depressed might act aggressively towards others instead of crying when feeling overwhelmed (Maguire, Niens, McCann, & Connolly, 2016). In this way, a boy's behavior might be perceived as externalizing, when it is really stemming from an internal struggle. Furthermore, societal expectations might permit girls and women to be emotionally expressive, so symptoms associated with depression and anxiety might be more socially acceptable when exhibited by girls than by boys (Crick & Zahn-Waxler, 2003).

Race differences. There are contradictory findings related to race differences and the prevalence of mental illness. Some research suggests there are few differences across racially defined groups. For example, a nationwide study on the prevalence of mental health disorders in adolescents found that there were minimal racial differences across all types of disorders (e.g., mood, anxiety, behavior, substance use) with the exception of lower rates of substance abuse and increased rates of anxiety disorders among Latina/o adolescents compared to non-Latina/o White youth (Merikangas et al., 2010). Furthermore, according to data from a 2005 nationwide survey using the *Youth Risk Behavior Surveillance System*, Latina/o students were more likely to experience sadness or hopelessness compared to their White and African-American peers (Knopf et al., 2008). A study of psychiatric disorders, impairments, and service use conducted in rural North Carolina revealed minimal differences between African-American and White adolescents.

Additionally, the prevalence of mental illness was similar, except for a higher rate of depressive symptoms in White youth. The main difference between these groups that was revealed was how often youth accessed mental health services. In a community setting, White youth were twice as likely to access services compared to their African-American peers. In contrast, if the mental health service was provided in the school setting, there was minimal difference (Angold et al., 2002).

Alternatively, minority youth are considered to have an increased risk for mental illness due to stressors in their environment including discrimination, issues surrounding cultural identity, and social risk factors (Suldo et al., 2013). There is a higher prevalence of internalizing disorders in racial/ethnic minority youth living in the United States compared to White youth. Specifically, Latina/o and African-American youth report higher rates of depressive and anxiety disorders when compared to White youth (Anderson & Mayes, 2010).

Overall, some research suggests an overall low disparity between adolescents of different racial backgrounds, except for anxiety and depression. But some studies indicate that racially diverse youth are at higher risk for experiencing environmental stressors that can lead to increased rates of emotional dysregulation. It is possible that other factors (e.g., poverty) could be influencing racially diverse youth's experience with mental illness (Anderson & Mayes, 2010).

Impact of mental illness on rural youth. In rural communities, there are many barriers to accessing mental health services. Lack of providers and transportation result in decreased access to services for individuals in need (Taras, 2004). In rural areas, there is often a limited number of clinics or health centers, and lack of reliable public transportation might result in decreased ability to make appointments. Additionally, stigma associated with receiving mental

health care can also create a barrier to mental health care (Hogan, 2003). For example, adolescents might not understand mental health services and believe that receiving these services suggests they are weak. According to a survey conducted with a sample of North Carolina residents, 21% of rural youth aged 9-17 reportedly had mental illness in the previous three months and only 13% received mental health services (Angold et al., 2002).

About 25% of the country's population lives in a rural area. Rural areas have high proportion of poverty and minority residents (Angold et al., 2002). There is limited research focused specifically on the rural population and the effects of poverty; however, there is evidence to support that belonging to a minority group and living in poverty have been associated with increased risk for experiencing mental illness (Wandersman & Nation, 1998; Masi & Cooper, 2006). Living in an impoverished and disadvantaged environment can result in higher levels of exposure to stress for adolescents, which can impact their emotional well-being (Snedker & Herting, 2016). Furthermore, rural areas are less likely to have mental health or health providers, means that limited accessibility to mental health services is a true barrier for these youth. Additionally, a nationwide, longitudinal report on youth suicide rates indicated that rural youth are twice as likely to commit suicide compared to youth who live in urban areas (Fontanella et al., 2015).

Office Discipline Referrals

Office discipline referrals are standardized records of discipline infractions which are routinely collected in schools for monitoring and managing disruptive behaviors. Typically, ODRs include information on date, time, location, type of school violation, others involved (e.g., students, staff), and disciplinary actions (Sugai, Sprague, Horner, & Walker, 2000). An ODR:

> …represents an event in which (a) a student engaged in a behavior that violated a rule or social norm in the school, (b) the problem behavior was observed or identified by a member if the school staff, and (c) the event resulted in a consequence delivered by administrative staff who produced a permanent (written) product defining the whole event (Sugai, et al., 2000, p. 96).

It is advantageous to use ODR data because they are readily available and can serve as an index of the discipline practices within a school (Sugai et al., 2000). In contrast, a limitation to using ODR data is the differences in how individual schools define and apply referral procedures, and the subjectivity of designating an ODR between different teachers (Wright & Dusek, 1998). ODRs include a wide range of school violations that can vary. Minor violations include disrespect, dress code violations, and disrupting class. Major violations include fighting, theft, intimidation, harassment, threats, and bringing weapons to school. ODRs are used to monitor student problem behaviors and to make decisions about the need for student support programs (Irvin et al., 2004). ODRs are readily available data for identifying students who are at-risk for negative educational outcomes (Sugai et al., 2000).

Student factors and rate of ODRs. Some students are more likely to receive ODRs when compared to their peers. For example, it has been well documented that there are racial disparities for students who receive ODRs (Kaufman, et al., 2010; Skiba et al., 2011). Specifically, African-American boys are more likely to be perceived as defiant and disruptive by their teachers compared to other students (Newcomb et al., 2002; Wentzel, 2002). In fact, African-American students are more likely to have a referral for serious offenses compared to students of any other racial background. For example, African-American students are six times more likely to receive a referral for delinquent behavior (e.g., weapons, drugs, theft).

Additionally, Latina/o students were five times more likely to have a delinquency referral compared to their White counterparts (Kaufman et al., 2010).

Furthermore, boys are at higher risk than girls of receiving an ODR (Pas et al., 2011; Kaufman et al., 2010). Boys were 50% more likely to receive an ODR across all types of disciplinary violations (Kaufman et al., 2010). Boys represent 51% of the school population nationally but they accounted for 70% of out-of-school suspensions compared to girls who made up 49% of the school population and received 30% of the school suspensions (Petras, Masyn, Buckley, Ialongo, & Kellam, 2011). Minority boys are at highest risk to receive ODRs and be removed from school (Petras et al., 2011; Skiba, Peterson, & Williams, 1997).

Patterns in ODR data vary across elementary, middle, and high school settings (Kaufman et al., 2010). For example, in elementary school, peer-related problems (e.g., fighting) were more common infractions compared to middle school students, whose violations were more frequently directed at adults (e.g., inappropriate language and disrespect towards teachers). In high school, tardiness and absenteeism were more common compared to disruptive behaviors and disrespect towards adults. Defiance was found to be one of the most common violations across all settings (Kaufman et al., 2010).

Impact on school experience. Higher rates of ODRs are associated with negative school-related outcomes such as school dropout, academic failure, antisocial behaviors, and lower achievement (McIntosh, Brigid Flannery, Sugai, Braun, & Cochrane, 2008; Tobin & Sugai, 1999). According to McIntosh and colleagues (2008), receiving an ODR has a moderate association with poor academic performance. In this study, there was a significant relationship between academic grades and ODRs. Students who had higher rates of ODRs (i.e., > 2) in the fall semester of the school year experienced a steeper decline in their grade point average in the

spring semester (McIntosh et al., 2008). Additionally, in a longitudinal study in which the researchers utilized sixth grade discipline referrals to predict future behavior in high school revealed that a history of ODRs for violent behaviors (e.g., fighting, harassing) in the sixth grade predicted higher frequency of suspensions and referrals for similar behaviors in the ninth grade. Also, these students were less likely to be on track to graduate and more likely to be struggling academically compared to their peers (Tobin & Sugai, 1999).

Impact on future outcomes. There are potential negative outcomes for youth who have high rates of ODRs due to behavior problems at school that can impact them into adulthood. For example, there is a moderate to strong positive relationship between numbers of student suspensions and the likelihood of dropping out (Skiba & Peterson, 2000). Lee and colleagues (2011) conducted a study examining the relationship between suspensions and dropout rates. Over the course of a school year, students who received ODRs and attended schools that were more likely to discipline through punitive measures (e.g., suspensions) dropped out of school at faster rates (56%) than students who attended schools that were less likely to use suspension as a consequence (22%) (Lee, Cornell, Gregory, & Fan, 2011). According to the National Center on Education Statistics (2017), 5.9% of students aged 16–24 dropped out of school in the United States in 2015. There is a relationship between school attrition and incarceration later in life (Ewert, Sykes, & Pettit, 2014). Dropping out of school is associated with a range of other negative outcomes including economic disadvantage, substance abuse, incarceration, and poor health (Irvin et al., 2004; Predy et al., 2012). Additionally, there are societal costs related to school attrition because individuals who do not finish high school will cost taxpayers billions of dollars in welfare, prosecution, and lost revenues (McIntosh et al., 2008; Stagman & Cooper, 2010; Tobin & Sugai, 1999). Graduating from high school is associated with clear benefits to

society such as decreased dependence on welfare, reduced criminal activity, and higher contribution to tax payments over a lifetime (Catteral, 2011).

