A DESCRIPTIVE ANALYSIS OF TEACHERS' USE OF EVIDENCE-BASED PRACTICES ACROSS ETHNICITY, GENDER, AND DISABILTIY RISK

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The undersigned, appointed by the Dean of the Graduate School,

have examined the dissertation entitled

A DESCRIPTIVE ANALYSIS OF TEACHERS' USE OF EVIDENCE-BASED PRACTICES ACROSS ETHNICITY, GENDER, AND DISABILTIY RISK

Presented by Ambra L. Green,

A candidate for the degree of doctor of philosophy,

And hereby certify that, in their opinion, it is worthy of acceptance.

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DEDICATION

To Ashton, Austin, Avery, & Alanna,

As African American boys and girls you will have experiences that some of your friends may not have.

I've had those experiences.

As African American boys and girls the odds are stacked against you...statistics are not in your favor.

They weren't for me either.

However, I dedicate my dissertation to each of you as a testament of what you can do.

Seek God (Matthew 6:33) - Listen to God (John 10:27) - Walk in His purpose (Jeremiah 29:11)

Defy the odds.

Love you.

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ABSTRACT

The purpose of this study was to determine to what extent teachers use evidence-based practices during classroom instruction and if those practices were applied differentially across demographic groups (i.e., ethnicity, gender, and disability risk) in Title 1 schools located within the city limits of a large urban center. A descriptive analysis was used to answer the research questions. Results of the study provide evidence that teachers use evidence-based practices at rates lower than advocated in the literature. Additionally, results demonstrated that when teachers did use evidence-based practices they were distributed inequitably across demographic groups. Findings from the study support the need to research parsimonious strategies to increase teachers' equitable use of evidence-based practices.

CHAPTER I

LITERATURE REVIEW

Students with or at-risk of disabilities often exhibit challenging behavior. According to the Individuals with Disabilities Education Act (IDEA, 2004), challenging behavior is a defining characteristic among students identified as having a serious emotional disturbance (SED). Students with or at-risk of SED (hereafter emotional or behavioral disorder [EBD] to reflect common terminology used in the literature) generally show internalizing and/or externalizing behavior patterns to the point where it impacts their overall social and academic functioning and impedes their educational performance within school. Students with internalizing behaviors generally experience anxiety, depression, and tend to withdraw from others. Students with externalizing behaviors typically engage in aggression towards peers and adults, disruption to the learning environment, and demonstrate poor prosocial skills, among other behaviors.

Slightly less than 1% of school children are served in special education under the category of EBD (Forness, Kim, & Walker, 2012). Based on their literature review, Forness et al. (2012) note that a point prevalence rate of 12% and cumulative prevalence rate of 25% for school children with EBD is reasonable. Point prevalence refers to a count of the number of children who meet criteria for a disorder or condition at the particular point in time assessed whereas, cumulative prevalence is a count in the number of children who might have met the criteria for a particular disorder or condition at any point in their life (Forness et al., 2012).

Interventions designed to reduce the occurrences of internalizing and externalizing behaviors have shown limited success in reducing more significant challenging behaviors, resulting in a continuous struggle to provide effective interventions (Benner, Nelson, Sanders, & Ralston, 2012). Additionally, teacher's often do not feel prepared to manage students with challenging behaviors which can lead to teacher attrition (Cha & Cohen-Vogel, 2011), poor discipline practices (e.g., behavioral referrals and suspension), and negative outcomes for students (e.g., school failure and dropout), especially those who are already at risk for academic or behavior problems such as students who live in poverty and some minority students.

Challenging behavior among students with disabilities and those at-risk leads to negative school and post school outcomes for a variety of reasons. First, once students are identified and begin receiving special education services, they tend to remain in special education classes for the remainder of their school career (Hosp & Reschly, 2003). Second, while in special education classes, students are likely to encounter limited and less rigorous curriculum and lower expectations (Ferri & Connor, 2005; Harry & Klingner, 2014). These lowered expectations can lead to reduced academic and post-secondary opportunities (Donovan & Cross, 2002; Harry & Klingner, 2014). Third, students in secluded settings often miss out on opportunities to interact with their typically achieving peers who can provide appropriate role models (Christle, Jolivette, & Nelson, 2005). Fourth, students in secluded settings have a decreased likelihood of post-secondary education and are more likely to drop out (Ferri & Connor, 2005), be placed in

youth detention (Losen, Hewitt, & Kim, 2010), or be incarcerated (Christle et al., 2005). Students with disabilities represent 25% of students arrested and referred to law enforcement although they represent only 12% of the overall student population (U.S. Department of Education Office for Civil Rights (OCR), 2014). In the 2012-2013 school year, 18.79% of students with EBD ages 14 to 21 dropped out of school (Department of Education (USDOE), 2013). The failure to obtain a high school diploma further restricts the possibility of employment opportunities and often leads to poverty. Further, as stated by Krezmien and colleagues, "the high rates of suspension for students with EBD is problematic because these students require intensive behavioral interventions implemented consistently over time" and are unlikely to receive such services where patterns of exclusionary discipline practices are present (Krezmien, Leone, & Achilles, 2006, p. 223). These poor school and post school outcomes are especially concerning for students from racial and ethnic minority groups, such as African Americans.

African American students are at a higher risk to receive a referral to special education, are nationally overrepresented in the EBD category, and subjected to higher rates of exclusionary discipline practices, such as suspension and expulsion (Coutinho & Oswald, 2000; OCR, 2014; Oswald, Coutinho, Best, & Singh, 1999; Skiba, Albrecht, & Losen, 2013). Under the umbrella of disproportionality, overrepresentation refers to too many individuals of a specific group represented in a designated category than would be expected given the percentage of the total population of those students. Overrepresentation occurs at higher rates within categories where the identification of

individuals is largely subjective and relies on professional judgment, such as learning disabilities (LD), intellectual disabilities (ID), and EBD (Skiba et al., 2013). Disproportionality refers to a particular racial/ethnic group represented in a given category (i.e., special education disability categories or exclusionary discipline practices) at a higher or lower rate than other racial/ ethnic groups (Skiba et al., 2013).

African American students living in urban and high poverty environments have an increased likelihood of special education placement due to higher than expected referrals, exclusionary disciplinary practices, and less access to early intervention and prevention services (Losen, Ee, Hodson, & Martinez, 2015). Additionally, African American students with challenging behavior receive special education referrals (Harry & Klingner, 2014), EBD diagnoses (U.S. Department of Education, 2013), placements in secluded educational environments (Albrecht, Skiba, Losen, Chung, & Middelberg, 2012), and exclusionary discipline practices (OCR, 2014), at higher rates than their White and Non-African American minority peers.

The remainder of this chapter will provide a review of the current status and hypothesized contributing factors that lead to overrepresentation of African American students identified as having EBD, and those at-risk, who receive disproportionate removal from school as a disciplinary action in response to problem behavior. A review of the current literature focused on teacher classroom and behavior management and use of evidence-based practices (EBPs) will follow. Finally, the chapter concludes with the proposed need for the study and research questions.

Overrepresentation of African American Students

The overrepresentation of ethnic minority students in special education referrals, specific IDEA categories, restrictive placements, and exclusionary discipline is a long-standing issue first introduced in the literature more than 40 years ago (Dunn, 1968), studied twice by the National Research Council (Donovan & Cross, 2002; Heller, Holtzman, & Messick, 1982), and is widely examined in the scholarly literature (Skiba et al., 2013; Sullivan, Van Norman, & Klingbeil, 2014). Despite litigation, national and state reports, many studies, and advocacy recommendations from major professional organizations such as Council for Exceptional Children (CEC), efforts to date have not significantly impacted the problem and overrepresentation in special education, especially for African American children labeled EBD, still remains (Albrecht et al., 2012; Ferri & Connor, 2005; Klingner et al., 2005).

Minority students are often twice vulnerable to discrimination; by race and again by disability (Losen & Welner, 2001). African American students lead all ethnicities in their overrepresentation in special education categories such as EBD (46%), restrictive placements, exclusionary discipline practices (i.e., in school suspension (ISS), out of school suspension (OSS), expulsion, referrals to law enforcement, and school related-arrests; OCR, 2014).

Discipline. Current disciplinary practices and policies in schools, such as zero tolerance, seem to have increased the vulnerability for students who have historically received discriminatory treatment in schools (Krezmien et al, 2006; Losen et al, 2015).

African American students receive the highest rates of discipline when compared to students of other ethnicities (Skiba et al., 2013). The most current Civil Rights Data Collection Survey (2011-2012), representative of all the nation's schools, reports that while African Americans represented about 16% of the public school population, they accounted for 32% of in ISS, 33% of OSS, 42% of multiple OSS, 34% of expulsions, 27% of referral to law enforcement, and 31% of school related arrest (OCR, 2014). More than 25% of African American males, and nearly 20% of African American females, receive OSS (OCR, 2014). Compared to other ethnicities and across gender, African American males are the most overrepresented group receiving disciplinary consequences (Skiba et al., 2011; OCR, 2014). For example, in a study examining disciplinary practices across nearly one million Texas public secondary school students for more than six years, nearly 60% of students were suspended or expelled and African American students had a 31% higher likelihood of a discretionary discipline action than their White and Latino classmates (Council of State Governments Justice Center, 2011).

The exclusionary discipline practices for students with disabilities are equally disturbing. According to the Office of Civil Rights, students with disabilities are more than twice as likely to receive OSS (13%) than students without disabilities (6%, OCR, 2014). Combine disability and minority status, and research reports that African American students on IEPs are 2.8 times more likely than other students with disabilities to receive exclusionary discipline in response to problem behavior (Skiba et al., 2013).

Identification. Although an under researched area in terms of how decisions are made and why, referring a student for individualized interventions and/or special education evaluation has been cited as one of the most important predictors of future special education eligibility since the majority of students referred are eventually found eligible (Harry & Klingner, 2014; Hosp & Reschly, 2003). Estimates of special education referrals across all disability categories that result in special education eligibility ranges from 50 to 85% (Fugate, Clarizio, & Phillips, 1993; Gottlieb, Alter, Gottlieb, & Wishner, 1994; Hibel, Farkas, & Morgan, 2010).

Referring and evaluating a student for EBD is even more challenging when considering the ambiguity of the definition for EBD. While required within the evaluation regulations of IDEA, the field does not have a standardized formula within EBD determinations to "rule out" behavior that may be related to acceptable cultural norms across various ethnic groups. Evaluation teams may mistake culturally acceptable behaviors as characteristics that violate "school norms" and therefore in line with an EBD diagnosis. According to the most recent Department of Education (DOE) Office for Special Education Programs (OSEP) Annual Report to Congress (USDOE, 2013), African American students represented 19% of students with disabilities but 26% of students with EBD. When compared to their White classmates, African American students are 1.9 times more likely to be identified as EBD (Parrish, 2002).

Placement. Compared to other disability categories, students with EBD are more likely to be educated in self-contained classrooms or pull out programs (Smith,

Katsiyannis, & Ryan, 2011; USDOE, 2013). Recent national data from OSEP's Annual Report to Congress (USDOE, 2013) indicates that 45% of students with EBD are served in general education classes 80% or more of the school day; 18% are served in general education classes between 40- 79% of the day, and 20% are served in the general education classroom 20% or less of the day. Although an under researched area of disproportionality, there are further concerns that students with EBD, who are also ethnic minorities, make up the percentage of students more frequently placed in restrictive, segregated educational settings (Albrecht et al., 2012).

Using one year of a single state's data, Skiba et al. (2006a) explored the extent to which African American students were placed in more and less restrictive settings within five disability categories, including EBD. The statewide analysis indicated that African American students were underrepresented in the general education setting and overrepresented in more restricted placements. Using a risk ratio, Skiba and colleagues compared the risk for African American students in a given disability category to the risk for other children in the same disability category. Findings determined African American students with EBD were 1.2 times more likely than peers with the same disability to be placed in separate classrooms and therefore, about 50% less likely to be placed in general education classrooms.

