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The Influence Of Teacher Attribution For Challenging Behavior On Teacher Self-Efficacy And Expectations For Student Success

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THE INFLUENCE OF TEACHER ATTRIBUTION FOR CHALLENGING BEHAVIOR ON TEACHER SELF-EFFICACY AND EXPECTATIONS FOR STUDENT SUCCESS

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Dedication

I can confidently say that without the influence of my teachers, from kindergarten to my college professors, this work would not have been possible. I am eternally grateful to each of the teachers in my life who believed in me and taught that I can do very hard things. Most of all, this work is dedicated to Mrs. Karen Armstrong, the special education teacher who taught me to read.

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Abstract

This study investigated how teachers' perceptions of students demonstrating challenging behaviors are influenced by the cause of the behavior. This study measured teacher perceptions of how successful a student would be in general education, the impact a student would have on the class, and the teachers' self-efficacy to support a student across five different attributions for challenging behavior: (a) an intellectual disability, (b) a negative attitude toward school, (c) an emotional and behavioral disability, (d) a history of trauma, and (e) autism. In Virginia, students with disabilities are disproportionately suspended, and additional inequities exist in access to an inclusive education between disability categories. For this study, kindergarten through 12th grade teachers (n = 205) from across Virginia participated in a survey with a randomized comparative experimental design using short vignettes to hold the type and intensity of the challenging behavior constant while varying the attribution. Following the survey, seven individual teacher interviews were conducted to investigate further the constructs identified. Findings showed teacher perceptions and self-efficacy may be influenced by the attribution for the student's behavior, and teachers may have a negative implicit bias toward students with emotional and behavioral disorders, which may influence inequitable access to general education. Discussion around possible mediating factors and recommendations for future research are included, along with implications for educational leaders and policy makers who are seeking to support schools and teachers as they improve inclusive education for all students.

THE INFLUENCE OF TEACHER ATTRIBUTION FOR CHALLENGING BEHAVIOR ON TEACHER SELF-EFFICACY AND EXPECTATIONS FOR STUDENT SUCCESS

CHAPTER 1

INTRODUCTION

Serving students with disabilities in the general education classroom improves their academic performance, decreases reliance on adult support, and improves attendance and behavior (Blackorby et al., 2005; Choi et al., 2017; Virginia Department of Education [VDOE], 2019; Wagner et al., 2006). However, the inclusion of some students, such as those with challenging behavior (CB), presents unique concerns. For many students, CB causes adverse short- and long-term outcomes, including exclusion from the general education classroom, suspension, poor academic performance, and low graduation rates (Colorado & Janzen, 2021; Gable et al., 2006; U.S. Department of Education [USDOE], 2021). For students with disabilities, CB can be even more concerning, as they are more likely than their typically developing peers to be suspended (VDOE, 2016a), even for minor misbehavior that does not pose a threat to safety and would be more appropriately addressed through alternative strategies (Office of Special Education and Rehabilitative Services [OSERS], 2016). Students with disabilities account for 28% of days missed due to suspension nationally (Civil Rights Data Collection, n.d.). In addition, teachers may inappropriately employ other restrictive measures, such as using study carrels, requiring extended time-outs, and withholding privileges, all of which mirror disciplinary removal (OSERS, 2016).

CB also takes a significant toll on teachers. Supporting students with CB can be an overwhelming task that leads to emotional exhaustion and reduced feelings of accomplishment for teachers (Aloe et al., 2014; Schaubman et al., 2011). Student misbehavior is a leading cause

of teacher stress (Aldrup et al., 2018; Chang, 2013; Geving, 2007); burnout (Aloe et al., 2014); job dissatisfaction; and teacher attrition (Brill & McCartney, 2008; Kapadia et al., 2007; Morin, 2001; Wynn et al., 2007). Given the implications for both students and teachers, support for teachers working with students with CB should be given considerable attention, as schools across Virginia attempt to retain teachers and support an ever-growing population of struggling students.