Prevention Model

A recent paradigm shift in the United States education system has resulted in a proactive delivery of services for vulnerable youth. The Multi-Tiered Systems of Support (MTSS) model was developed to address academic and behavioral needs of students at different levels (Benner, Kutash, Nelson, & Fisher, 2013). The tertiary model incorporates regular, systematic assessments to monitor students' academic and behavior data and to inform evidence-based decision making (Sugai & Horner, 2009).

Tier I is intended to serve the majority of students within a school system – approximately 80-85% of students – and includes evidence-based instruction and school-wide interventions for behavior management (Cook, Volpe, & Livanis, 2010). For example, interventions at the Tier I level typically involve evidence-based schoolwide curriculum for key subject areas (i.e., mathematics and reading) and schoolwide behavior systems (Benner et al., 2013; Burke, et al., 2012). At Tier I, positive behavior support strategies are implemented by all teachers and staff and include frequent recognition for appropriate behaviors, predictable structure, and positively-phrased and highly visible behavioral expectations (Benner et al., 2013). One of the main benefits of effective Tier I services is a reduction of ODRs and exclusionary punishments (Bradshaw, Mitchell, & Leaf, 2010). Tier II is intended for students who do not respond to the universal interventions at the Tier 1 level or are identified as needing supplemental supports via the screening procedures but who do not qualify for special education services – around 10-15% of students (Sugai & Horner, 2006). At the Tier II level, students receive targeted support in a small-group setting or within the regular education environment to

prevent further delay and to facilitate their learning or ameliorate behavior difficulties. For example, a student in Tier II might receive an evidence-based reading intervention in a small-group to target their specific deficits (e.g., comprehension or fluency) or an individualized behavior chart with a reward system to address disruptive behaviors (Benner et al., 2013). Additionally, students struggling with social skills or anger management might receive short-term small group counselor to address their difficulties. For youth who do not respond to the universal or Tier II interventions or are identified as students who need specialized instruction or intensive services, Tier III services are available. Theoretically, only about 1-5% of students will need services at this level (Sugai & Horner, 2006). To address academic deficits, youth who meet the criteria for Tier III intervention receive instruction in a special education setting or speech/language related services which are formally outlined in a personalized education plan. For pervasive mental illness or behavior concerns, youth might receive individual counseling at a greater frequency, often addressing multiple issues simultaneously (Sugai & Horner, 2009).

The School-Based Mental Health (SMBH) services provided to students for the current study meet the criteria for a Tier III intervention. The individual therapy services were provided to at-risk youth who required additional, individual support to address their presenting mental illness. For some of these youth, the need for intensive supports emerged from an underlying mental health illness. For others, this need was a result of a traumatic life experience (e.g., incarcerated parent, loss of a loved one, sexual assault). Regardless of the referral concern, the availability of the SBMH services provided the students with the support they required in an accessible setting.

School-Based Mental Health Services

SBMH service programs are in increasing demand due to the robust evidence indicating that mental illness can affect school-age youth academic achievement and overall school experience (Murphy et al., 2015). Additionally, schools are increasingly the primary provider of mental health services for youth (Burns et al., 1995; Merikangas et al., 2011).

Brief history of school-based mental health. SBMH services research is limited (Paternite, 2005), although the concept of serving student health needs in the school setting dates back to the early twentieth century. The placement of nurses in schools occurred at that time due to the recognition that children and adolescents who are in poor health would have difficulty learning. Over time, health services provided in the school setting continued to expand from basic vision/hearing screening and vaccination compliance, to more comprehensive services including sex education and preventative health services. By the early 1990s, the importance of addressing mental health to promote overall well-being became widely recognized and school-based health services were expanded to include mental health services as well. Recognition for the need of inclusion of mental health service delivery in the school setting resulted from factors such as increases in teen pregnancy, adolescent suicide, and increasingly high drop-out rates (Flaherty et al., 1996).

Schools have been identified as prime locations to reach students in need of services to address their emotional and behavioral needs. Thus, it has been recommended that SBMH services be improved and expanded, either by creating new programs or augmenting existing school-based health center services (The President's New Freedom Commision, 2003). The passage of the *Every Child Succeeds Act* signed into law in 2015 authorizes funds for school counseling and mental health programs (Jacob, Decker, & Lugg, 2016). Schools are regarded as

an ideal location for delivery of services because this setting affords increased access to students, reduced stigma for help seeking, and opportunities to implement general mental health promotion and preventative measures (Nabors & Reynolds, 2000; Paternite, 2005).

Impact of school-based mental health services. In community-based mental health clinics, missed appointments are common. In fact, the data available for this matter indicate that there is an estimated 50% no-show rate in these settings (McKay et al., 2004). Increased access to care, reduced stigma, early identification/intervention are among the most important benefits to providing mental health services in the school setting. Meeting youth where they are results in a unique opportunity to have a positive impact on their lives (Hoover & Mayworm, 2017).

When mental health services are provided within a school-based clinic, students are likely to access these services. It is estimated that of the youth who receive mental health services, 70% access them in a school setting (Teich, Robinson, & Weist, 2008). Furthermore, in a recent study examining the rate of mental health visits within 23 school-based health centers, it was reported that 30% of the visits were related to mental illness, and that students who experienced high-risk behaviors or who did not have insurance were more likely to access these services compared to their peers (Bains & Diallo, 2016). Providing services in the school setting also increases the likelihood of students following through with services and can decrease the no-show rate – compared to services accessed in a community clinic – because their provider is in the same building that they are (Catron, Harris, & Weiss, 1998).

Stigma is another known barrier to accessing mental health care. Societal stigma about people who have mental health disorders affects youth directly and is a prominent as stigma related to adults who are identified with mental illness (Mukolo, Heflinger, & Walston, 2010). In general, these youth are perceived as being prone to violence and a threat to the community by

the general public (Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007). Furthermore, youth also tend to view individuals with mental health illness negatively (Wahl, 2002). It is evident that the unfavorable societal perspective on individuals with mental illness is robust, and fear of being labeled, rejected, or perceived negatively can influence a person's likelihood of seeking help for mental health needs. Providing mental health services in schools removes the need to have to go to a designated mental health center and instead provides these services in a familiar and comfortable setting.

Accessibility and reduced stigma will help to provide youth with services they need earlier to ameliorate their difficulties and prevent negative long-term impact. Also, schools are an ideal location for early identification of needs because they can provide routine assessments for emotional and behavioral health (Dowdy et al., 2015). With the nationwide shift to the MTSS model, routine universal mental health screening can help to identify students who might be struggling emotionally, especially those with internalizing disorders who might otherwise not be identified until their issues become so severe that they impact others (Hill, Lochman, Cole, & Greenberg, 2004). Early identification and intervention provide the best long-term outcomes for youth and results in increased treatment engagement (Cauce et al., 2002).

Studies analyzing academic and socio-emotional outcomes for SBMH programs are limited but have promising results (Greenberg et al., 2003; Hoover & Mayworm 2017). For example, one study evaluating outcomes for students who received services through a comprehensive SBMH program resulted in significant reduction of disruptive behaviors and depressive symptoms one year after the program was implemented (Hussey & Guo, 2003). Additionally, a study evaluating a multi-tiered SBMH program resulted in improved behavior,

significantly fewer mental illness for students, and increased acceptance (e.g., beliefs and attitudes about mental illness) for the participants of the study (Walter et al., 2011).

The relationship between mental health and academic performance is complex but there is evidence to support that the two are interrelated (Suldo et al., 2014). Research on the effect of SBMH programs typically focus on mental health outcomes compared to academic outcomes. For instance, a recent review of 67 SBMH evaluations published between 1990 and 2006 revealed that only 24 studies evaluated outcomes for academic performance for youth who received mental health services (Hoagwood, Olin, Kerker, Kratochwill, Crowe, & Saka, 2007). Yet, research analyzing academic outcomes for these students is promising. The consensus is that overall, school mental health interventions led to improved academic performance, fewer disciplinary referrals, and fewer special education referrals (Bruns, Walwrath, Glass-Siegel, & Weist, 2004; Greenberg et al, 2003; Greenberg et al., 2005).

Historically, schools have been one of the primary settings in which children and adolescent receive mental health care (Bains & Diallo, 2016; Burns et al., 1995; Merikangas et al., 2011). Delivery of mental health services in schools helps to reduce the gap in accessibility of services for students who face barriers to receiving treatment for mental illness.