Hypothesized Contributing Factors to Overrepresentation

Although the extent of overrepresentation of racial and ethnic minority students in special education and exclusionary discipline practices has remained fairly consistent

over the past decade, it is still considered one of the most complex issues in special education, especially since there is little consensus about contributing factors (Skiba et al., 2006a). The most frequently offered reasons leading to overrepresentation of African American students in special education and exclusionary discipline include: a) cultural mismatch and teacher bias leading to inaccurate referrals, b) poor classroom management, c) discriminatory policies, and d) unequal access to educational opportunities based on SES (Albrecht et al., 2012; Bean, 2013; Gregory, Skiba, & Noguera, 2010; Klingner et al., 2005; Losen & Welner, 2001; Skiba et al., 2013). For the overrepresentation of ethnic minorities in EBD specifically, the federal definition of EBD has been cited as an additional contributing factor (Gage, Gersten, Sugai, & Newman-Gonchar, 2013; Skiba et al., 2013). The following section will focus on three of the most commonly cited contributing factors to the overrepresentation of ethnic minority students in the EBD category; a) the definition and identification of students with EBD (Gage et al., 2013; Skiba et al., 2013), b) inaccurate referrals to special education (Hosp & Reschly, 2003; Skiba et al., 2006b; Sullivan, 2011), and c) poor classroom instructional practices (Bean, 2013; Gregory, Cornell, & Fan, 2011; Williams-Shealey, Alvarez McHatton, & Wilson, 2011; Vavrus & Cole, 2002).

Definition of EBD

A student must meet one or more of the five criteria and all three criteria of severity, duration, and impact on school performance in order to be identified as having an EBD (Forness & Knitzer, 1992). However, as previously mentioned, the definition has

been criticized for its ambiguity, subjectivity, and its role in the misidentification of students with emotional and/or behavioral needs (Forness & Knitzer, 1992; Peacock Hill Working Group, 1991; Skiba et al., 2013). Language used in the definition such as, *to a marked degree*, *adversely impacts school performance*, and *over a long period of time* is "nebulous and highly subjective" (Gresham, 2005, p.330). The ambiguity and subjectivity of the federal definition of EBD can lead school teams to inaccurate identification of students. Scholars posit the highly subjective identification process of students with EBD potentially contributes to overrepresentation, which can potentially have negative implications for African American students (Skiba et al., 2013; Ysseldyke, Algozzine, & Thurlow, 1992) since special education is not always the least restrictive environment for some of the student's inaccurately identified. Because the federal definition of EBD does not have a rule-out factor such as that found in the definition of LD which states; "disorders that are not included are learning problems that are primarily the result of visual, hearing, or motor disabilities, or mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage" (Section 300.8 (c)(10)(ii)), evaluation teams may not take into account cultural norms, past poor instruction, and the impact of students coming from low income neighborhoods. However, special education does not automatically lead to poor outcomes. Further, educators receiving little guidance from current IDEA regulations and professional literature on differentiating between cultural behaviors and characteristics of EBD may also contribute to overrepresentation.

Inaccurate Referrals to Special Education

The decision to refer and place any student in special education is a crucial decision with potential lifelong effects, both positive and negative. Though some researchers agree that teachers are accurate judges regarding student ability, strengths, and needs (Hecht & Greenfield, 2001), others contend teacher referrals may be inaccurate due to bias. A teacher's interpretation of a student's behavior is often a critical factor in making a special education referral (Raines, Dever, Kamphaus, & Roach, 2012). Teacher perceptions of student behavior and accompanying consequences have the potential to perseverate the disparate gaps in special education referrals and exclusionary discipline. Students who come from a culture other than that of the teachers, are more likely to be identified as having a behavior disorder and placed outside the general education environment (Hosp & Reschly, 2003).

Due to the special education eligibility process and most exclusionary disciplinary actions originating in the classroom (Ferri & Connor, 2005; Skiba, Michael, Nardo, & Peterson, 2002), one strong argument, and the most longstanding factor for racial and ethnic overrepresentation, is likely due to interactions among student characteristics and teacher capabilities, attitude, and bias (Serwatka, Deering, & Grant, 1995; Skiba et al., 2013). While the American education system has many challenges, one main concern is the preparation of teachers who can effectively teach students whose cultural backgrounds are different from their own (Harry & Klingner, 2014; Townsend, 2000) as well as those with challenging behaviors in a manner that allows students at-risk to

remain in the classroom and thereby benefit from instruction (Parsad, Lewis, & Farris, 2001).

Overrepresentation becomes more complex when we consider that the nation's school children are becoming more racially, ethnically, culturally, and linguistically diverse, yet, the racial and ethnic composition of teacher's in public schools is significantly less diverse. Current demographic data across US schools indicate that 85% of teachers are Whites and 75% are female (Aud et al., 2011) creating a potential cultural mismatch between their learning history and those of students from diverse backgrounds. In a study conducted by Parsad et al. (2001), only 26% of teachers with three or less years of experience reported they felt equipped to address the needs of students from diverse cultural backgrounds. Skiba and colleagues (2008) hypothesize that the overrepresentation of African American students diagnosed with EBD is a result of the referrals written primarily by White, middle-class teachers as a result of cultural mismatch. The cultural mismatch hypothesis holds that teachers are more likely to inappropriately refer, identify, make placements for, and discipline African American students because they do not understand or are unfamiliar with their cultures (Skiba et al., 2008).

A potentially related challenge in the referral process for an EBD evaluation is the overuse among teachers of exclusionary discipline practices found among African American students leading to inflated archival data and hours of lost instruction which impacts academic performance. Researchers indicate that in secondary schools (i.e.,

middle and high school) African American students are more likely to be referred to the office by teachers for infractions that are subjective and teacher's perceive as disrespect, defiance, or disruption, whereas their White classmates were sent to the office for more serious and objective offenses such as smoking, truancy, or vandalism (Bryan, Day-Vines, Griffin, & Moore-Thomas, 2012; Skiba et al., 2002; Wallace, Goodkind, Wallace, & Bachman, 2008).

In a recent study, Okonofua and Eberhardt (2015) concluded discipline disparities are partially driven by teacher bias which can lead to escalated responses to the behaviors of African American students over multiple interactions. Okonofua and Eberhardt (2015) gave teachers two scenarios using two male students, one with a stereotypical White name and the other with a stereotypical African American name, but otherwise held all other information consistent across the two. After reading both scenarios, teachers were asked to rate the severity of the behavior, its effect on classroom management and teacher irritation, how harsh the punishment should be, and the likelihood that the student was a troublemaker. Results determined that teacher's viewed the behaviors of the African American "named" student as more severe than for the behaviors of the White "named" student (i.e., classroom insubordination vs. classroom disturbance). Teachers were also found to believe that the African American student's behavior should be met with a more severe punishment than the White student's behavior. Additionally, the researchers found the African American student's behavior was significantly more likely than the White student's behavior to be perceived as indicative of a pattern and the African American

student was significantly more likely to be labeled a troublemaker. Further, Okonofua and Eberhardt (2015) found that teachers were significantly more likely to imagine themselves suspending the African American student in the future compared to the White student. Okonofua and Eberhardt (2015) hypothesize that these results are due first, to stereotypes, and second, a "Black-escalation effect." In general, the researchers posit the "Black-escalation effect" is when repeat offenders are met with harsher punishments, and even more so if the offender is African American. For example, using the Civil Rights Data Collection survey (OCR, 2014), the researchers found racial disparities in suspension rates are greater for students who have been suspended multiple times than those who have been suspended once, and the increase from single to multiple suspensions is significantly greater for African American students compared to other racial groups (Okonofua & Eberhardt, 2015). This is one of the first studies of its kind and causal relationships should not be inferred; but it does reflect a disturbing pattern noted across much of the current literature in this area.

Poor Classroom Instructional Practices

Research continues to suggest that many general and special education teachers are using less than optimal rates of effective instructional practices (Walker & Buckley, 1973; Wehby, Symons, Canale, Go, 1998; Stichter, Stormont, & Lewis, 2009). The need for effective instruction is critical for all students, but especially for students who are at-risk or have a disability (Stichter et al., 2009). For example, Lyon et al. (2001) report that about 70% of students identified as having a LD may not have been identified, or

academic delays lessened, had those students received effective classroom instruction coupled with early identification and preventative practices.

Classrooms with poor instructional and behavioral management practices are typically not supportive environments for students identified with challenging behaviors, regardless of disability status, and may actually exacerbate inappropriate behavior (Moore-Partin, Robertson, Maggin, Oliver, & Wehby, 2010). The coercive interactions between teacher and students with challenging behaviors has been well documented in the literature (Gunter & Coutinho, 1997; Jack, Shores, Denny, Gunter, DeBriere, & DePaepe, 1996; Shores, Gunter, & Jack, 1993). Students with challenging behavior often receive higher rates of negative or non-instructional interactions with their teachers, more teacher attention is often provided to inappropriate behavior, and little teacher attention is paid when students demonstrate appropriate behavior (Shores et al., 1993; Van Acker, Grant, & Henry, 1996; Wehby, Symons, & Shores, 1995). Students with challenging behavior also receive fewer task demands and are given less challenging work. Descriptive studies have found that teachers demand only 30% academic engagement time within an instructional period among students with challenging behaviors (Wehby, 1997). Some evidence shows that students with challenging behavior often exhibit aggressive behavior when presented with academic and social behavior requests, therefore, potentially functioning as an "aversive stimuli" to teachers (Wehby et al., 1995). For example, Gunter et al. (1994) reported that the aversive behaviors of students with EBD may lead to escape or avoidance behavior by their teachers. Teachers are

"shaped" by students with high rates of acting out behavior to decrease their demands and work completion through negative reinforcement; that is, teachers are negatively reinforced by the student for making fewer demands through the removal of acting out behavior (i.e., an aversive to teachers). The cycle of student-teacher interaction (Gunter et al., 1994; Wehby et al., 1995) between students with challenging behavior and their teachers, is potentially exacerbated by teacher perceptions and differences in culturally related behavioral norms found between teachers and students. Teacher perceptions of student behavior and accompanying consequences have the potential to perseverate the disparate gaps in special education referrals and exclusionary discipline among African American and White students. Cook (2001) and Cook, Cameron, and Tankersley (2007) explored teachers' attitudes towards students with disabilities and whether teacher attitudes differed by severity of the student's disability. Results indicated that both, students with evident and obscure disabilities, were at risk of receiving inappropriate educational interactions with teachers (Cook, 2001).

For many racial and ethnic minority students, the overall quality of the schools many attend (i.e., Title 1, poorly funded urban) are staffed by novice educators who struggle with effective and pro-active instructional and classroom management (Kozol, 1991; Simonsen et al., 2008). Further, Sleeter (2001) indicated that a cultural gap between teachers and students is growing, and preservice teachers, who resemble the current teaching force, have limited understanding of what multicultural teaching involves. When this lack of experience and understanding is coupled with teaching in

diverse school settings with large minority populations, poor classroom manage can contribute to the risk and problem behaviors (Milner, 2006; Watson, Charner-Laird, Kirkpatrick, Szczesiul, & Gordon, 2006). However, classroom instructional practices, as a contribution to overrepresentation, are largely under-researched as a potential contributing factor but may in fact, have the best hope in altering the current exclusionary practices.

Implementing evidence-based instructional practices, with fidelity, and sustaining interventions over the course of a student's school career has proven to increase academic learning and reduce problem behaviors for students at-risk or who have challenging behaviors (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). When teachers are aware of and know how to use positive and preventative management strategies, many of the frequently reported minor classroom behaviors can be avoided (Scheuermann & Hall, 2011). Further, teacher use of EBP's consistently in classroom environments with students who exhibit challenging behaviors, could result in lowered rates of exclusionary disciplinary practices received by students.