Current State of Inclusive Practices in Virginia

Despite the known negative effects, exclusionary practices, such as suspension, are typical responses to disruptive student behavior to maintain order in the classroom (Okonofua et al., 2016; Osher et al., 2010). The Office of Civil Rights Remedies estimated that students across the United States lost 11,392,474 days, the equivalent of 62,596 years, of instruction due to out-of-school suspension in the 2015–2016 school year (Losen & Martinez, 2020). The Commonwealth of Virginia was a major contributor to the missed instructional days. In the same year, suspensions in Virginia ranked the ninth highest in the Unites States (Losen & Martinez, 2020). In six Virginia divisions, suspension accounted for the loss of instructional time equivalent to over 1 academic school year (i.e., 182 days) for every 100 students enrolled (Losen & Martinez, 2020). Richmond, the state capital, had the second-highest reported use of suspension in the USDOE's data for the 2015–2016 school year (Losen & Martinez, 2020). For every 100 students enrolled in Richmond Public Schools, students missed a total of 352 school days due to suspension. Disaggregation of this data has revealed that for every 100 students with disabilities, a shocking 744 school days were missed, which is an average of 7.44 school days missed due to suspension for each student with a disability in Richmond Public schools (Losen & Martinez, 2020).

The VDOE (n.d.) requires that divisions measure and report their suspension data annually. Data analyzed from the Virginia FFY 2019 Special Education Performance Report outlined the state's goals and the performance of its divisions for the 2019–2020 school year (VDOE, n.d.). According to this report from the VDOE (n.d.), 41.57% of Virginia school divisions had a "significant discrepancy in the rate of suspensions and expulsions of greater than 10 days in a school year for children with [individualized education programs]" (p. 2) compared to students without disabilities, meaning students with disabilities were over twice as likely as their peers to receive a suspension (Joint Legislative Audit and Review Commission [JLARC], 2020). This statistic fell far short of reaching the state's goal of 0% of divisions having a discrepancy, especially considering that in nine Virginia school divisions, students with disabilities were over 4 times as likely as their peers to receive a long-term suspension or to be expelled in the 2017–2018 school year (JLARC, 2020). This breakdown included three divisions where students with disabilities were over 8 times as likely to receive a long-term suspension (JLARC, 2020).

Students with disabilities often cannot afford to miss instruction; however, Civil Rights Data Collection (n.d.) showed students with disabilities accounted for 30.9% of days missed due to out-of-school suspension during the 2017–2018 school year in Virginia, slightly higher than the national average of 28.1%. This percentage is especially high considering students with disabilities made up only 13.3% of enrollment for the same school year. Parents of students with disabilities also have concerns about the use of exclusionary discipline (JLARC, 2020). In a survey of parents of students with disabilities conducted by JLARC (2020), 24% of parents indicated their child had been removed from their classroom due to behavior in the past 3 years. Of those parents, 53% felt their child had been disciplined inappropriately or excessively, and

49% indicated their child's school had not done enough to reduce the amount of class time their child missed due to behavioral challenges.

In addition, data analyzed from the VDOE (2016b, 2016c) from the 2014–2015 school year, the last year such data were made available, revealed that further discrepancies existed in the use of exclusive disciplinary practices among disability categories. Students with the identification of an emotional disturbance or other health impairment were the most likely groups to receive an in- or out-of-school suspension or expulsion. In fact, over one-third of students identified as having an emotional disturbance were suspended for at least 1 day, with 6% expelled or suspended for greater than 10 days. In addition, 15.7% of students with an emotional disturbance received between 1 and 10 days of in-school suspension. These rates are roughly twice as high as students identified under the disability category of "other health impairment," which represented the next most likely disability category to be suspended. This group, which included students identified as having attention deficit hyperactive disorder, received out-of-school suspension for up to 10 days at a rate of 14.2%. An additional 3.1% received suspension or expulsion greater than 10 total days, and over 10% spent between 1 and 10 days in in-school suspension (VDOE, 2016b, 2016c). Although the varying nature of the different disabilities may explain some of the discrepancy in suspension rates, other characteristics, such as gender and race, are also associated with suspension rates (Camacho & Krezmien, 2019; Skiba, 2010; USDOE, 2014). These differences suggest factors other than student behavior alone impact disciplinary decisions in response to student misbehavior.