Current Study

There is an emerging body of evidence supporting the efficacy of SBMH services for youth and the relationship between mental illness and school-related outcomes. The overarching objective of SBMH services is to increase access to services for youth who experience barriers by bringing the service to the students. Yet, in order for youth to benefit from these services, they have to be in school. Students who attend schools with high rates of punitive consequences for behavior will likely spend more time out of the classroom and school setting. Students with

mental illness – especially those with externalizing symptoms – are more likely to receive ODRs compared to their peers. As a result, the youth who have the highest need for intervention are less likely to receive it due to exclusionary punishments.

There were two specific aims for this study. The first was to assess the latency between the onset of individual therapy and the first, subsequent ODR event, to estimate the time before therapists might expect a disruption to treatment. A specific prediction regarding the average length of time to first ODR following the onset of therapy was not formulated. The second aim was to assess the degree to which group differences (e.g., sex, race, and referral concern) impacts the latency of first ODR following the initiation of individual treatment, hypothesizing that there would be differences in the occurrence of the first ODR for students who received individual therapy. Predictions regarding the group differences were formulated based on the extant literature. Specifically, the breakdown of this hypothesis is as follows:

Hypothesis 1a: Girls will be more likely to experience a longer time to next incident of an ODR compared to boys.

Hypothesis 1b: Non-White students will experience a shorter time to next incident of an ODR compared to their White peers.

Hypothesis 1c: Students with internalizing symptoms will experience a longer time to next incident of an ODR compared to their peers with externalizing problems.

CHAPTER II: METHOD

Participants and Setting

The current study included a sample of youth in a southeastern state who were part of a research study with Institutional Review Board Approval (See Appendix A). Data collected for this study were provided by two middle schools and one high school in two different counties. County A included a middle and high school and had a population of 47% White, 37% Black, 15% Latina/o, and Other, 1%, according to data from the state. Seventy percent of students who attend these two schools received free or reduced lunch. County B included one middle school, and the demographic group makeup was: Black, 61%; White, 32%; Latina/o, 4%, and Other, 3%, according to data from the state. Ninety-nine percent of students who attended this school received free or reduced lunch. The students who comprised this sample lived in impoverished communities with high levels of poverty.

All data for this study have already been collected with permission from the schools, informed consent from students' parents or guardians, and assent from the students. Data that were used for this study include demographic information, a self-report screening measure of mental illness, and ODR data.

Study inclusion. Participants in this sample were selected from a larger sample of youth who received mental health services. The inclusion criteria for this sample included students whose parent/guardian signed consent for them to receive therapeutic services and permission for research, who provided assent to participate, who had complete data (e.g., ODR and SDQ data) available, and who received individual therapy services. Additionally, some of the students who received mental health services in the school setting were seen by therapists for multiple years while the service was available. For this study, only data collected for students who received

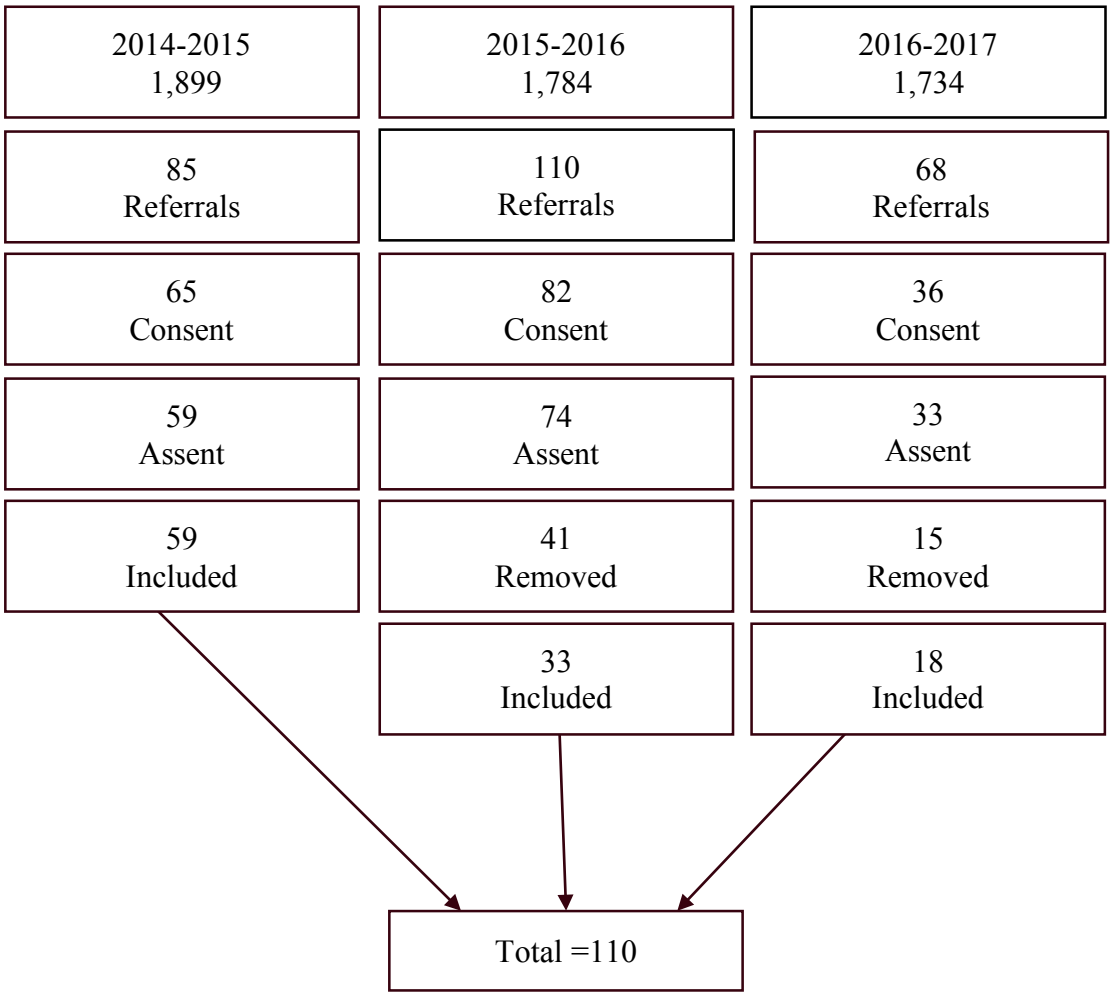

Figure 1. Sample population selection process grouped by academic year, beginning with the combined number of students from both counties. The total number of referrals, parental consent, participant assent, and final number of participants included. For the 2015-2016 and 2016-2017 years, the number of participants removed because it was their second year receiving services is provided.

individual therapy for the first time (i.e., first year of services) were included in the analysis. Figure 1 includes information on the total student population, number of referrals, consent, assent, and final number included in the sample separated by academic year. The data for this study were extracted from three academic years: 2014-2015, 2015-2016, and 2016-1017.

Screening measure of mental illness. Student participants completed the *Strengths and Difficulties Questionnaire* (SDQ) at the beginning of treatment and at the end of treatment to inform the therapeutic approach and as an outcome measure. The SDQ is a brief measure consisting of 25 items which includes five subscales that relate to emotional behaviors, conduct, hyperactivity/inattention, peer relationships and prosocial behavior, that can be completed by the individual, teacher, or parent (Goodman, 1997). The SDQ total difficulties score is the sum of the first four subscales and has been found to be a reliable measure of overall child mental illness that requires follow-up or intervention (Goodman et al., 2010; Achenbach et al., 2008). Additionally, individual subscale scores can be calculated. The rater marks each item presented as *not true*, *somewhat true*, or *certainly true* reflecting on their experiences in the last six months (Goodman, 1997). Cutoff scores are provided to designate the level of impairment, with scores greater than 13 indicating impairment (He, Burstein, Schmitz, & Merikangas, 2013). Studies have found a Cronbach's alpha range of 0.76-0.80 for total difficulties (Goodman, 2001; Muris, Meesters, Eijkelenboom, & Vincken, 2004). Further, the results of a study with a United States sample of adolescents living in urban and suburban areas demonstrated that the self-report version of the SDQ has good internal consistency coefficients for the total difficulties score (α = .79 in the urban sample and α = .83 in the suburban sample) (Ruchkin, Jones, Vermeire, & Schwab-Stone, 2008).

Demographics of the intervention sample. Within the overall sample of youth for who parental consent was obtained (N = 110), one participant refused treatment after signing the assent form; thus, this participant was removed from the final analysis. ODR data were missing for one participant; therefore, this case was removed. Finally, one participant was suspended frequently after the intake session and, for this reason, could never make an appointment for

treatment, therefore, this participant was removed from the analysis as well. The remaining 107 participants were included in the analysis. The mean age for the participants at the beginning of treatment was 13.4 (*SD* = 1.6). Sample descriptive statistics and mean SDQ scores for the sample are included in Table 1. Based on the mean SDQ scores, African-American youth reported the highest levels of impairment compared to other youth in the sample. Additionally, youth who were classified as experiencing primarily internalizing symptoms reported a higher level of impairment compared to those who experienced externalizing symptoms. Boys and girls reported roughly the same level of impairment based on this measure. The racial demographics for both counties were markedly different and distributed unevenly (see Table 2). Additionally, the group sizes for racially defined groups were uneven, and African-American students comprised 63% of the sample. Due to the small number of students in the Latina/o and Multiracial group, it was decided to dichotomize this factor into two variables, White, and non-White. The decision was informed by the extant literature regarding similar referral rates for non-White, minority students compared to White students.