Evidence-based Practices (EBP)

Effective classroom and behavior management skills, along with effective instructional strategies, are essential for all students to promote academic and social success. Teacher use of EBP's have proven to both promote academic achievement and reduce rates of challenging behavior (Colvin, Sugai, & Patching, 1993; Crosby, Jolivette, & Patterson, 2006; Haydon, et al., 2010; Jenkins, Floress, & Reinke, 2015; Kern &

Clemens, 2007). The challenge is insuring classroom teachers understand how to use EBPs with appropriate intensity to match student learning challenges. In response, Simonsen et al. (2008) identified 20 evidence-based practices and grouped them into five empirically supported features of effective classroom management: (a) maximized structure; (b) post, teach, review, monitor, and reinforce expectations; (c) actively engage students in observable ways; (d) use a continuum of support to respond to appropriate behaviors; and (e) use a continuum of support to respond to inappropriate behaviors (Simonsen et al., 2008). These five features include several evidence-based practices that have proven to increase appropriate behavior (Lewis, Hudson, Richter, & Johnson, 2004) while decreasing inappropriate behaviors, such as opportunities to respond (Kern & Clemens, 2007), positive specific praise or feedback (Myers, Simonsen, & Sugai, 2011), and precorrection (Lampi, Fenti, & Beaunae, 2005). The remainder of this section will review the current empirical support for these three EBPs that have strong evidence to increase academic success and reduce rates of challenging behavior.

Opportunities to respond (OTR). An OTR is any teacher behavior that provides opportunities in which students have to actively respond to academic material or requests (e.g., asking questions, reading aloud, writing answers to a problem; Kern & Clemens, 2007). When implemented at high rates (minimum of 3 OTR per minute), OTR have demonstrated positive results on academic and behavioral outcomes for students with challenging behaviors (Sutherland, Alder, & Gunter, 2003). Additionally, the frequent responses from students allows the teacher to adjust the lesson to match student skill

mastery. OTR research has documented increased task engagement and decreases in disruptive behaviors (Moore-Partin et al., 2010).

In a single case withdrawal design across behaviors, Haydon, Mancil, and Van Loan (2009) identified a functional relationship between teacher use of OTR and the on-task and disruptive behaviors of one African American female identified as at-risk for EBD. Results from the study indicate that when the teacher increased rates of OTR, the student's on-task behavior and correct responses increased and disruptive behavior decreased. Similar results were found when comparing three types of OTR on student academic and social behaviors (Haydon et al., 2010). Haydon and colleagues used an alternating treatment design to investigate the effects of three different types of OTR (i.e., individual, choral, and mixed responding) on the academic and behavioral challenges of African American students at-risk for EBD. Results from the study indicated lower rates of disruptive behavior and fewer intervals of off-task behavior for most of the students during the mixed responding condition of the intervention.

Precorrection (PC). Precorrection strategies are described by Lewis, Colvin, and Sugai (2000) as "antecedent manipulations designed to prevent the occurrence of predictable problem behavior and facilitate the occurrence of more appropriate replacement behavior" (p.110). Examples of precorrection include, reminders, prompts, and brief role play to provide student practice opportunities. By requiring teachers to focus on possible antecedents and environmental factors as possible contributors to student behaviors (Crosby et al., 2006), precorrection has proven to decrease the amount

of time teachers spend in redirection, prevents repetition of undesired behaviors, creates a more positive climate (Lampi et al., 2005), and sets up situations for teachers to use praise to reinforce appropriate behaviors (Colvin et al., 1993). However, perhaps most beneficial, precorrection as an instructional and classroom management practice proactively addresses potential academic and behavioral errors before they occur allowing the teacher to focus attention on the appropriate versus inappropriate behavior.

Several studies examining the use of precorrection for students with challenging behavior have had promising results. Precorrection has been shown to reduce problem behavior among students in several settings such as, the classroom, cafeteria, recess, and during transition (Lewis et al., 2000; Lewis, Sugai, & Colvin, 1998). Lewis et al. (1998) analyzed the effects of a school-wide discipline approach using precorrections. When coupled with active supervision, precorrections reduced inappropriate hallway behavior during transition times. In a related study, Lewis et al. (2000) explored the effects of precorrection and active supervision on the rate of challenging behaviors of 475 students during recess on a playground of an elementary school. Results again demonstrated that precorrection coupled with active supervision can reduce the rate of challenging behaviors among all students. Other studies using precorrection to increase academic performance among students with social-skill deficits have also shown promising outcomes. Yu, Darch, and Rabren (2002) found that when used as an academic and social-skills intervention, precorrection aided in increased accuracy in reading sounds, words, and the on-task behavior of six students with learning and behavioral challenges.

Using a multiple-baseline design, Miao and colleagues investigated the effectiveness of using precorrection in teaching decoding skills to students with academic and behavioral difficulties (Miao, Darch, & Rabren, 2002). After the 21 day investigation, results demonstrated that the use of precorrection increased reading accuracy and on-task behavior among students. Additionally, Sprague and Thomas (1997) found the use of precorrection increased academic responsiveness while reducing challenging behavior among a 10-year old male student with severe disabilities. Literature has not identified a recommended rate or ratio for use of precorrections. However, precorrections should be used as often as there are transitions between activities and as a prompt to use appropriate behaviors in various environments.

Positive specific feedback (PSF). Feedback is among the most powerful and readily available evidence-based practice teachers can use to increase academic achievement (Hattie & Timperley, 2007) and reduce challenging behavior (Simonsen et al., 2008). Positive specific feedback identifies the particular desirable behavior that the student is performing and acknowledge mastery, or progress toward skill mastery (Kern & Clemens, 2007). Due to its vicarious effect, positive specific feedback does not have to focus on the individual student in order to be effective. Increased use of positive specific feedback has been proven to decrease rates of student problem behavior and increase rates of academic engagement across classrooms and groups of students (Sutherland, Wehby, & Copeland, 2000). A common guideline for the rate of feedback, which will be

used for this study, should be a minimum of 4 positive specific feedback statements to every corrective teacher statement (Myers et al., 2011).

Past and recent research on the relationship between positive specific feedback and challenging behaviors has identified an apparent functional inverse relationship. When positive specific feedback occurs at high rates, student rates of problem behavior decreases (Gunter & Coutinho, 1997; Sutherland et al., 2000). Gunter and colleagues conducted four single subject trials and used lag sequential analysis to identify antecedent and subsequent social events that were related to the behaviors of two young boys with EBD, ages 6 and 12, receiving instruction in self-contained classrooms (Gunter, Jack, Shores, Carrell, & Flowers, 1993). The students' teachers were instructed to ignore disruptive behaviors and provide positive attention when target students were on task, in their seats, or raised their hands to talk. When the teachers' rate of positive attention increased the students challenging behavior decreased; one student's behavior rate of problem behavior went to 0 per minute. Using a withdrawal design, Sutherland et al. (2000) analyzed the relationship between positive specific feedback and on-task behavior among nine fifth-grade students with EBD, six of which were African American, in a self-contained setting. The intervention phase consisted of increased rates of positive specific praise which resulted in higher levels of on-task behaviors. Similarly, Reinke, Lewis-Palmer, and Merrell (2008) found that providing consultation and feedback to teachers increased teacher rates of positive specific feedback. Consequently, the classroom disruptive behaviors across 4 participating classrooms decreased.

Summary and Purpose Statement

Teacher perceptions of student behavior is a leading impetus to refer students for a special education EBD evaluation (Raines et al., 2012). However, the literature is replete with examples that show a potential cultural mismatch between the current US teacher work force and the students they are tasked to educate. This mismatch is further exacerbated by the broad and subjective nature of the current IDEA definition of EBD. Although theoretical reasons have been provided to explain the overrepresentation of ethnic minority students labeled with EBD, particularly African American students, there is a dearth of literature providing an instructional path to impact overrepresentation. Additionally, little research has focused on potential teacher instructional factors that may be related to the high rates of African American students referred for special education and the high rates of exclusionary discipline practices. Research has demonstrated that all students can benefit academically and socially when educators implement evidence-based instructional practices with high intensity and fidelity (Simonsen et al., 2008). However, it has been documented that teachers differentially interact with students who display high rates of acting out behavior, providing less instruction and supports, which further places those students at-risk. What is unknown, do teachers also differentially apply rates of positive instructional strategies among varying groups of students based on behavioral patterns, gender, and ethnicity?

The purpose of this study was to determine to what extent teachers use evidence-based practices during classroom instruction and if those practices were applied

differentially across demographic groups (i.e., ethnicity, gender, and disability risk). Specifically, the following research question were addressed through the use of a descriptive research design:

Research Question One: Do general education teachers use EBP's, specifically opportunities to respond, positive specific feedback, and precorrections, at rates comparable to those advocated in the literature?

Sub Aim One: Are rates of OTR at or above the recommended minimum of 3 per minute?

Sub Aim Two: Are ratios of positive to negative/neutral interactions within the recommended 4:1?

Sub Aim Three: At what rate are teachers using precorrections?

Research Question Two: To what extent do general education teachers' use of targeted evidence-based practices differ among students from varying demographic groups?

Sub Aim One: To what extent do general education teachers' use of targeted evidence-based practices differ among students from different ethnicities (e.g., African America, White, Latino)?

Sub Aim Two: To what extent do general education teachers' use of targeted evidence-based practices differ among male and female students?

Research Question Three: To what extent do general education teachers' use of evidence-based practices differ among students who are at-risk for disabilities (i.e., emotional behavior disorders)?

CHAPTER II

METHOD

Overview

A descriptive research design was used to determine to what extent teachers are using targeted evidence-based practices during classroom instruction and if those practices were applied differentially across student groups (i.e., ethnicity, gender, and disability risk). The three targeted evidence-based practices included: a) opportunities to respond (OTR), b) precorrection, and c) positive specific feedback. In addition, teacher rates of negative and neutral interactions were also recorded. The study was conducted through the following steps: a) teachers who met minimal inclusion criteria were recruited to participate in the study, b) teachers identified possible subjects in their classroom and distributed parent consent form, c) confirmatory data were collected to include student subjects, and d) direct observation data were collected across several class periods on teacher and target students.

Participants and Setting

Schools. Students ages 12 through 17 make up 62.12% of students with EBD, the highest identified age range of students with EBD (USDOE, 2013). This implies the largest percentage of referral, evaluation, and identification typically occurs between 4th through 6th grade. Therefore, 4th-5th grade public school classrooms in the Midwest were targeted for participation. To participate in the study, schools had to be located in suburban or urban settings, serve children in 4th and/or 5th grade, have high percentages

of children from low-income families (i.e., Title 1), and at least 15% minority student enrollment. Additionally, schools were classified into 3 categories based on their student demographics; 15%- 40% minority enrollment (Category 1), 41%-70% minority enrollment (Category 2), or 71%-100% minority enrollment (Category 3; see Table 1). Five schools, one Category 1 school, two Category 2 schools, and two Category 3 schools were invited to participate in the study. Building administrators of targeted schools were contacted through e-mail and provided details of the study. Of the five schools invited to participate, four schools agreed. While four schools agreed to participate, only three schools were included in the final sample. The fourth school did not complete the study due to the timing of their annual state assessments. All schools were Charter schools in the Midwest and within the city limits of a large urban center. School variables including socioeconomic status (i.e., number of students receiving free or reduced lunch), percentage of racial/ ethnic enrollment, and state assessment data are provided in Tables 1 and 2 for the three participating schools.

Following school selection, administrators sent a list of 4^{th} and 5^{th} grade teachers. The researcher met with the teachers individually or in small groups to discuss the study, answer any questions, and obtain teacher consent for those who wished to participate.

Table 1 School Demographic Variables

School	School Category Type	Percent of Free/Red. Lunch	Minority Enrollment	Percent of White	Percent of African Am.	Percent of Latino	Percent of Other minority
1	Cat 2	87%	68%	33%	49%	4%	14%
2	Cat 1	68%	40%	60%	21%	4%	15%
3	Cat 3	100%	99%	1%	99%	0%	0%

Note. 15%- 40% minority enrollment (Category 1), 41%-70% minority enrollment (Category 2), 71%-100% minority enrollment (Category 3); Free/Red.= free or reduced lunch.