Table 1

Participant Information (N = 107)

Variable	*n*	%	SDQ
Sex			
Female	69	65	15.10
Male	38	35	15.22
Race			
African-American	68	63	16.21
White	21	20	14.95
Latina/o	15	14	11.27
Multiracial	3	3	11.67
Classification of Symptoms			
Internalizing	64	60	15.94
Externalizing	43	40	13.93

Note. SDQ = Strengths and Difficulties Questionnaire. For this scale, higher scores indicate greater difficulties and scores greater than 13 indicate impairment.

Table 2

Race Demographics by School (N = 107)

	Race				
School	White	Latina/o	African American	Multiracial	Total
County A	20	14	22	2	58
County B	1	1	46	1	49
Total	21	15	68	3	107

Description of Intervention

School mental health program. The program from which the data for this study were collected was established in 2007 and provided middle and high school students living in rural settings with mental health services since its inception until May 2017. The program was created in partnership with members of the schools' administration, superintendents, and health personnel to provide mental health services to children and adolescents who would otherwise not be able to access them. Youth received individual and group therapy provided by graduate students in different training programs (e.g., pediatric school psychology, clinical psychology, social work, and rehabilitation counseling). Additionally, behavior consultation services were provided for teachers and parents as needed (Golden, Letchworth, & Ognsuco, 2013). Youth were referred for services by teachers, social workers, school counselors, or other school personnel. Originally, the program served only students in County A. In 2011, the program expanded to serve youth in County B as well.

Graduate student clinicians were supervised by a licensed psychologist, a licensed social worker, and a licensed counselor individually and in a group setting. The clinicans used various therapeutic approaches (e.g., cognitive behavior therapy, motivational interviewing) for

treatment. The therapeutic approach was determined in consultation with their supervisors and tailored to meet individual client needs. Referrals for the adolescents seen by the graduate students often included changing crises and traumatic life events (e.g., incarcerated parent, loss) (Golden et al., 2013). The majority of the cases managed by the graduate students were individual therapy cases. For the purposes of this study, only youth who received individual therapy will be included in the analysis. The average number of sessions for this sample was 11.

Therapeutic approach. The therapeutic approach utilized to deliver services provided to youth by graduate student clinicians was determined by referral concern and consultation with the licensed supervisor assigned to work with the clinician. Individual supervision included onsite meetings which varied weekly depending on the clinician caseload. Clinicians and supervisors discussed case-related content (e.g., progress, ethical concerns, crisis situations), and general site related administrative issues. Group supervision included clinicians from all sites and all supervisors for a two-hour session once a month. The three supervisors of the SBMH program were oriented in behavioral analytic, gestalt, and eclectic therapy approaches. The Adolescent Psychotherapy Treatment Planner (Jongsma, Peterson, & Bruce, 2006) was used to develop individualized treatment plans including specific goals for each student that were reviewed and signed by supervisors.

Participants who were identified as experiencing primarily internalizing behaviors typically received cognitive behavioral interventions, including psychoeducation on the relationship between thoughts, actions, and emotions and increasing adaptive coping skills (Hofman, Asnaani, Vonk, Sawyer, & Fang, 2012). Furthermore, cognitive behavioral therapies such as Acceptance and Commitment Therapy (ACT) and Dialectical Behavioral Therapy (DBT) were utilized when appropriate. ACT approaches targeted increasing psychological flexibility in

order to enhance ability to act toward values (Hayes, Luoma, Bond, Masuda, & Lillis, 2005). DBT approaches targeted enhancing emotional regulation, behavioral self-control, and distress tolerance (Dimeff & Linehan, 2001; Linehan, 1993).

For students who exhibited externalizing behaviors or low compliance with work completion, a behavioral analytic approach was most frequently used. In this approach, a student's prior learning history was evaluated and an analysis of current antecedents and consequences affecting frequency and intensity of behaviors in the current environment was considered (Cooper, Heron, & Heward, 2007). Functional behavioral assessments were frequently conducted using teacher and student interviews and direct observations. Additionally, a problem-solving consultation model (Tilly, 2008) was utilized to include parents, teachers, and school personnel to identify target behaviors, understand the contributing factors, make a plan, and progress monitor effectiveness of function-based interventions. Contingency-based interventions were frequently used to increase on-task behaviors and work completion (Hawkins & Axelrod, 2008).

Measures

Office discipline referrals. ODRs were provided by the respective counties for students who received individual therapy once parental consent was provided. ODR data were collected for each individual student, including: date of the infraction and a standardized description of the infraction. The dates for each ODR were entered into a database and coordinated with the treatment dates for the analysis. Cases in which a student had an ODR the same day as a treatment session were each analyzed individually and counted as occurring after the session because there was no mention of the referral in the case note for the date in which both events

happened on the same day. The same method was applied consistently for all cases for which this occurred.

ODRs were grouped into four categories: noncompliance (truancy, late to class, skipping, dress code violation, cell phone use), delinquency (weapons, drugs, alcohol, vandalism, theft, cheating), aggression (fighting, physical threat to staff/peer, verbal harassment, bullying, endangering behavior), and disrespect (use of profanity toward peer/staff, disruptive behavior, disrespect, lying). The categories from the Kaufman and colleagues (2010) study were used as a guide for the categorical groups for this study. The coding language used for this study is derived from the North Carolina Discipline Data Reporting Procedures published by the North Carolina Department of public instruction (2017).

Additionally, whole school ODR data were provided by the district data managers for the academic years that were used for the analysis, including data for the total number of students in each school per year, and the total number of students who received at least one ODR that academic year. With this information, whole school rates of ODR occurrence of 27% and 66% were calculated for County A and County B, respectively. Finally, for the sample of participants, the ODR data were grouped into four categories: noncompliance, delinquency, aggression, and disrespect. Table 3 displays a frequency count for each of the categories grouped by sex and race.

Session log. For each student who received therapy, a log was completed for every contact the clinician had with them. The date of the contact and a description of the contact (e.g., intake, assessment, individual therapy) was included in this log. For this study, the dates of all individual therapy treatment sessions were extracted and entered into the database for the analysis, beginning with the first session.

Table 3

Frequency of Office Discipline Referrals by Category

	Noncompliance *N* (%)	Delinquency *N* (%)	Aggression *N* (%)	Disrespect *N* (%)	Total *N* (%)
Sex					
Female	23 (69.7)	2 (25)	26 (55.3)	95 (47.3)	146 (49.5)
Male	10 (30.3)	6 (75)	21 (44.7)	106 (52.7)	143 (48.5)
Race					
African-American	24 (72.7)	4 (50)	40 (93)	193 (91.4)	261 (88.4)
White	7 (21.2)	2 (25)	1 (2.3)	8 (3.8)	18 (6)
Latina/o	2 (6.1)	1 (12.5)	1 (2.3)	9 (4.3)	13 (4.4)
Multiracial	0 (0)	1 (12.5)	1 (2.3)	1 (0.5)	3 (1.2)

Treatment plan. Each therapist assigned to a case completed a Treatment Plan form for their client within three treatment sessions; it was used to conceptualize each individual case. The Treatment Plan form includes the initial referral reason, information collected during the intake session, assessment and diagnostic information (e.g., SDQ), treatment focus, and goals/objectives for therapy to best serve the client. The form was completed by the therapist and the supervisor assigned to the case. The Treatment Plan form was used as a tool to determine treatment goals after considering client input, and it was utilized to determine whether the client was experiencing primarily internalizing symptoms or externalizing symptoms. A copy of the Treatment Plan form is included in Appendix B.

Data Analysis

Survival analysis methods were conducted for all students who received individual therapy, including Cox regression to examine differences in rates of survival based on group membership (e.g., sex, race, internalizing or externalizing symptoms) to investigate if differences existed between groups.

Survival analysis. Survival analysis is a set of methods used to determine the length of time until the occurrence of an event of interest (Kleinbaum & Klein, 2005; Singer & Willett, 1993). Originally, survival analysis was developed for use in epidemiological and biomedical research, and the event of interest was death; hence the term "survival". The use of the survival analysis method has been demonstrated to have high utility in social sciences as well, and has been used to evaluate outcome data for clinical assessment and treatment evaluation (Luke & Homan, 1998). For example, the following clinically meaningful events could be modeled using survival analysis: dropping out of school, leaving treatment program, relapsing (e.g., drugs, alcohol), and suicide (Corning & Malofeeva, 2004; Keiley & Martin, 2005). Survival methods can be used to analyze data from experimental, quasi-experimental, or observational study designs. The event of interest is operationally defined and the analysis is conducted on the length of time to that event (e.g., time to relapse after leaving treatment) (Luke & Homan, 1998).

There are two basic components to a survival analysis model: survival time and censoring status. Survival time, or time to event, is the outcome variable in the analysis and it can be measured by any unit of time (e.g., minutes, days, months). Censoring refers to cases where participants leave the study before experiencing the event of interest (i.e., right-censoring). Censoring can happen for a variety of reasons, including participant drop-out or the treatment ends before the event occurs (Luke & Homan, 1998). Additionally, the hazard function – which refers to the rate of failure – is of interest when conducting a survival analysis because it demonstrates how likely an individual is to have an event occur at a specific time (Kleinbaum & Klein, 2005). In survival analysis, descriptive statistics are displayed in a life table. The life table summarizes survival times for the sample as a whole – how long it takes for an event to

happen and includes survival functions, hazard rates, and information on censored cases (Keiley & Martin, 2005)

For this study, the event that occurs in a given interval is the occurrence of the first ODR after therapeutic services commence. The unit of time which was used to measure the time to event is time between sessions, meaning an ODR occurred in the time that passed from one session to the next. The time between sessions for this study was calculated using the dates of each session for each participant (M = 16, SD = 7). To test the hypotheses related to differences between groups of students (e.g., sex, race, internalizing/externalizing), a Cox regression was conducted to determine if certain groups respond better to treatment.

Cox regression is premised on the proportional hazards assumptions which include that the observations are independent and that the hazard ratio remain constant over time. The assumptions were verified utilizing a graphical technique by inspecting the log-minus-log plots and a goodness-of-fit (GOF) test. The log-minus-log plot is one method to assess graphically whether the assumption of proportional hazards is reasonable. In order for the assumption to be satisfied, the log-minus-log plot should include separate lines that are approximately parallel to each other. The GOF test includes calculating residuals for every participant who has an event, and plotting the residuals against rank time. To meet the assumption, the plot should not show a clear trend over time and should be generally close to zero, supporting the null hypothesis that there is no correlation between computed residuals and the ranked failure time (Kleinbaum & Klein, 2005).

CHAPTER III: RESULTS

Life Table

A life Table was computed for the entire sample of students and its results are provided in Appendix C. The life table includes information on the number of events (i.e., ODRs received), the number of censored cases, the cumulative survival rate of the sample recalculated after each time an event occurs, and the hazard rate. The total number of recorded events for the whole sample was 35; there were 72 censored cases. The greatest number and proportion of ODRs occurred within the first three sessions, with 25% of the sample experiencing an event during this time. The highest hazard rate was during the time between the first and second sessions. Also, although the highest number of sessions was 28, no events occurred after 12 sessions and the average number of sessions was 11. By the end of the treatment period, 53% of the entire sample had not received an ODR.

Due to the lack of control group for this study, a rate of ODRs for the whole student body, during the 2014-2017 academic years, for each school was calculated to have a point of reference for comparison to the treatment sample. ODR data for the entire school population were provided by the data managers for this analysis, and these data were used to calculate the average rate of occurrence of at least one ODR for each student in the school. The average combined rate over the three years for both counties was 41%, indicating that 59% of youth in the whole sample did not receive an ODR during the same time period.

It was evident from the available whole school data that there was a stark difference in disciplinary practices between the two counties. County A schools had an average combined ODR rate of 27%, indicating that 73% of the whole school population had zero ODRs in the time period. In contrast, students in County B had an average combined rate of 66%, indicating that

34% of the school population had zero ODRs. For this reason, a second life table analysis which grouped the sample by the two counties, was also computed. The life table is included in Appendix D. Notably, the survival rates between both groups differed significantly, (X^2[1, N = 107] = 16.13, p = .000). For both counties, the greatest number of ODRs occurred within the first three sessions. Yet, County B had a higher proportion of students experiencing an ODR compared to County A by the end of this time, 37% compared to 10%. In County A the final, cumulative survival rate was 77%; in County B it was 27%.Figure 2 includes the survival curve for the sample grouped by county.

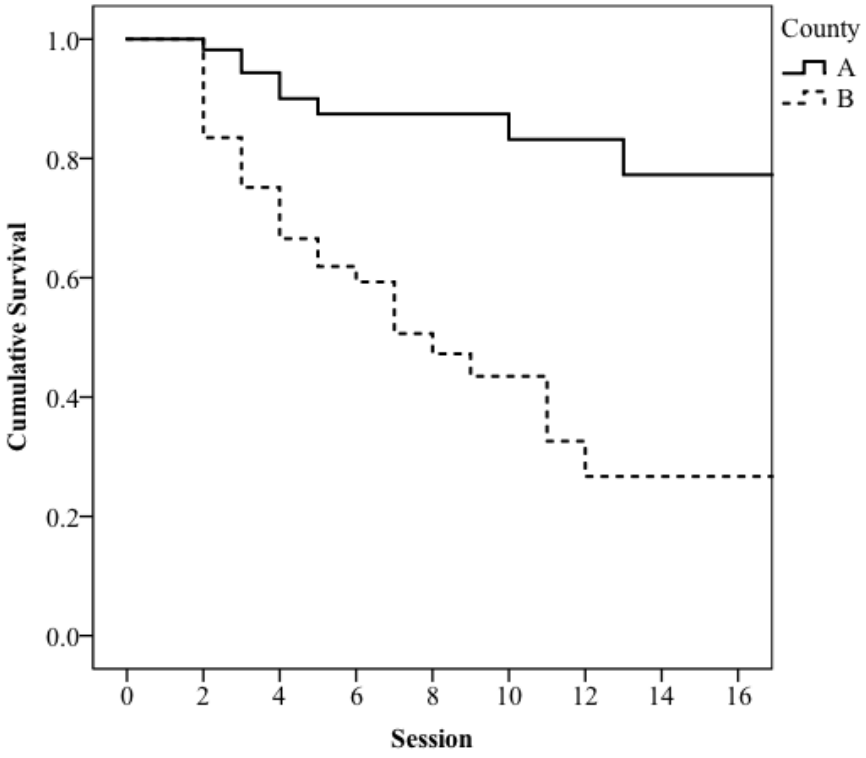

Figure 2. Cumulative survival on occurrence of ODR grouped by county.

Cox Regression

Hypothesis 1. Hypothesis 1 examined potential group differences in the occurrence of an ODR after individual therapy commenced based on individual factors (i.e., sex, race, classification of symptoms) for the participants in the sample. The hypothesis was broken down into three components (i.e., 1a-1c). A Cox regression was utilized to examine these differences

on each proposed factor. The proportional hazards assumptions were computed for each factor. A visual inspection of the log-minus-log plot revealed parallel lines for sex and classification of symptoms (i.e., internalizing and externalizing), satisfying the requirements of this assumption, but not for race. Additionally, the GOF test resulted in no significant correlations, and the null hypothesis was not rejected for sex (p = .947), classification of symptoms (p = .326), and race (p = .205), meeting the assumption. Results from the Cox regressions are detailed below.

Hypothesis 1a, sex differences. It was predicted that girls would be more likely to experience a longer time to next ODR compared to boys. When comparisons were made by sex, boys experienced a shorter time to infraction compared to girls. Additionally, girls had a higher survival rate by the twelfth session, approximately 65%, compared to boys at this same time, approximately 40% (See Figure 3). The difference between the cumulative survival rates was significant (X^2[1, N = 107] = 6.74, p = .009), indicating that sex does play a role in latency to ODR when controlling other variables.