Teachers. Eight general education teachers agreed to participate in the study. To maintain consistency across observations, teachers were required to have at least two years of teaching experience, a teaching degree from a college or university, full certification by the state, and currently teaching 4th or 5th grade reading/language arts in one of the participating schools. In addition, teachers must have currently been teaching within an inclusive classroom setting defined as a general education classroom in which students with and without disabilities are instructed by a general education teacher. Teacher demographic variables including gender, race or ethnicity, number of years of teaching experience, grade level taught, number of classes and/or professional development opportunities taken related to classroom and behavior management, and highest educational degree completed were collected to determine how individual factors may contribute to the instructional measures (see Table 3). Of the participating teachers, 7 were female and 1 male; five teachers taught 4th grade and three teachers taught 5th grade. All teachers were White. Seven teachers, had a single class of students that stayed

with them all day. One teacher was the language arts teacher for the entire grade level and taught two sections of language arts instruction. Nine independent groupings of students across 9 classrooms were observed in all, two of which were taught by the language arts teacher (Teacher 4), all others by the remaining 7 teachers.

Table 2 School State Assessment Scores by Percentage of Students

School	Content	Grade Level	Below Basic	Basic	Proficient	Advanced
1	ELA	4	30.3%	21.2%	21.2%	27.3%
	Math	4	40.9%	36.4%	15.2%	7.6%
	ELA	5	27.3%	25.0%	27.3%	20.5%
	Math	5	25.0%	47.7%	13.6%	13.6%
2	ELA	4	24.4%	26.7%	33.3%	15.6%
	Math	4	13.3%	24.4%	42.2%	20.0%
	ELA	5	19.6%	26.1%	34.8%	19.6%
	Math	5	26.1%	47.8	13.0%	13.0%
3	ELA	4	6.3%	18.8%	41.7%	33.3%
	Math	4	2.1%	20.8%	47.9%	29.2%
	ELA	5	15.9%	34.1%	31.8%	18.2%
	Math	5	4.5%	29.5%	50.0%	15.9%

Note. State Assessment data is taken from the previous year. Fourth grade data represents students previously in 3rd grade. Fifth grade data represents students previously in 4th grade.

Table 3 Teacher Demographic Variables

Teacher	School Category Type	Grade Level Taught	Gender	Ethnicity	Completed years teaching	Number of PD taken	Highest Degree
1	2	5	Female	C	4	4	Bachelors
2	2	4	Female	C	2	4	Bachelors
3	2	4	Female	C	4	3	Bachelors
4	1	4	Female	C	5	5 or more	Masters
5	3	5	Female	C	9	5 or more	Bachelors
6	3	5	Female	C	7	1	Bachelors
7	3	4	Male	C	6	5 or more	Bachelors
8	3	4	Female	C	2	3	Masters

Note. PD=professional development, C=White.

Students. Teachers were asked to nominate up to three students within their classroom, who did not have a disability, they considered as possibly at-risk due to externalizing or acting out behavior concerns. Following teacher selection, parental invitations through a cover memo explaining the study along with consent forms to participate in the study were sent home by the classroom teacher. Following parent consent and student assent, teachers completed gates 1 and 2 of the Systematic Screener for Behavior Disorders (SSBD; Walker, Severson, & Feil, 2014) in order to confirm student at-risk status. The SSBD is a multiple-gating screening system used to identify student at-risk for behavior disorders. The SSBD has been successfully used within

middle school settings and psychometric characteristics and procedures justify its use for intended purposes. Gate 1 asked teachers to confirm that participating students met the definition of externalizing behavioral concerns. Gate 2 involved teachers completing the critical events and adaptive and maladaptive scales for each student. Students had to receive a minimum score of 1 on the critical events scale. Additional adaptive and maladaptive scores were obtained for descriptive and teacher benchmark purposes. Of the 177 students screened, 27 students were found eligible and provided with consent forms. Twenty students consented and participated in the study (see Table 4).

Of the consented pool of students who met inclusion criteria, 16 were African American, 2 White, and 2 who indicated they were of mixed ethnicities (i.e., African American and White; see Table 4). There were 6 female and 14 male students. Fourteen students were in fourth grade and 6 students were in fifth grade. Additionally, all remaining students (i.e., not consented) in the teacher's classrooms (n=157) were observed across the classroom observations to provide comparative data. The ethnicities of the remaining students across the 9 classrooms were as follows: 29% White, 57% African American, 3.6% Latino, 8.5% two or more ethnicities, and 1.2% other ethnicities. The total sample of subjects included 48% female and 42% males (see Table 5). All comparison data was pooled and reported through group means and ranges to remove any possible link to their identity. Direct observation data of student behavior was not collected, rather, teacher instructional behavior was coded based on interactions with targeted (i.e., consented at-risk subjects) and non-targeted students.

Table 4 Target Student Demographics by Classroom

Teacher	Student	Grade	Gender	Ethnicity	SSBD Gate 1 Rank	Critical Events Score	Adaptive Student Behavior	Maladaptive Student Behavior
1	1	5	M	AA	3	3	32	32
2	2	4	F	AA	1	3	38	31
	3	4	F	AA	2	2	38	24
	4	4	F	AA	3	3	36	20
3	5	4	M	AA	1	8	21	49
	6	4	M	MR	2	4	32	29
4A*	7	4	M	C	1	4	23	37
4B*	8	4	M	AA	2	3	31	29
	9	4	M	C	3	1	37	22
5	10	5	M	AA	1	3	31	43
	11	5	F	AA	2	3	48	24
	12	5	F	AA	3	3	51	17
6	13	5	M	AA	1	5	28	39
	14	5	M	MR	2	2	42	33
7	15	4	M	AA	1	3	30	19
	16	4	M	AA	2	2	26	16
	17	4	M	AA	3	2	30	15
8	18	4	M	AA	1	5	33	24
	19	4	M	AA	2	4	32	23
	20	4	F	AA	3	2	44	25

Note. *denotes same teacher. AA=African American, L=Latino, C= White, MR= African American and White, M=Male, F=Female.

Table 5 Classroom Demographics

		Ethnicity							
Teacher	Grade	C-Male	C-Female	AA-Male	AA-Female	L-Male	L-Female	Two or more	Other
1	5	21%	21%	16%	26%			16%	
2	4	10%	14%	33%	24%		10%	5%	5%
3	4	9%	9%	30%	35%	4%		9%	4%
4A*	4	40%	20%	4%	12%	4%	4%	16%	
4B*	4	40%	24%	8%	8%	4%		16%	
5	5			35%	65%				
6	5	7%		43%	43%			7%	
7	4			41%	59%				
8	4			31%	69%				

Note. *denotes same teacher. AA=African American, L=Latino, C= White

Teacher Instructional Measures

Using a paper pencil coding system, data collectors were trained to track the frequency of the targeted teacher variables across student groups. For example, if the teacher provided an opportunity to respond (OTR) to any white, female student that was not a study target student, the data collector placed a tally mark in the row designated "WF" for "White Female" under the column heading OTR on the data collection sheet (see Appendix B). If the student was a consented subject (i.e., target student) the tally would be placed in the row designated TS for "Target Student" and no other section.

Data were collected on three teacher instructional behaviors: (a) opportunities to respond (OTR), (b) precorrection (PC), and (c) positive specific feedback (PSF). The

number of negative interactions and neutral interactions per student were also collected (see Table 6). Instructional Measures were defined as follows.

Opportunities to respond. OTR is any teacher behavior that provides opportunities in which students have to actively respond to academic material or requests during instruction (e.g., asking questions, reading aloud, writing answers to a problem; Kern & Clemens, 2007). Data were limited to academic opportunities to respond. A group OTR was recorded if the teacher provided an OTR without explicitly calling on a student prior to or immediately after providing the OTR and allowed students to raise their hands to respond. For example, "What is the setting of the story?" An individual OTR was recorded if a student's name was called prior to or immediately after providing the OTR and did not allow an opportunity for other students to respond. For example, "James, what is the setting of the story?" or "What is the setting on the story, James?"

Precorrection. A precorrect is a statement that prompts a student to exhibit a more appropriate behavior before the predictable problem behavior occurs. Precorrection statements are planned, teacher-directed activities that prepare students for a situation by explaining the desired behavior before starting a task or entering a new environment (Lewis et al., 2000). A group PC was recorded if the teacher made a statement addressing the class; for example, "When I say go, you may get up from your seat and quietly walk to line up." An individual PC was recorded if a statement was addressed to a specific student by using their name or talking directly to them. For example, a teacher faces a

student and bends down at their desk and says “When we line up, remember to say excuse me if someone is in your spot.”

Positive specific feedback. Positive specific feedback is a positive statement, given by the teacher, immediately after a desired behavior occurs to inform students specifically what they did correctly (Simonsen et al., 2008). Positive specific feedback can be directed at an individual or an entire class and can be verbal and non-verbal. A group PSF was recorded if the teacher made a statement addressing the class. For example, “You are all doing a good job of following independent reading expectations.” An individual PSF was recorded if a statement was addressed to a specific student by using their name or talking directly to them. For example, “James, you are doing a good job of following independent reading expectations.”

Negative interactions. Negative interactions include teacher initiated verbal statements, physical gestures, or consequences (Stichter et al., 2009; Wehby et al., 1995). Examples include, but are not limited to, verbal statements that request the immediate termination of a behavior such as “Don’t do” or “Stop” when referring to a current event and is not a precorrection, removal or attempt to remove materials in possession of the student, and statements or gestures indicating disapproval. A group negative interaction was recorded if the teacher made a statement addressing the class (e.g., “Class, you need to stop talking <u>now</u>”). An individual negative interaction was recorded if a statement was addressed to a specific student by using their name or talking directly to them (e.g., “James, stop talking”).

Neutral interactions. A neutral interaction is any teacher initiated interaction that is neither positive nor negative. Examples include, but are not limited to, monitoring student progress on work and conversation unrelated to current academic task or behavior. A group neutral interaction was recorded if the teacher made a statement addressing the class, for example, "I see a lot of you are not putting punctuations at the end of your sentences." An individual neutral interaction was recorded if a statement was addressed to a specific student by using their name or talking directly to them (e.g., "James, go back and check number 4").

Table 6 Teacher Instructional Measures

Variable	Operationalized Definition	Example/ Non- example	Measure
Opportunity to Respond (OTR)	OTR is any teacher behavior that provides opportunities in which students have to actively respond to academic material or request during instruction.	**Example:** Asking questions about related curriculum, asking student to read aloud, asking student to write answers to a problem (Kern & Clemens, 2007). **Non-example:** Teacher giving instructions (i.e., when to turn in homework).	Frequency Count
Precorrection (PC)	A precorrect is a statement that prompts a student to exhibit a more appropriate behavior before the predictable problem behavior occurs. Precorrection statements are planned, teacher-directed activities that prepare students for a situation by explaining the desired behavior before starting a task or entering a new environment (Lewis et al., 2000).	**Example:** "Before starting, make sure your name is on the top of the page" or "During a test your voice level is zero." **Non-example:** "You are taking a test, your voice should be off."	Frequency Count
Positive Specific Feedback (PSF)	Positive specific feedback is a positive statement or gesture, given by the teacher, immediately after a desired behavior occurs to inform students specifically what they did correctly (Simonsen et al., 2008). Positive specific feedback can be directed at an individual or an entire class and can be verbal and non-verbal.	**Example:** "Class, you are doing a good job following expectations" or "James, that is correct. You multiply first then add." **Non-example:** "Good job." "That's right!"	Frequency Count

Negative Interaction	Negative interactions include teacher initiated verbal statements, physical gestures, or consequences (Stichter et al., 2009; Wehby et al., 1995). Examples include, but are not limited to, verbal statements that request the immediate termination of a behavior, phrases such as "Don't do" or "Stop" when referring to a current event and is not a precorrection, removal or attempt to remove materials in possession of the student, and statements or gestures indicating disapproval.	**Example:** "Don't do…", "Stop…", "shhh", "James, your eyes should be on me," shaking head at student, placing finger over mouth to quiet the student, or removing a student from the environment. **Non-example:** "No, go back and check number 4," or "No, the word is treat."	Frequency Count
Neutral Interaction	A neutral interaction is any teacher initiated interaction that is neither positive nor negative. Examples include but are not limited to, monitoring student progress on work, conversation unrelated to current academic task or behavior.	**Example:** "No, go back and check number 4," or teacher looking over student shoulder to check and monitor progress. **Non-example:** "Don't do that," or "You need to be quiet." A response *after* a student asks a question.	Frequency Count

Data Collection Procedures

Training. Two data collectors were trained to code targeted teacher variables (see Appendix A). First, data collectors were trained using videos of classroom management designed for teacher training. Prior to practicing, the investigator reviewed specific observational codes, along with examples and non-examples, and data collection procedures (e.g., checking in at the office, where to turn in completed observations, how

to start and end sessions with two data collectors to gather inter-observer agreement). Data collectors were then required to achieve an inter-observer agreement (IOA) of at least 80% with the primary researcher on four different training videos. Inter-observer agreement was calculated by dividing the smaller number of recorded occurrences by the larger number of recorded occurrences and multiplying by 100 (smaller number/larger number X 100). Once observers reached 80% or better, in vivo practice data collection began in the participating teacher's classroom during a language arts instructional period (these data were not included in the final data set). The data collector observed one 30 minute session with the primary researcher, in which IOA rates were calculated once more. If IOA was above 80%, the data collector could begin independently collecting data. If at any time data collectors IOA feel below 80%, they were retrained using the training videos and debriefs around disagreements until minimal percentages were met.