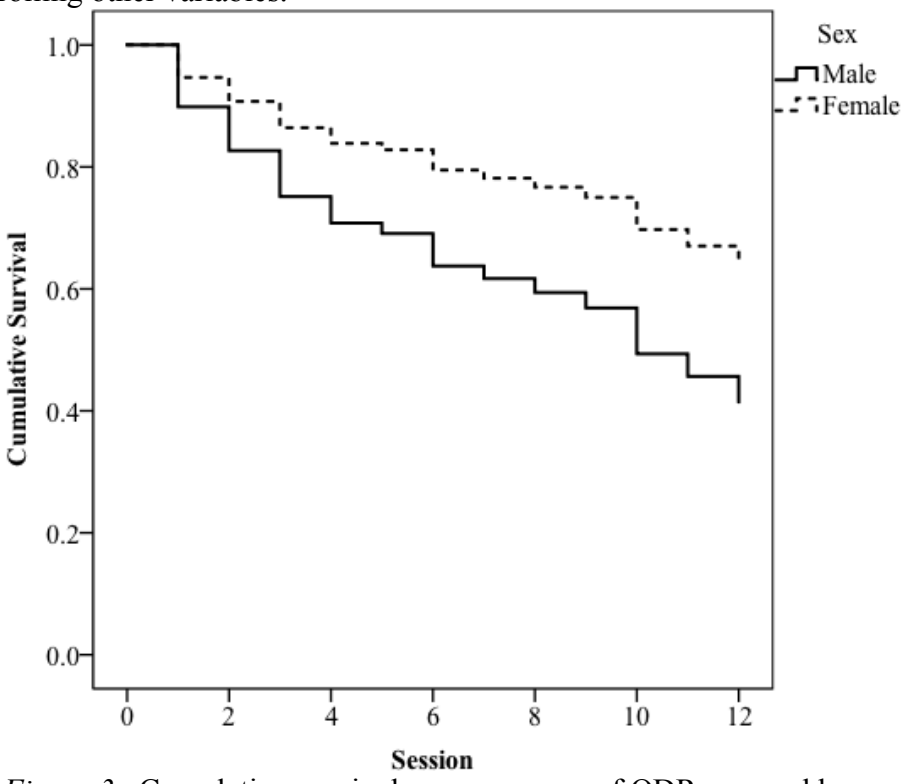

Figure 3. Cumulative survival on occurrence of ODR grouped by sex.

Hypothesis 1b, race differences. It was predicted that non-White students would experience a shorter time to next infraction compared to their White peers. Based on the survival curves (See Figure 4), both groups appear to have similar curves throughout the entire length of time. The results are inconsistent with what was expected from this sample. County B has a higher proportion of non-White students with a shorter latency of ODRs compared to white students and therefore it was expected that the comparison between race would yield similar survival rates. The analysis produced non-significant results, ($X^2[1, N = 107] = 0.610$, $p = .435$). When differences among races were compared, it was clear that the assumption of proportional hazards was violated because a visual inspection of the log-minus-log graph presented lines that were not completely parallel. Therefore, this comparison is deemed inconclusive.

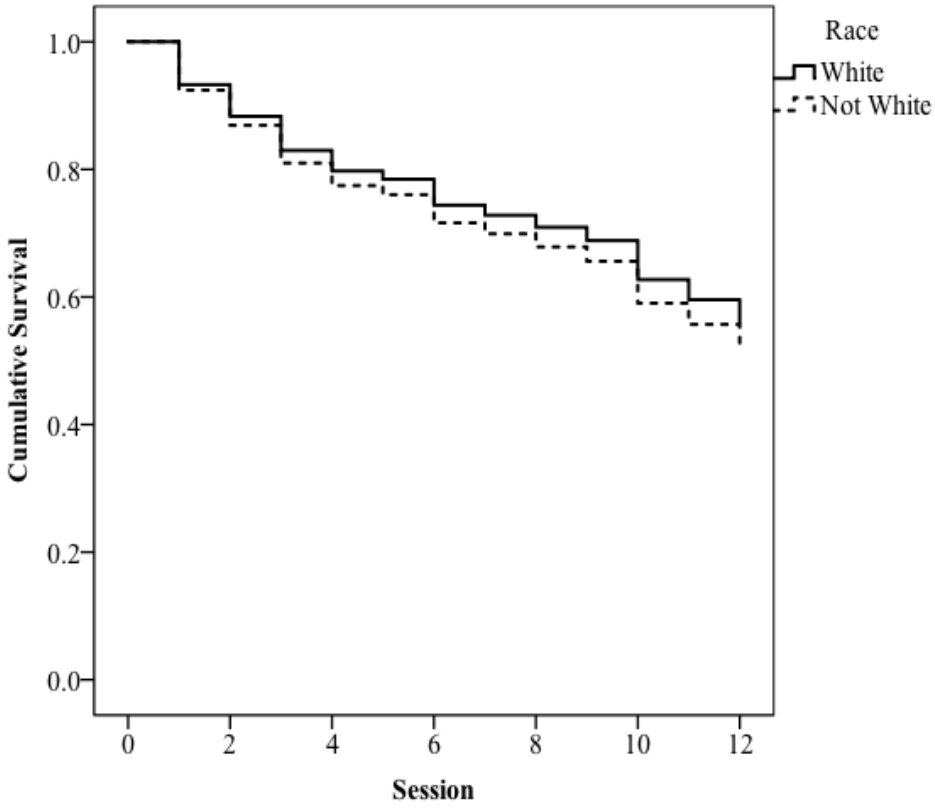

Figure 4. Cumulative survival on occurrence of ODR grouped by race.

Hypothesis 1c, classification of symptoms. It was predicted that youth with internalizing symptoms would experience a longer time to next incident of an ODR compared to their peers with externalizing problems. When grouped by classification of symptoms, youth who were identified as having externalizing symptoms had a shorter latency to the first ODR and a steeper decline on the survival curve compared to youth with internalizing symptoms (See Figure 5). The survival rate by the twelfth session for youth with internalizing symptoms was approximately 65%, compared and for youth with externalizing symptoms at the same time, approximately 50%. This supports the original hypothesis; however, it falls short of significance ($X^2[1, N = 107] = 2.45, p = .118$).

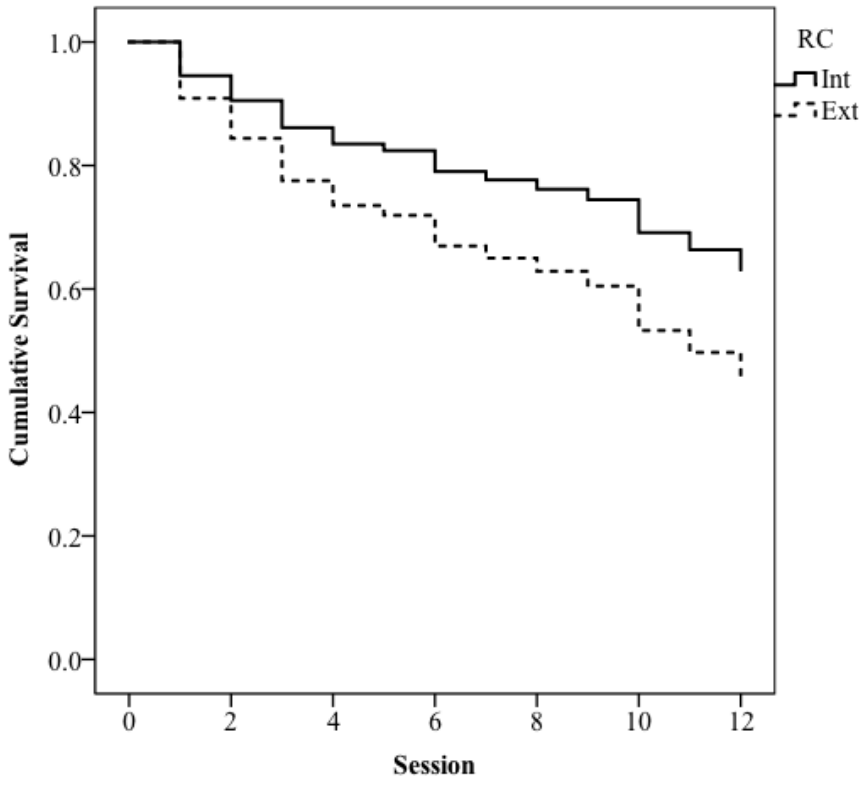

Figure 5. Cumulative survival on occurrence of ODR grouped by classification of symptoms.

CHAPTER IV: DISCUSSION

Summary of Results

Results from the life table analysis to address the first research aim of investigating the latency to the occurrence of an ODR for the sample as a whole (i.e., both counties) indicated that students who received individual therapy services experienced the highest probability of receiving an ODR early in treatment (i.e., during the time between the first three sessions). It was presumed that evident differences between disciplinary practices of the two counties might have influenced this outcome. The assumption was supported by data on the overall rate of ODRs for the entire student population for each county, which were made available by the school data managers and were used for convenience as a reference point for the sample. With these data, a rate from the number of students who received at least one ODR during the academic school year was calculated. County B had a rate of ODR occurrence for the whole school of 66% compared to the combined rate of County A, which had an overall rate of 27%. Based on this information, it was concluded that the two counties had different approaches to disciplinary action.

For this reason, a second life table analysis was conducted, and the sample was divided by county. There were significant differences on the survival rates for youth from the different counties. Although the highest probability of receiving an ODR was still within the first three sessions for both counties, students who attended County B received ODRs at a higher rate and the latency to the first ODR was shorter after services commenced, compared to County A. Additionally, there was not a change in the time when no more events occurred when comparing the two counties. For the whole sample, there were no events after the twelfth session. The data are not suggesting that we can say with confidence that this number of sessions is the most

effective. Rather, it supports what clinicians and researchers in mental health service delivery already know - the effects of therapy are not instant. In fact, a review of clinical trials literature revealed that, between 57.6% and 67.2% of individuals who receive psychotherapeutic services improve within an average of around 13 sessions (Hansen, Lambert & Forman, 2002).

Cox regression analyses were conducted to investigate the second research aim, which included predictions relating to differences of the latency on the occurrence of ODRs after individual therapy services commenced for youth grouped by sex, race, and internalizing/externalizing symptoms.

Comparisons based on sex indicated that girls had a significantly longer time to ODR compared to boys, as predicted. Girls made up a higher proportion of the sample, yet still experienced fewer rates of ODRs compared to boys. The result could be a product of the fact that boys are at higher risk of receiving an ODR in general, and highlights the importance of investigating ways to reduce the incidence of ODR for boys by providing targeted therapeutic services to reduce disruptive behaviors that result in higher rates of ODRs (Kaufman et al., 2010; Pas et al., 2011).

For comparisons based on racially defined groups, the student sample was grouped in two, White, and non-White, in part due to the small number of students in the Latina/o and Multiracial categories. The decision was informed by the extant literature regarding similar referral rates for non-White, minority students compared to White students (Kaufman, et al., 2010). It was predicted that non-White students would experience a shorter time to the next ODR compared to their White peers. The survival curves included similar patterns for both groups related to the latency of the first ODR, and cumulative survival rates. The result of the

Cox regression grouped by factor of race did not meet the assumptions of a Cox regression, and therefore these results were deemed inconclusive.

Finally, for comparisons based on classification of symptoms, youth with externalizing symptoms experienced a shorter time to infraction and a higher proportion of them had an event compared to youth with internalizing symptoms. Although the results fell short of significance, they supported the hypothesis, indicating a need for special considerations for students who have a higher risk to to receive ODRs. Youths who exhibit externalizing symptoms are more likely to be labeled as a behavior problem and sent out of class for disruptions than those with internalizing symptoms (Flisher et al., 1996; Flaherty, Weist, & Warner, 1996). Thus, these youths receive more referrals for services.

The occurrence of an ODR was selected as a variable of interest due to research on the relationship of ODRs and negative long-term outcomes for students who receive them and because they result in exclusionary punishments (e.g., sent to office, suspension) that results in making students unavailable for treatment (Irvin et al., 2004; Sugai et al., 2000). The current study did not include a control group or a standardized manipulated variable; therefore, these results should be interpreted with caution.

Relevant Implications

Overall, the results support a higher risk for the occurrence of an ODR in the beginning of treatment (i.e., the time between the first three sessions). A potential implication of this finding for therapists operating in the school setting is that they might expect the youth they are working with will experience ODRs early in their treatment, before there is an opportunity for them to benefit from these services. Additionally, it is possible that these ODRs will make them

unavailable for treatment due to exclusionary punishments, therefore undermining one of the primary goals of SBMH services which is to increase access to care for vulnerable youth.

The youth who experienced the highest levels of impairment based on their self-reported SDQ scores were those who identified as African-American. Although the comparison made between racially defined groups for this sample was inconclusive, the comparison of the two counties resulted in a significant difference for the cumulative rate of survival. There was also a difference on the latency to an ODR. Students who went to school in County B experienced a shorter time to ODR and lower overall rate of survival compared to County A. Also, County B had a higher proportion of African-American students who received individual therapy compared to County A; specifically, the sample was comprised of 94% African-American students. What this means for this sample is that the students who are reporting the highest level of need, are also the ones who are more likely to be subjected to exclusionary discipline practices.

Prior research has indicated that African-American youth are more likely to receive harsh punishment compared to their White peers, for the same infractions (Kaufman et al., 2010; Skiba et al., 2011). Because the consequences of an ODR were not data collected for this study, it is not possible to state with certainty that this was the reason; however, it is possible that this was an explanation for the higher frequency and rates of ODRs in County B. Data from the state indicate that 96% of students who attended this school in County B were African-American, even though the whole county only included 61% African-Americans in its population. In comparison, the schools in County A 35% of students were identified as African-American, compared to the total 47% of African-Americans who live in County A, which is more proportionate to the overall population. It is speculated that this example is the product of de facto segregation occurring in this country. In fact, it is estimated that between the years 2000

and 2014, the percentage of African-American, Latina/o and low-income students in racially isolated schools nearly doubled (Frankenberg & Taylor, 2018). In these schools which have uneven demographics, with a high proportion of minority students, it is likely that there are exclusionary and punitive forms of discipline which lead to less time spent in the classroom and results in poor outcomes for their students, meaning that they will be likely to fall behind academically, drop out of school, be expelled, be unemployed, and be involved with the juvenile/criminal justice system (Irvin et al., 2004; Lee et al., 2011; Predy et al., 2012; Skiba & Peterson, 2000).

Given the high stakes consequences for youth who are frequently referred for ODRs and the related probability that they are the most at-risk, a preventative approach should be employed to identify and provide interventions to those who are in need sooner. At its universal level (i.e., Tier 1) the MTSS model is promising because it includes early, universal screening for behavioral concerns and establishes Positive Behavior Support Systems (PBIS) to address student behavior (Benner et al., 2013). Notably, the implementation of PBIS in schools has been found to reduce the number of ODRs assigned to students (Bradshaw, Mitchell, & Leaf, 2010). Early, universal screening of students for mental illness could also result in increased supports for those who need it, and, a referral for mental health intervention instead of a referral to the office.

The schools in County A were in the beginning stages of implementing the prevention model during the time of data collection for this study. It was not the case in County B. With this sample, it was evident that high rates of ODRs actually functioned as a potential barrier to SBMH services. Perhaps the complete adoption of the MTSS model - as the deadline for mandatory implementation in the state that the study was conducted in approaches - will result in

the prevention of unjust disciplinary practices for the most vulnerable youth and increase the availability of resources and access to the interventions they need to succeed.

In order for therapists working in the school setting to take full advantage of the access it provides to at-risk children, it is important to consider becoming integrated into the prevention effort as part of the MTSS model, providing teacher consultation or even problem-solving team membership (e.g., PBIS). Competent therapists who can actively support tiered prevention models that reduce the need for exclusionary punishments will be able to truly reach at-risk children. ODRs can directly undermine Tier 3 efforts such as the services that were provided by the SBMH program in this study. ODRs will not pose a barrier for the most vulnerable students to receive the services that they need if they are brought under control by an effective Tier 1-level prevention.

Limitations of Present Study and Future Directions

The current study had several limitations. First, this study did not employ a randomized sampling strategy. Rather, the sample consisted of participants primarily obtained via referrals made by teachers and school personnel. This poses a potential limitation due to the discrepancy in referrals and bias in who is more likely to be referred. Furthermore, another limitation related to the sample is that there was no control group for comparisons on outcomes. A whole school rate of ODRs for students who received at least one ODR in the same year was utilized to provide information about general school disciplinary practices. This poses several limitations. First, comparing a high-risk sample to the general population is not ideal because of how discrepant the two samples can be. Also, no information was collected on the frequency or the types of referrals received by the whole school sample which also might be discrepant. ODR data are convenient to use because they are extant and have been found to have predictive

validity for later outcomes (Irvin et al., 2004; Sugai et al., 2000). However, a disadvantage to using these data is the differences in referral practices from school to school (Wright & Dusek, 1998). Although the entry of the referrals into the school database is standardized, it is possible that the referrals were not assigned in a consistent manner. The current study did not collect descriptive information for referrals and did not account for potential biases that might have occurred when ODRs were made.

The overarching goal of the SBMH program was to increase access to mental health services for youth who experienced emotional difficulties and barriers to receiving care. This person-centered approach to services was not conducive to tight experimental control. Although the student clinicians who provided services for this program utilized evidence-based services with their clients and were supervised by licensed clinicians, there were a variety of therapeutic approaches utilized for each case. For this reason, it is likely that the impact of the interventions utilized varied across clinician-client dyads.

Modifications to future research designs should include process-oriented measurement of therapeutic processes to more adequately identify mechanisms of change in the context of SBMH services. Also, therapist involvement in MTSS teams to increase the effectiveness of preventive assessment and services should be considered in future research designs. Measures of collaboration and satisfaction completed by the MTSS team related to support and services provided by the therapist would be beneficial. Measurement of additional variables including more sophisticated demographic information (e.g., SES) and other variables beyond demographic data (e.g., academic performance and attendance) could further identify important sample characteristics of students more or less likely to benefit from SBMH services, in addition to facilitating identification of additional supports needed for students. Additionally, a more

stringent method to calculating ODRs should be utilized to ensure consistency. Finally, additional disciplinary data (e.g., suspensions, juvenile justice referrals) could be beneficial to examine rates of referrals and school disciplinary practice.