Data Collection. Data was collected during reading/language arts instruction for five 30 minute observations per teacher (30 minutes x 5 observation observations =150 observation minutes per teacher). One teacher taught two different language arts classes, so 150 minutes of data were collected for each of the two independent sections (Teacher 4A and 4B, see Table 4). During the classroom observations, interobserver agreement (IOA) was collected across 24% of the observations with the investigator serving as the second coder.

CHAPTER III

RESULTS

Frequency counts of teachers' use of each of the instructional measures tracked across student groups, were converted to rate per minute. Mean and range of each teacher variable by student group were computed. Mean rates of use for the targeted EBP's were then compared to those advocated in the literature (Jenkins et al., 2015; Kern & Clemens, 2007; Miao et al., 2002; Yu et al., 2002). Results are discussed by research question.

Research Question One

Do general education teachers use EBP's, specifically opportunities to respond, positive specific feedback, and precorrections, at rates comparable to those advocated in the literature?

Frequency data were converted to rate per minute and averaged for each classroom (see Table 7). The range of use of OTR across all teachers was 0.34 to 0.69 per minute with a mean of 0.54 per minute. Use of PSF ranged from 0.01 to 0.13 with a mean of .05 per minute. Teacher's use of PC ranged from 0.03 to 0.14 with a mean of .08 per minute.

Table 7 Teacher Average Rates of Targeted Evidence-based Practices

Teacher	Opportunities to Respond	Positive Specific Feedback	Precorrection
T1	0.49	0.03	0.06
T2	0.46	0.01	0.08
T3	0.34	0.13	0.05
T4A	0.62	0.04	0.06
T4B	0.45	0.05	0.08
T5	0.69	0.07	0.14
T6	0.50	0.01	0.14
T7	0.44	0.02	0.03
T8	0.35	0.06	0.03
Mean	0.54	0.05	0.08

Research Question One, Sub Aim One

Are rates of OTR at or above the recommended minimum of 3 per minute?

The rates of OTR for all teachers did not meet the recommended minimum of 3 OTR per minute. All teachers had rates that were less than 1 per minute (see Table 6).

Research Question One, Sub Aim Two

Are ratios of positive to negative interactions within the recommended 4:1?

The literature recommends that for every corrective statement, teachers should make at least 4 positive statements to every 1 negative statement (Myers et al., 2011). None of the teachers within the present study hit the recommended ratio. In fact, all teachers had ratios indicating higher overall rates of negative interactions as compared across the overall rate of positive specific feedback statements (from 2.0 to 17.0; see Table 8).

Table 8 Ratio of Positive Specific Feedback to Negative Interactions by Classroom

Teacher	Positive: Negative Ratio
T1	1:3.66
T2	1:5.0
T3	1:5.46
T4A	1:2.75
T4B	1:2.0
T5	1:3.57
T6	1:17.0
T7	1:3.0
T8	1:15.66

Research Question One, Sub Aim Three

Sub Aim Three: At what rate are teachers using precorrections?

The range of use of PC was .03 to .14 per minute with a mean of .08 per minute. Overall rates of PC were low (see Table 7).

Research Question Two

To what extent do general education teachers' use of targeted evidence-based practices differ among students from varying demographic groups?

Data was disaggregated across demographic groups and means of each direct observation variable were calculated across all teachers (see Table 9). Range and mode of each direct observation variable are detailed by demographic group below.

Table 9 Teacher Rates of Instructional Measures across Demographic Groups

		Ethnicity			Gender		Disability Risk	
Teacher	Variable	AA	L	C	M	F	At-Risk	Not At-Risk
T1	OTR	0.10		0.08	0.06	0.12	0.03	0.18
	PSF	0.01		0.0	0.01	0.01	0.0	0.02
	PC	0.0		0.0	0.0	0.0	0.0	0.0
	Neg Int	0.04		0.02	0.07	0.0	0.0	0.07
	Neu Int	0.09		0.11	0.14	0.08	0.04	0.22
T2	OTR	0.03	0.0	0.03	0.01	0.05	0.01	0.03
	PSF	0.01	0.0	0.0	0.0	0.0	0.0	0.01
	PC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Neg Int	0.03	0.0	0.01	0.03	0.01	0.0	0.04
	Neu Int	0.18	0.02	0.04	0.14	0.10	0.06	0.24
T3	OTR	0.11	0.0	0.02	0.04	0.09	0.01	0.13
	PSF	0.07	0.01	0.02	0.06	0.04	0.02	0.10
	PC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Neg Int	0.30	0.02	0.09	0.33	0.08	0.11	0.41
	Neu Int	0.02	0.0	0.01	0.01	0.02	0.0	0.03
T4A	OTR	0.0	0.06	0.05	0.16	0.07	0.01	0.23
	PSF	0.0	0.0	0.0	0.03	0.0	0.0	0.03
	PC	0.0	0.0	0.01	0.01	0.0	0.0	0.01
	Neg Int	0.03	0.0	0.01	0.01	0.04	0.05	0.05
	Neu Int	0.0	0.03	0.08	0.14	0.09	0.0	0.23
T4B	OTR	0.01	0.08	0.06	0.10	0.04	0.11	0.15
	PSF	0.0	0.0	0.03	0.03	0.0	0.01	0.04
	PC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Neg Int	0.0	0.01	0.04	0.04	0.01	0.04	0.05
	Neu Int	0.01	0.04	0.11	0.11	0.05	0.12	0.16
T5	OTR	0.31			0.11	0.20	0.09	0.31
	PSF	0.03			0.01	0.02	0.02	0.03
	PC	0.0			0.0	0.0	0.01	0.0
	Neg Int	0.09			0.03	0.06	0.05	0.09
	Neu Int	0.15			0.07	0.08	0.07	0.15

T6	OTR	0.2		0.03	0.10	0.13	0.04	0.23
	PSF	0.0		0.0	0.0	0.0	0.01	0.0
	PC	0.0		0.0	0.0	0.0	0.0	0.0
	Neg Int	0.01		0.01	0.06	0.03	0.07	0.09
	Neu Int	0.01		0.01	0.07	0.03	0.06	0.10
T7	OTR	0.14			0.05	0.09	0.03	0.14
	PSF	0.01			0.01	0.0	0.0	0.01
	PC	0.0			0.0	0.0	0.0	0.0
	Neg Int	0.03			0.02	0.01	0.02	0.03
	Neu Int	0.03			0.01	0.02	0.03	0.03
T8	OTR	0.14			0.04	0.10	0.06	0.14
	PSF	0.03			0.01	0.02	0.01	0.03
	PC	0.0			0.0	0.0	0.0	0.0
	Neg Int	0.70			0.13	0.57	0.13	0.70
	Neu Int	0.06			0.03	0.03	0.06	0.06
Mean	OTR	0.11	0.03	0.04	0.07	0.09	0.04	0.16
	PSF	0.01	0.0	0.0	0.01	0.01	0.0	0.03
	PC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Neg Int	0.13	0.0	0.03	0.08	0.09	0.05	0.17
	Neu Int	0.06	0.02	0.06	0.16	0.05	0.04	0.13

Note. AA=African American, L=Latino, C=White, M=Male, F=Female, Neg Int=Negative Interaction, Neu Int =Neutral Interaction.

Ethnicity. The range of OTR for African American students was 0 to 0.31 per minute with a mode of 0.14 per minute; the range for Latino students was 0 to .08 per minute with a mode of 0 per minute; and the range for White students was .02 to .08 per minute with a mode of .03 per minute. The range of PSF for African American students was 0 to 0.07 per minute with a mode of .01 per minute; the range for Latino students was 0 to .01 per minute with a mode of 0 per minute; and the range for White students was 0 to .03 per minute with a mode of 0 per minute. The range of PC for White students

was 0 to .01 per minute with a mode of 0 per minute. There were 0 PCs employed across all teachers for African American and Latino students.

The range of negative interactions for African American students was 0 to .70 per minute with a mode of .03 per minute; the range for Latino students was 0 to .02 per minute with a mode of .01 per minute; and the range for White students was .01 to .09 per minute with a mode of .01 per minute. The range of neutral interactions for African American students was 0 to .18 per minute with a mode of .01 per minute; the range for Latino students was 0 to .04 per minute with no mode; and the range for White students was .01 to .11 per minute with modes of .01 and .11 per minute.

Gender. The range of OTR for male students was .01 to .16 per minute with a mode of .04 per minute and the range for female students was .04 to .20 per minute with a mode of .09 per minute. The range of PSF for male students was 0 to .06 per minute with a mode of .01 per minute and the range for female students was 0 to .04 per minute with a mode of 0 per minute. The range of PC for male students was 0 to .01 per minute with a mode of 0 per minute. For females, there were 0 PCs employed across all teachers.

The range of negative interactions for male students was .01 to .33 per minute with a mode of .03 per minute and the range for female students was 0 to .57 per minute with a mode of .01 per minute. The range of neutral interactions for male students was .01 to .14 per minute with a mode of .14 per minute and the range for female students was .02 to .10 per minute with modes of .02 and .03 per minute.

Disability Risk. The range of OTR for students at-risk (i.e., consented target students) was .01 to .11 per minute with a mode of .01 per minute and the range for students not at-risk was .03 to .31 per minute with modes of .14 and .23 per minute. The range of PSF for students at-risk was 0 to .02 per minute with a mode of 0 per minute and the range for students not at-risk was 0 to .10 per minute with a mode of .03 per minute. The range of PC for students at-risk was 0 to .01 per minute with a mode of 0 per minute and the range for students not at-risk was 0 to .01 per minute with a mode of 0 per minute.

The range of negative interactions for students at-risk was 0 to .13 per minute with modes of 0 and .05 per minute and the range for students not at-risk was .03 to .70 per minute with a mode of .09 per minute. The range of neutral interactions for students at-risk was 0 to .12 per minute with a mode of .06 per minute and the range for students not at-risk was .03 to .24 per minute with a mode of .03 per minute.

Research Question Two, Sub Aim One

To what extent do general education teachers' use of targeted evidence-based practices differ among students from different ethnicities (e.g., African America, White, Latino)?

To determine if the descriptive differences truly reflected teacher differentiation, a risk index was calculated for each demographic group. More commonly used to determine to what degree a potentially negative outcome will occur for a sub-group of students (i.e., "risk"), a risk index can also provide an index on the likelihood that students in a given group will be in a specific category (e.g., students who receive OTR).