Conclusion

Youth who attend schools which habitually use exclusionary punishments for disruptive behaviors are more likely to spend time out of the classroom/school compared to youth who attend schools which implement preventative services for at-risk students. Frequent ODRs delivered to students can be counterintuitive to the primary aim of SBMH services, which is to increase access to care for students who might not otherwise be able to get it. If youth are frequently removed from the school setting, they will not benefit from this on-site service. The current study assessed the latency between the onset of individual therapy and the first, subsequent ODR event, to estimate the time before therapists might expect a disruption to treatment when working in the school setting and the degree to which group differences (e.g., sex, race, and classification of symptoms) impacts the latency of first ODR.

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APPENDIX A: IRB APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** · **www.ecu.edu/ORIC/irb**

Notification of Continuing Review Approval: Expedited

From: Social/Behavioral IRB
To: Jeannie Golden
CC: Ana LePage
Date: 5/30/2017
Re: CR00005984
UMCIRB 09-0493
[IMPORTED] ECU-Greene County-Rocky Mount Partnership to Improve School-Based Mental Health Services: Student Progress

The continuing review of your expedited study was approved. Approval of the study and any consent form(s) is for the period of 5/30/2017 to 5/29/2018. This research study is eligible for review under expedited categories #5 and #7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Document	Description
(DOCX Version) Effects of School-Based Behavioral Counseling and Support Services on Rural Adolescents(0.03)	Study Protocol or Grant Application
(PDF Version) Effects of School-Based Behavioral Counseling and Support Services on Rural Adolescents(0.04)	Study Protocol or Grant Application
Academic Confidence Questionnaire(0.02)	Surveys and Questionnaires
Assent(0.03)	Consent Forms
BASC Parent 12-21.pdf(0.01)	Surveys and Questionnaires
BASC Parent 6-11.pdf(0.01)	Surveys and Questionnaires
BASC Self Report 8-11.pdf(0.01)	Surveys and Questionnaires
BASC Self-Report 12-21pdf.pdf(0.01)	Surveys and Questionnaires
BASC Teacher 12-21.pdf(0.01)	Surveys and Questionnaires
BASC Teacher 6-11.pdf(0.01)	Surveys and Questionnaires

Document	Description
Behavior Checklist(0.01)	Surveys and Questionnaires
Children's Perceived Academic Self-Efficacy subscale from The Morgan-Jinks Student Efficacy Scale (MJSES)(0.01)	Surveys and Questionnaires
Clinician Summary(0.01)	Data Collection Sheet
Combined BASC(0.01)	Standardized/Non-Standardized Instruments/Measures
Consent Form Tutoring(0.03)	Consent Forms
Consultation Referral Form.jpg(0.01)	Additional Items
Demographic Form(0.01)	Additional Items
Dissertation Data Sheet.pdf(0.01)	Data Collection Sheet
Evaluation of Services(0.01)	Surveys and Questionnaires
GAPS Adolescent Screener(0.01)	Surveys and Questionnaires
Impairment Rating Scale - Parent form(0.01)	Surveys and Questionnaires
Impairment Rating Scale - Teacher form(0.01)	Surveys and Questionnaires
Letters of Support(0.01)	Dataset Use Approval/Permission
Outcome Rating Scale(0.01)	Surveys and Questionnaires
Parental Consent Form For Student Record Review for Counseling/Consultation(0.05)	Consent Forms
Participant Outcomes(0.01)	Data Collection Sheet
Quarterly Tracking Forms(0.01)	Data Collection Sheet
Quarterly Tracking Sheet(0.01)	Additional Items
Scale of Intrinsic and Extrinsic Motivation(0.01)	Surveys and Questionnaires
SDQ-P(0.02)	Surveys and Questionnaires
SDQ-P_FU(0.02)	Surveys and Questionnaires
SDQ-S(0.03)	Surveys and Questionnaires
SDQ-S FU(0.02)	Surveys and Questionnaires
SDQ-T(0.02)	Surveys and Questionnaires
SDQ-T FU(0.02)	Surveys and Questionnaires
Session Rating Scale(0.01)	Surveys and Questionnaires
Student Tracking Form(0.01)	Data Collection Sheet
Thank You for Recent Consultation Referral Form.jpg(0.01)	Additional Items
Title V- Assent(0.01)	Consent Forms
Title V- Consent(0.01)	Consent Forms
Tutoring assent form(0.01)	Consent Forms
Youth Tutoring Survey(0.01)	Surveys and Questionnaires

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: TREATMENT PLAN FORM

Treatment Plan – Individual
***** Complete within 3 sessions***
☐ GCHS ☐ GCMS ☐ PMS ☐ Other: _____

Client: _____ Therapist: _____ Date: _____

- Revisions indicated with initials and dates

Problem(s) or Concern(s)

1. _____
2. _____
3. _____

Assessment and Diagnostic Information

_____

_____

Treatment Counseling Focus

_____

_____

Strengths

_____

_____

Goals *(Global and related to problem)*

1. _____
2. _____
3. _____

Objectives and Interventions (*Objectives are behavioral; Interventions are implemented by counselor/consultant and/or practiced by client)*

Obj. 1. (Goal #) _____

Interventions

1. _____
2. _____

3. _____

Obj. 2. (Goal #) _____

Interventions

1. _____
2. _____
3. _____

Obj. 3. (Goal #) _____

Interventions

1. _____
2. _____
3. _____

Treatment Plan Evaluation with Supervisor(s)

Treatment Plan: ☐ Approved ☐ Approved with revisions ☐ Not Approved: _____

Revisions with Rationale and Type of Modification: ☐ Not Applicable

_____

_____

Date: _____

Therapist's Signature: _____

Supervisor Signature: ☐ Jeannie Golden, PhD _____

☐ Beverly Sheaffer, PhD _____

☐ Phyllis Hazel, MSS _____

APPENDIX C: LIFE TABLE FOR OVERALL SAMPLE

Session	*n* Entering Interval	*n* With ODR	*n* Censored at the End of Interval	Hazard Function	Survival Function
0	107	0	0	.00	1.00
1	107	9	5	.09	.91
2	93	6	4	.07	.85
3	83	6	9	.08	.79
4	68	3	9	.05	.75
5	56	1	2	.02	.74
6	53	3	5	.06	.69
7	45	1	5	.02	.68
8	39	1	5	.03	.66
9	33	1	6	.03	.64
10	26	2	1	.08	.59
11	23	1	2	.05	.56
12	20	1	5	.06	.53
13	14	0	0	.00	.53
14	14	0	1	.00	.53
15	13	0	1	.00	.53
16	12	0	3	.00	.53
17	9	0	2	.00	.53
18	7	0	0	.00	.53
19	7	0	2	.00	.53
20	5	0	2	.00	.53
21	3	0	0	.00	.53
22	3	0	0	.00	.53
23	3	0	1	.00	.53
24	2	0	0	.00	.53
25	2	0	1	.00	.53
26	1	0	0	.00	.53
27	1	0	0	.00	.53
28	1	0	1	.00	.53

APPENDIX D: LIFE TABLE GROUPED BY COUNTY

	Session	*n* Entering Interval	*n* With ODR	*n* Censored at the End of Interval	Hazard Function	Survival Function
County A	0	58	0	0	.00	1.00
	1	58	1	4	.02	.98
	2	53	2	4	.04	.94
	3	47	2	7	.05	.90
	4	38	1	6	.03	.87
	5	31	0	0	.00	.87
	6	31	0	2	.00	.87
	7	29	0	3	.00	.87
	8	26	0	4	.00	.87
	9	22	1	3	.05	.83
	10	18	0	1	.00	.83
	11	17	0	1	.00	.83
	12	16	1	4	.07	.77
	13	11	0	0	.00	.77
	14	11	0	1	.00	.77
	15	10	0	1	.00	.77
	16	9	0	3	.00	.77
	17	6	0	2	.00	.77
	18	4	0	0	.00	.77
	19	4	0	1	.00	.77
	20	3	0	0	.00	.77
	21	3	0	0	.00	.77
	22	3	0	0	.00	.77
	23	3	0	1	.00	.77
	24	2	0	0	.00	.77
	25	2	0	1	.00	.77
	26	1	0	0	.00	.77
	27	1	0	0	.00	.77
County B	0	1	0	1	.00	.77
	1	49	0	0	.00	1.00
	2	49	8	1	.18	.84
	3	40	4	0	.11	.75
	4	36	4	2	.12	.67
	5	30	2	3	.07	.62
	6	25	1	2	.04	.59
	7	22	3	3	.16	.51
	8	16	1	2	.07	.47
	9	13	1	1	.08	.43

	10	11	0	3	.00	.43
	11	8	2	0	.29	.33
	12	6	1	1	.20	.27
	13	4	0	1	.00	.27
	14	3	0	0	.00	.27
	15	3	0	0	.00	.27
	16	3	0	0	.00	.27
	17	3	0	0	.00	.27
	18	3	0	0	.00	.27
	19	3	0	0	.00	.27
	20	3	0	1	.00	.27