The risk index for each of the teacher variables was computed for each sub group by dividing the number of students in the group targeted by the teacher (e.g., given positive specific feedback) by the total number of students in the class. The risk index is then used to calculate a "risk ratio," which gives an estimate on how much more or less likely a group of students in a given sub-group will receive (or not receive) specific teacher interactions. For example, the OTR risk ratio for Latino students was calculated by dividing the risk index of Latino students receiving OTR, divided by the risk index of a comparison group. When calculating risk ratios, White students were used as the comparison group for ethnicity, females for gender, and students not at-risk for disability risk, as commonly found in the literature (OCR, 2014; Losen & Skiba, 2010).

To begin calculating risk ratios, base ratios were calculated in order to serve as a comparison. Base ratios were calculated for ethnicity, gender, and disability risk based on the number of enrollment in each classroom (see Table 10). For example, the ratio of African American students to White students in T1's classroom was 1.0. This base ratio means for every 1 White student there was 1 African American student. To determine whether distribution of instructional measures were proportional (i.e., distributed equitably), the ratio of those variables provided to African American students and White students should be equivalent to 1.0. If the risk ratio is less than 1.0, that demographic group is less likely to receive the measured direct observation variable. If the risk ratio is greater than 1.0, that demographic group is more likely to receive the measured direct observation variable (see Table 11).

Table 10 Teacher Base Ratios

	Ethnicity		Gender	Disability Risk
	African American	Latino	Male	Students At- Risk
T1	1.0		1.1	0.05
T2	2.40	0.40	0.75	0.16
T3	3.75	0.25	0.91	0.09
T4A	0.26	0.13	1.33	0.04
T4B	0.25	0.06	1.62	0.08
T5			0.54	0.21
T6	12.0		1.50	0.16
T7			0.70	0.21
T8			0.45	0.23

Note. *T5, T7, & T8 had homogenous classrooms of African American students and thus a base ratio for ethnicity could not be determined. T1 did not have any Latino students in the classroom.

The data indicate patterns of disproportionate use across variables between African American and White students and Latino and White students across classrooms (see Table 11). African American students were more likely to receive teacher interactions that mostly related to behavior (e.g., PSF, negative interactions) and less likely to receive opportunities to engage during instruction (e.g., OTR) when compared to their White peers. Latino students were more likely to receive all variables when compared to their White peers. Further analysis of risk ratios are provided by direct observation variable and demographic group below.

Table 11 Risk Ratio of Teacher Use of Instructional Measures across Ethnicity

	OTR		PSF		PC		Negative Interaction		Neutral Interactions	
	AA	L	AA	L	AA	L	AA	L	AA	L
T1	1.33		3.0		0.0		1.75		0.77	
T2	0.34	0.0	--	N/A	N/A	N/A	1.04	--	1.66	1.42
T3	1.20	0.0	0.80	2.0	N/A	N/A	0.87	1.14	0.53	0.0
T4A	0.0	2.59	0.0	0.0	0.0	0.0	4.68	0.0	0.13	1.60
T4B	0.88	21.33	1.0	4.0	0.0	0.0	0.57	4.57	0.70	5.64
T5										
T6	0.62		N/A		N/A		0.50		1.08	
T7										
T8										
Mean	0.87	11.96	1.6	3.0			1.56	2.85	0.81	2.88

Note. White students used as comparison group. AA=African American, L=Latino, Blank cells represent a homogenous sample (T5, T7, T8) or no enrollment (T1), 0.0 represents zero rates of EBP for the reference group and a risk ratio could not be calculated, -- represents zero rates of EBP for the comparison group and a risk ratio could not be calculated, N/A represents zero rates of EBP for both groups and a risk ratio could not be calculated.

OTR. On average, across classrooms African American students were 0.87 times less likely and Latino students were 11.96 times more likely to receive an OTR.

PSF. On average, across classrooms African American students were 1.6 times more likely and Latino students were 3.0 times more likely to receive PSF.

PC. Overall rates of PC were low. Risk ratios could not be calculated because either or both the comparison or reference group received 0 PCs.

Negative Interactions. On average, across classrooms African American students were 1.56 times more likely and Latino students were 2.85 times more likely to receive negative interactions.

Neutral Interactions. On average, across classrooms African American students were 0.81 times less likely and Latino students were 2.88 times more likely to receive neutral interactions.

Research Question Two, Sub Aim Two

To what extent do general education teachers' use of evidence-based practices differ among male and female students?

The data indicate differentiated patterns of targeted variables between male and female students (see Table 12). Overall, male students were more likely to receive teacher interactions that mostly related to behavior (e.g., PSF, negative interactions) and less likely to receive opportunities to engage during instruction (e.g., OTR) when compared to their female peers. Further analysis of risk ratios are provided by direct observation variable and demographic group below.

Table 12 Risk Ratio of Teacher Use of Instructional Measures across Gender

	OTR	PSF	PC	Negative Interaction	Neutral Interactions
T1	0.50	0.90	N/A	9.0	1.31
T2	0.50	1.33	N/A	3.33	1.72
T3	0.62	1.71	0.0	4.27	0.54
T4A	1.63	3.75	1.50	0.21	1.12
T4B	1.15	3.07	--	2.46	1.16
T5	1.03	1.22	N/A	1.01	1.52
T6	0.46	N/A	N/A	1.66	1.66
T7	0.87	--	N/A	4.28	0.95
T8	0.88	0.73	N/A	0.48	2.20
Mean	0.84	1.81	1.50	2.96	1.35

Note. Female students used as comparison group. 0.0 represents zero rates of EBP for the reference group and a risk ratio could not be calculated, -- represents zero rates of teacher measures for the comparison group and a risk ratio could not be calculated, N/A represents zero rates of EBP for both groups and a risk ratio could not be calculated.

OTR. On average, across classrooms male students were 0.84 times less likely to receive an OTR than female students.

PSF. On average, across classrooms male students were 1.8 times more likely to receive PSF than female students.

PC. On average, across classrooms male students were 1.5 times more likely to receive PC than female students.

Negative Interactions. On average, across classrooms male students were 2.96 times more likely to receive a negative interaction than female students.

Neutral Interactions. On average, across classrooms male students were 1.35 times more likely to receive a negative interaction than female students.

Research Question Three

To what extent do general education teachers' use of evidence-based practices differ among students who are at-risk for disabilities (i.e., emotional behavior disorders)?

The data indicate differentiated use of teacher variables between students at-risk and students not at-risk (see Table 13). Overall, students at-risk were more likely to receive higher rates of teacher interactions when compared to peers not at-risk. Further analyses of risk ratios are provided by direct observation variable and demographic group below.

Table 13 Risk Ratio of Teacher Use of Instructional Measures across Disability Risk

	OTR	PSF	PC	Negative Interaction	Neutral Interactions
T1	3.03	4.25	N/A	1.54	3.18
T2	1.63	0.0	N/A	0.85	1.07
T3	0.95	2.91	N/A	2.95	1.75
T4A	1.14	3.33	0.0	15.55	0.57
T4B	7.43	3.16	0.0	6.65	6.94
T5	1.29	3.73	--	2.33	1.90
T6	1.14	--	N/A	5.10	4.17
T7	0.88	0.0	N/A	3.50	3.73
T8	1.65	1.08	N/A	0.78	4.33
Mean	2.12	2.63		4.36	3.07

Note. Students not at-risk used as comparison group. 0.0 represents zero rates of EBP for the reference group and a risk ratio could not be calculated, -- represents zero rates of EBP for the comparison group and a risk ratio could not be calculated, N/A represents zero rates of EBP for both groups and a risk ratio could not be calculated.

OTR. On average, across classrooms students at-risk were 2.12 times more likely to receive an OTR than students not at-risk.

PSF. On average, across classrooms students at-risk were 2.63 times more likely to receive a PSF than students not at-risk.

PC. Overall rates of PC were low. Risk ratios could not be calculated because either or both, students at-risk or students not at-risk received 0 PCs.

Negative Interactions. On average, across classrooms students at-risk were 4.36 times more likely to receive negative interactions than students not at-risk.

Neutral Interactions. On average, across classrooms students at-risk were 3.07 times more likely to receive neutral interactions than students not at-risk.

Inter-Observer Agreement

Across all observations, 24.44% included a second observer to measure reliability through inter-observer agreement (IOA). IOA was computed by dividing the smaller number of agreements by the larger number of agreements and multiplying by 100 (smaller number/larger number X 100) across sessions. The range of IOA was from 80% to 97% with a mean of 87.36%.

CHAPTER IV

DISCUSSION

Nationally, students with challenging behavior, particularly those from racial and ethnic minority backgrounds, are receiving exclusionary discipline practices and referrals to special education at rates significantly higher than their non-minority peers (OCR, 2014). Literature has documented that teacher perceptions of student behavior lead to differential treatment of students who have challenging behaviors (Cook, 2007). Teacher differential treatment is potentially detrimental for students with challenging behavior, especially racial and ethnic minority students, because it increases their risk of academic failure, referrals to special education, and exclusionary discipline practices. With the nation's student population becoming more diverse (Brown-Jeffy & Cooper, 2011), the instructional and classroom management practices of the largely homogenous teaching force is a critical component for effectively addressing student needs. Therefore, the purpose of the study was to determine to what extent teachers use evidence-based practices during classroom instruction and if those practices were applied differentially across demographic groups (i.e., ethnicity, gender, and disability risk).

Results of this study align with past research in two ways. First, the current study supports findings from previous research demonstrating the overall low rates of general education teacher use of EBPs (Jenkins et al., 2015; Lewis et al, 1998; Reinke, Lewis-Palmer, & Merrell, 2008; Sutherland et al., 2003) and their high rates of negative responses towards students with challenging behavior (Moore-Partin et al, 2010; Gunter

& Coutinho, 1997). Although optimal rates have not been identified by the field for all EBP, rates have been recommended for OTR (Sutherland et al., 2003) and PSF (Myers et al., 2011). However, findings from this study indicate all EBPs were implemented at rates lower than suggested in the literature.

Second, previous research has had mixed findings regarding the interactions between teachers and students with challenging behavior. Some research has shown that teachers have more negative interactions (Cook, 2004; Jack et al., 1996) while others have found teachers interact at very low rates with students with challenging behaviors and provide lower rates of negative comments (Wehby et al., 1995; 1997). Results from the present study showed higher rates of teacher negative interactions with students with challenging behaviors. However, the subjects in the current study were students at-risk, while previous research (Wehby et al., 1995; 1997) was conducted with students with EBD. Clear patterns of interactions between teachers and students at-risk have not been established by the field.

This exploratory study is one of the first to examine interactions between teacher and student groups based on gender and ethnicity. Analyzing teacher interactions related to use of EBPs across each demographic group provides comparison and insight into potential teacher bias that may contribute to student achievement and behavior problems. That is, teachers may be providing fewer instructional supports to certain groups and higher rates of negative statements to certain groups based on their gender and/or ethnicity. When EBPs were used by the teachers in the present study, they were

implemented at differing rates across demographic groups. Additionally, rates of negative interactions overall were disproportionality higher for males, African American, Latino, and students with challenging behaviors. Although qualitatively documented in past research (Gregory et al., 2011; Irvine, 1990; Irvine, 2012; Skiba et al., 2006b), these findings extend the knowledgebase by providing sampled rates of teacher behavior versus indirect measures of perception across student groups. Additional discussion of findings from the current study are presented below. Outcomes of each research question and sub aim, limitations, and implications for research are discussed.

Research Question One: Do general education teachers use EBP's, specifically opportunities to respond, positive specific feedback, and precorrections at rates comparable to those advocated in the literature?

In the current study all teachers demonstrated lower rates of the targeted EBPs than recommended in the literature (Lewis et al., 2000; Sutherland et al., 2003; Jenkins et al., 2015). Each teacher exhibited less than 1 of each of the targeted EBPs per minute in each classroom. Past research suggests teacher low rates of use of EBPs are potentially due to the typical use of lecture format during large group instruction (Stichter et al., 2009). Further discussion of the research question is provided by sub aim below.

Sub Aim One: Are rates of OTR at or above the recommended minimum of 3 per minute?

Teacher rates of use of OTR did not meet the recommended minimal rate of 3 per minute. While all teachers did attempt to use OTR, rates were less than 1 OTR per minute. Additionally, the type of OTR (Sutherland et al., 2003) used across all teachers

was the traditional choral or individual responding. Strategies to provide students with OTRs have advanced from the traditional choral response (Sutherland et al., 2003). The low rates and lack of versatility of OTRs may have been due to the teachers' lack of knowledge regarding OTR variations. Although teachers in this study indicated having many professional development opportunities related to classroom and behavior management, it is uncertain if the strategies taught were specific to the targeted evidence-based practices. Haydon and colleagues (2009) found that when teachers are taught how to use OTR during instruction at rates advocated in the literature, the time on-task and correct academic responding increased while disruptive behavior decreased for a student at-risk for EBD.

Sub Aim Two: Are ratios of positive to negative interactions within the recommended 4:1?

Ratios of positive to negative interactions were not in the recommended 4:1 ratio as advocated in the literature. In fact, ratios indicated the opposite for all teachers. Teachers used more negative comments than PSF. The study used PSF only as the direct observation variable while other research has included general praise statements in their analysis of ratios (Reinke, Herman, & Stormont, 2013; Sutherland et al., 2000). Teachers were observed providing general praise statements and gestures but it was not a measured variable. It is possible that if general praise statements or gestures and PSF were both measured, the ratio of positive to negative feedback may have been closer to the recommended 4:1 ratio.

Sub Aim Three: At what rate are teachers using precorrections?

Teacher rates of PC were less than 1 per minute and in some cases zero. Ideally, PCs should be used often especially prior to transitions. Although the classroom environments provided many opportunities for PCs (e.g., moving from carpet to desk, transition from group work to independent work), teacher's interactions were often reactive and negative towards those students not appropriately transitioning. As previously mentioned, teachers reported having many professional development opportunities related to classroom and behavior management, however, the specific content and length of time provided for direct instruction on how to use the targeted EBPs is unknown.

Research Question Two: To what extent do general education teachers' use of targeted evidence-based practices differ among students from varying demographic groups?

Results from the current study suggests if teachers consistently interacted with students as observed during the study, patterns of differential use of EBPs and neutral and negative comments among varying demographic groups would exist. Range and mean use of each EBP and neutral and negative interactions varied for each demographic group. Further discussion of the results by demographic group are provided by sub aim below.

Sub Aim One: To what extent do general education teachers' use of targeted evidence-based practices differ among students from different ethnicities (e.g., African America, White, Latino)?

The data suggests the African American students in this study did not receive equal rates of instructional strategies and positive feedback when compared to their peers. Although the analysis used in this study cannot determine statistical significance, the lower rate of teacher EBP instructional strategies could potentially lead to poor outcomes for all students, especially African American students, and thereby lead to the noted increase in special education referrals and exclusionary discipline practices. Sugai and Horner (2002) note that academic engagement, along with maximized time for instruction and proactive behavior management, is one of three central components of effective classroom management leading to improved outcomes for at-risk students. Greenwood and colleagues (1994) found that when students are academically engaged through good instruction, it is difficult to engage in problem behavior (Greenwood, Terry, Marquis, & Walker, 1994).

Rates of negative teacher interactions were higher for African American and Latino students as compared to their White peers. These findings align with previous research indicating a differential pattern of treatment in classrooms across ethnicities. Previous research found that while African American and White students engaged in similar rates of challenging behavior, African American students were more likely to receive negative teacher interactions related to their behavior (Skiba et al., 2002; Skiba,

Shure, & Williams, 2012). However, student behavior was not measured in the current study and findings cannot be analyzed to determine if all students displayed same rates of challenging behavior. The literature is unclear regarding the treatment of Latino students. Some literature suggests that Latino students are more likely to receive negative interactions and exclusionary discipline (Skiba et al., 2011) while national data does not reflect differential treatment for Latino students (OCR, 2014; Skiba et al., 2012). However, because the sample size for the Latino group in this study was small, data may be inflated. Nonetheless, continuous negative interactions in the classroom can lead to office discipline referrals and exclusionary discipline practices (Skiba et al., 2000). Time spent out of the classroom for behavioral reasons results in hours of lost instruction which potentially impacts academic performance and increases the likelihood of poor academic achievement.

Sub Aim Two: To what extent do general education teachers' use of evidence-based practices differ among male and female students?

Findings from this study indicate male students were more likely to receive interactions related to behavior (i.e., PSF, negative interactions) and neutral interactions when compared to their female classmates. Males were also less likely to receive a directed OTR than females. Skiba and colleagues (2002) found that male students had higher rates of office discipline referrals, suspensions, and expulsions when compared to female students. However, in their study they noted that males engaged in higher rates of disruptive behavior (Skiba et al., 2002) but did not directly measure student behavior.

Teacher behaviors could be attributed to cultural mismatch and teacher bias theories. Cultural mismatch theory proposes that students and teachers do not hold the same understanding of standards, norms, and expectations for achievement (Skiba et al., 2008). Findings from the study suggest there may be differences based on bias but the data are insufficient to draw clear conclusions. Teacher bias theory suggests that teachers have standards, norms, and expectations that privilege some students but not others (Kozlowski, 2015). The teacher bias theory could be applied to account for the inequitable teacher behavior across gender because 88% of the teachers in this study were female and it is possible that gender may have privileged the female students and not the male students in the class (OCR, 2014).

Research Question Three: To what extent do general education teachers' use of evidence-based practices differ among students who are at-risk for disabilities (i.e., emotional behavior disorders)?

Teacher use of EBPs differed among students who displayed high rates of challenging behavior and those who did not. Overall, students with challenging behavior were more likely to receive more EBPs across all variables when compared to peers without high rates of challenging behavior. This finding is especially encouraging given previous research has indicated that high rates of EBPs can increase student academic achievement and reduce problem behavior among students with disabilities and those at-risk (Colvin et al., 1993; Crosby et al., 2006; Haydon, et al., 2010; Jenkins et al, 2015; Kern & Clemens, 2007).

Findings from the study were consistent with previous literature demonstrating that students with challenging behavior are at risk of receiving higher rates of negative teacher comments (Cook, 2001; Cook et al., 2007; Morgan, 2006; Scott, Alter, & Hirn, 2011; Yell, Meadows, Drasgow, & Shriner, 2009). Findings related to students with challenging behavior and neutral interactions were inconsistent with previous research (Wehby et al, 1995; 1997). Previous research has found that teachers are more likely to avoid students with EBD who display challenging behavior because teachers found interacting with the students to be aversive. This study noted that students with challenging behavior were more likely to receive more interactions across all teacher measures. However, the subjects in this study were students at-risk for EBD, therefore, the frequency and intensity of their challenging behaviors may not equate to that of the participants in the previous research (Wehby et al, 1995; 1997), thus potentially accounting for the difference in teacher interactions. Additionally, the majority of students at-risk in the current study were African American. Therefore, the current analysis could not determine whether challenging behavior or ethnicity attributed to teacher behavior.

Teacher bias theory could possibly account for the inequitable teacher behavior received by students with high rates of challenging behavior. Regarding EBPs, teacher bias may account for the differential use of EBPs that consequently placed students with challenging behavior at an advantage when compared to students without challenging behavior. Conversely, teacher bias theory can be applied to account for the inequitable

rates of teacher negative interactions received by students with challenging behavior as well. Cook and colleagues (2007) found that teachers who held bias towards students with challenging behavior had more inappropriate educational interactions with students with challenging behaviors. Students with challenging behavior are already at risk of poor academic achievement and referral for special education. Negative interactions may potentially increase that risk. Additionally, teachers' use of the instructional and positive observation variable among students with challenging behavior may have been a result of the "Hawthorne effect" (also referred to as Observer effect; Parsons, 1974). The Hawthorne effect is when an individual (i.e., teachers in the current study) modifies their behavior in response to the awareness of being observed.

Limitations

There are several limitations to be considered when evaluating the results of this study. First, the overall sample of teachers and target students is small. The current sample size limits additional analysis, firm conclusions, and generalizability across school categories, teachers, and groups of students. Further the small sample, particularly of Latino students, caused some data to be inflated. Additionally, the small sample size did not allow for more sophisticated statistical analyses to determine clearer differentiated patterns among demographic groups. Further, the study set out to determine whether there were differences in teacher behaviors across school categories. However, due to the limited sample, conclusions regarding teacher behaviors across school categories could not be determined.

Second, the current analysis was unable to account for large differences across classrooms or by the same teacher (i.e., Teacher 4). The data received from observing Teacher 4 varied from the mean on several analyses and could have skewed the data. A replication of this study should include a larger sample size which would allow for a higher level of analysis that would account for outliers.

Third, although teachers were observed for 2.5 hours each, it is unknown whether the total length of observations was sufficient to support clear trends. Future research should increase the length of time teachers are observed in order to identify clear patterns of teacher behavior.

Fourth, although teachers tried to make sure target students were present during observations, a few absences were unavoidable (i.e., school absence, meeting with Principal, ISS, OSS, receiving pull out services). These absences may have had an effect on the rate teachers interacted with the student and the overall data for target students. When replicating this study, clear rules related to target student absences should be defined (i.e., observe only when the target student is present).

Implications for Research

The current study was descriptive and exploratory, therefore, causal relationships cannot be determined and more research is clearly needed. The fields of general and special education have more work to do with regards to ensuring teacher use of EBPs at recommended rates and ensuring equitable treatment of students from racially and ethnically diverse backgrounds. Additional research is needed to determine how to

modify teacher behavior to ensure teacher practices are supportive of students who are at-risk. Building on past research and results from this study, implications for research are discussed below.

First, future research should focus on ways to increase and maintain teacher use of EBPs over time. School-based intervention literature has placed greater emphasis on evaluating the effectiveness of an intervention rather than on treatment integrity (McIntyre, Gresham, DiGennaro, & Reed, 2007; Noell et al., 2000). Prevention research should focus on teacher preparation programs, courses and accompanying coursework, and increasing opportunities for preservice teachers to practice and receive feedback on implementing EBPs. Intervention research should focus on scripted lesson planning templates imbedded with evidence-based practices (i.e., precorrection statements, OTR, modeling, task analysis) that require teachers to use each practice directly when completing and presenting their lessons until teachers build fluency.

Second, future research should replicate this study and include direct measurement of student challenging behavior. Including student measures to the present study will provide a more comprehensive look into the daily interactions between teachers and students in the classroom. Past research indicates that African American students receive higher rates of negative interactions than their White peers even when they both exhibit the same rate of challenging behaviors (Skiba et al, 2002; 2012). Research also indicates African American students are referred to the office by their classroom teacher for infractions that are more subjective (Bryan et al., 2012; Skiba et al.,

2002; Wallace et al., 2008). Additional research should measure the types of student behaviors teachers typically respond to explore in more detail why the differentiated outcomes exist.

Third, future research should use quantitative analysis to adequately interpret whether or not, and how much, teachers differentiate between groups and if this pattern can be attributed to one of the explanations for African American student outcomes. The literature regarding disproportionality hypothesizes that teacher bias can be attributed to some of the overrepresentation of racial and ethnic minority students in special education and exclusionary discipline practices. However, most research on teacher bias is qualitative and therefore, variance and statistical significance has yet to be measured. Further the present study should be replicated across various settings and include a larger sample of schools (e.g., 9), teachers (e.g., 30), and students (e.g., 90 target students and 510 non-target students) in order to increase the statistical power and allow for a more thorough interpretation of the data. Further to account for the variance across schools with different racial and ethnic enrollment percentages, the replicated study should include at least three schools from each school category (i.e., Category 1, Category 2, and Category 3). With increased subjects, higher level analyses such as Hierchial Linear Modeling could be used to determine how school, teacher, and student level variables may affect teacher instructional measures and determine statistical significance. Logistic regression could also be used to determine the relationship between teacher instructional measures and ethnicity, gender, and disability risk. Additionally, logistical regression can

be used to predict the probability of a particular outcome (i.e., teacher instructional measures) for each demographic group and determine if there is an interaction effect.

Conclusion

The purpose of this study was to investigate teacher use of evidence-based practices and whether those practices were (a) used at rates comparable to those recommended in the literature and (b) if they were distributed equitably among varying demographic groups. Although the study found that rates of teacher use of evidence-based practices were below recommended rates and that teachers differentiated their behavior across and between groups, no firm conclusion can be drawn at this time. The present study does provide a starting point for more rigorous examinations.

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Appendix A

Data Collection Training Package

Data Collector: _____

Table of Contents

Completion Checklist

Task	Signature
1. CITI training complete • Added to IRB ☐	
2. Practice session 1 Completed • Attendance ☐ • Review of ethical behavior ☐ • Review Operational Definitions ☐ • Procedures for data collection ☐	
3. Practice session 1: Met min. 80% IOA with lead researcher using practice videos.	
4. Practice session 2: Met min. 80% IOA with lead researcher in classroom • Additional training needed? **Circle: Yes/ No** **If yes, move to number 5.* **If no, data collector may begin collecting data.*	
5. Additional training session with lead researcher	*If applicable*
6. Additional classroom practice session • *Did the data collector meet IOA? **Circle: Yes/ No*** **If No, the data collector will be removed from data collection.*	*If applicable*

Practice Session 1 Agenda

1. Component 1: A review of ethical behavior and professionalism.

2. Component 2: Review operational definitions.

3. Component 3: Procedures for data collection.

4. Component 4: Practice data collection with a series of video recorded classroom management scenarios designed for teacher training.

Component 1

A review of ethical behavior related and professionalism.

I. CITI Training and MU Harassment and Mandatory Reporter Training

a.) Because this is a research study, all data collectors must complete the online CITI training through Mizzou on research ethics and procedures. The link to access this brief training is here: https://www.citiprogram.org/. Login using your MU pawprint and password on the main page, then click "Add a Course or Update Learner Groups", then select the checkbox marked "I would like to enroll in Human Subject Research courses." If you are a graduate research assistant, you have likely already completed this. If you run into any technical difficulties, I can set up a time to help.

b.) Mizzou also requires all people being paid by the university to complete an online training on harassment in the workplace and mandatory reporters. The link to this brief training is here: http://www.umsystem.edu/ums/hr/harassment_training. You will click on "Employee Version" and sign in with your pawprint and password. If you experience any difficulties with this we can go over it when we meet in person.

II. Ethical behavior

As a data collector you must agree to uphold the following ethical behaviors:

1. Maintain confidentiality.
2. Silent observation only.
3. Be conscious of multiple roles.
4. Turn off or silence cell phones (not on vibrate).

III. Professionalism

a) Dress Code-Dress like a teacher! No rubber flip flops, no leggings as pants, no cleavage, no sweatpants or track suits, etc. If you have to ask about an article of clothing, don't wear it!

*Jeans: we are not employees of the district and have not earned the right to wear jeans at any time. Even if you see the teachers wearing jeans on Fridays or other occasions, we will be dressed professionally at all times.

b.) Communication- Refer to all individuals in the school by Mr. or Mrs./Ms./Miss and their last name.

c.) On-Time-Please arrive at least 10 minutes early to your site. Sign in and out of the office each time you visit.

d.) Least Obtrusive- Enter and exit the classroom quickly. If the teacher does not have an assigned location for you to sit, choose an area out of the way but where you can observe and hear clearly. *If students question why you are there, tell them you are just learning about their classroom.*

IV. Attendance

Inclement Weather Policy

We will follow the district's snow day schedule. If they're in school, we're going to be there. See the attached school calendar for the district's scheduled days off.

Absence Policy

I need everyone to commit to being at the school during their assigned time(s) consistently. **If you know you are going to be absent, PLEASE SEND ME THOSE DATES ASAP** so I can find a sub. I understand that emergencies do arise. If you or your children get sick or have an emergency, **please email, call or text me by 6:30am** that day so I can arrange a sub. If I do not hear from you by 6:30am, I will assume you will be in attendance.

On this day, _____/____/ 2016__, I, _____ agree to uphold the above expectations of ethical behavior and dress code while collecting data on this research project.

Component 2

Review operational definitions.

Variable	Operationalized Definition	Example/ Non- example	Measure
Opportunity to Respond (OTR)	OTR is any teacher behavior that provides opportunities in which students have to actively respond to academic material or request during instruction.	**Example:** Asking questions about related curriculum, asking student to read aloud, asking student to write answers to a problem (Kern & Clemens, 2007). **Non-example:** Teacher giving instructions (i.e., when to turn in homework).	Frequency Count
Precorrection (PC)	A precorrect is a statement that prompts a student to exhibit a more appropriate behavior before the predictable problem behavior occurs. Precorrection statements are planned, teacher-directed activities that prepare students for a situation by explaining the desired behavior before starting a task or entering a new environment (Lewis et al., 2000).	**Example:** "Before starting, make sure your name is on the top of the page" or "During a test your voice level is zero." **Non-example:** "You are taking a test, your voice should be off."	Frequency Count
Positive Specific Feedback (PSF)	Positive specific feedback is a positive statement or gesture, given by the teacher, immediately after a desired behavior occurs to inform students specifically what they did correctly (Simonsen et al., 2008). Positive specific feedback can be directed at an individual or an entire class	**Example:** "Class, you are doing a good job following expectations" or "James, that is correct. You multiply first then add." **Non-example:** "Good job." "That's right!"	Frequency Count

	and can be verbal and non-verbal.		
Negative Interaction	Negative interactions include teacher initiated verbal statements, physical gestures, or consequences (Stichter et al., 2009; Wehby et al., 1995). Examples include, but are not limited to, verbal statements that request the immediate termination of a behavior, phrases such as "Don't do" or "Stop" when referring to a current event and is not a precorrection, removal or attempt to remove materials in possession of the student, and statements or gestures indicating disapproval.	**Example:** "Don't do…", "Stop…", "shhh", "James, your eyes should be on me," shaking head at student, placing finger over mouth to quiet the student, or removing a student from the environment. **Non-example:** "No, go back and check number 4," or "No, the word is treat."	Frequency Count
Neutral Interaction	A neutral interaction is any teacher initiated interaction that is neither positive nor negative. Examples include but are not limited to, monitoring student progress on work, conversation unrelated to current academic task or behavior.	**Example:** "No, go back and check number 4," or teacher looking over student shoulder to check and monitor progress. **Non-example:** "Don't do that," or "You need to be quiet." A response *after* a student asks a question.	Frequency Count

Component 3

Procedures for Collecting Data.

1. Upon entering the classroom for the first time, you will need to identify the target student. The teachers will be notified to point out the student, but you may need to ask if they forget. If you do need to ask, do so without alerting the students to your question.

2. Sit in an area where you are not in the way but can see and hear all interactions in the classroom.

3. Prepare you data collection form. Look at the time and plan for a 30 minute observation.

Teacher Name: _____ Date: _____

Observation Time: _____:_____to _____:_____ Observer: _____

Data Collection Form

	OTR	Positive Specific Feedback	Precorrection	Negative Interactions	Neutral Interactions
Group					
T1:					
T2:					
T3:					
WM					
WF					
BM					
BF					
LM					
LF					

4. Begin observation.

5. Concluded the observation after 30 minutes.

6. Discretely walk out of the classroom so as not to cause a disruption and sign out at the office.

7. Submit data collection forms to Ambra.

Component 4

Practice data collection with a series of video recorded classroom management scenarios designed for teacher training.

Practice Session 1: Classroom Management Videos

	Your Rate	Lead Researcher Rate	IOA	IOA=80% or above?
Practice 1				Y/N
Practice 2				Y/N
Practice 3				Y/N
Practice 4				Y/N
Practice 5				Y/N

To calculate interobserver agreement:

$$Smaller\ rate \div Larger\ rate \times 100\% = \%\ of\ agreement$$

Practice Session 2: Classroom

	Your Rate	Lead Researcher Rate	IOA	IOA=80% or above?
Practice 1				Y/N
Practice 2				Y/N
Practice 3				Y/N
Practice 4				Y/N
Practice 5				Y/N

Research Study Basic Information

I. Primary Investigator

Ambra Green
E-mail:
Cell:
Office:

*Please direct all questions to me.

II. Participating Schools

School
Address
Phone Number
Website
Principal Name

School
Address
Phone Number
Website
Principal Name

School
Address
Phone Number
Website
Principal Name

Appendix B

Teacher Name: _____ Date: _____

Observation Time: _____:_____to _____:_____ Observer: _____

Data Collection Form

	OTR	Positive Specific Feedback	Precorrection	Negative Interactions	Neutral Interactions
Group					
T1:					
T2:					
T3:					
WM					
WF					
BM					
BF					
LM					
LF					

Appendix C

Teacher Participant #_____
Teacher Participant Location_____

Teacher Demographic Information

1. What is your gender identification? _____

2. How do you identify your race or ethnicity? _____

3. Number of years of teaching experience? _____

4. What grade do you currently teach? _____

5. How many students are in your class? _____

6. How many professional development opportunities have you taken related to classroom and behavior management? _____

7. What is your highest educational degree completed? _____

8. Through what method did you receive your initial teacher certification?

Please circle one: alternative or traditional

**Alternative certification= Certification was received through an educational service center and not through college or university coursework.*

**Traditional certification= College or university level coursework was completed in exchange for teacher certification.*

Appendix D

School Participant_____

School Demographic Information

1. Community/location/area of school (circle one):

- Urban
- Rural
- Suburban

2. Circle one: Title 1 or Non-Title 1

Please indicate the percentage of students receiving free/ reduced lunch ____%

3. Percentage of minority enrollment (please write and circle one): _____%
(actual percentage)

- Category 1: 15%-40% minority student enrollment
- Category 2: 41%-70% minority student enrollment
- Category 3: 71%- 100% minority student enrollment

4. Percentage of

White/ White students: _____%

African American/ Black students: _____%

Latino students: _____%

Other racial/ ethnicities: _____%

Appendix E

Teacher Participant #_____
School Participant # _____

Target Student Demographic Information

Target Student 1

Name: _____

1. Race/ Ethnicity: _____

2. Grade: _____

3. Circle **Yes or No**: The target student has a history of archival data such as office discipline referrals, telephone calls or notes home, suspension, and/ or expulsions.

Target Student 2

Name: _____

1. Race/ Ethnicity: _____

2. Grade: _____

3. Circle **Yes or No**: The target student has a history of archival data such as office discipline referrals, telephone calls or notes home, suspension, and/ or expulsions.

Target Student 3

Name: _____

1. Race/ Ethnicity: _____

2. Grade: _____

3. Circle **Yes or No**: The target student has a history of archival data such as office discipline referrals, telephone calls or notes home, suspension, and/ or expulsions.

Appendix F

Teacher _____
School _____

Classroom Demographic Information

Instructions: Please provide the number of students in your class with the demographic racial/ ethnicity categories below. *See first row for example.*

	Male	**Female**	**(Total)**
Sample Race	3	5	8
White/ White			
Black/ African American			
Hispanic/ Latino			
Other ethnicities			
2 or more races	(specify multiple races)	(specify multiple races)	

VITA

Ambra Green received her Bachelor of Science degree and Masters of Education degree both with concentrations in Behavior Disorders, Positive Behavior Intervention and Supports, and Learning Disabilities from Texas State University in San Marcos, Texas. Ambra began her career as a special education resource and inclusion teacher for students with Emotional and Behavioral Disorders and Learning Disabilities at the middle school level. Additional experience included serving as a Positive Behavior Intervention Support coach and a Strategic Instruction Model coach to her colleagues. Her research foci include the disproportionate representation of minority students, particularly African Americans, in exclusionary discipline and special education referrals, categories, and placement. Additional research emphasizes prevention and intervention through culturally relevant systemic approaches as a means to mitigate the overrepresentation of marginalized groups. A related strand of research focuses on equity policies at the local, state, and federal levels.