The Discipline, Crime, and Violence Annual Report (VDOE, 2016a) provided additional insight into the causes of suspensions in Virginia. The leading three offenses resulting in suspensions of fewer than 10 days during the 2014-2015 school year were relatively minor,

nonviolent offenses. These included defiance/insubordination (15.73%), classroom or campus disruption (12.66%), and disruptive demonstrations (11.3%). Other non-violent and minor offenses resulting in suspension included using obscene language (7.9%), disrespect/walking away (7.74%), and minor insubordination (3.45%). Together, these offenses accounted for 58.78% of short-term suspensions, meaning that most of the offenses were non-volent, relatively minor, and could likely have been addressed in more inclusive and supportive ways.

The suspension statistics fail to capture less formal exclusionary actions, such as patterns of students being sent to the special education classroom, students being seated separately or at a study carrel, office referrals, or being sent home early without a formal suspension (OSERS, 2016). Although some of these actions may be used as strategies to support students, they are often used inappropriately as exclusionary disciplinary responses to CB (OSERS, 2016). These informal means of restricting access to the general education setting are short-term solutions to a long-term problem. They contribute to missed instruction, missed opportunities for working with typically developing peers, and ostracization from the class community (Dishion et al., 2008; Osher et al., 2010). Although there will always be a place for discipline in schools and many students genuinely require more restrictive placements, increasing the use of inclusive practices for all students is vital to improve equitable student outcomes.

Use of Inclusive and Supportive Practices

Schools are responsible for using evidence-based strategies to maintain safe and orderly settings and reduce exclusionary discipline practices, such as providing behavioral focused instruction or addressing the root causes of student misbehavior (Contractor & Staats, 2014; Osher et al., 2010; Skiba, 2010; USDOE, 2014). Teachers can use several evidence-based strategies to decrease the likelihood of student misbehavior and respond to misbehavior in a way

that encourages students to remain in the classroom. Preventative strategies include teaching and reinforcing classroom rules and expectations, teaching students the positive consequence of following rules, targeting the function of behaviors, strengthening student–teacher relationships, and setting up the environment to make CB less likely (Mitchell & Bradshaw, 2013; Osher et al., 2010; Ross et al., 2012). For students who consistently display CB, teachers can use precorrection to help students make positive choices before they enter situations in which they are likely to exhibit predictable misbehavior (Gable et al., 2009).

In response to CB, teachers are encouraged to implement strategies that (a) promote positive alternative behavior, (b) prompt expected behavior, (c) provide structured breaks, (d) praise and reward appropriate behavior, and (e) keep correction and consequences private between the teacher and student (Gable et al., 2009; Hieneman et al., 2005; JLARC, 2020; OSERS, 2016; Scott et al., 2007). Teachers can increase the likelihood students will comply with redirection by establishing eye contact and proximity to the student, using a polite and unemotional tone to clearly explain the desired behavior, and provide wait time for the student to process and comply with the direction (Gable et al., 2009). By reinforcing approximations of the expected behavior, even when the student does not behave perfectly, teachers can shape the behavior and help the student see themselves as capable of being successful in the classroom (Rumain, 2010). The inclusive strategies described are those frequently supported by the positive behavior interventions and supports framework, which embeds inclusive and preventative strategies within a tiered system of behavioral supports (Gable et al., 2009; Ross et al., 2012; Scott et al., 2007).

There is ample evidence that systematically and consistently implementing positive and inclusive strategies, such as those previously described, improves student academic and

behavioral outcomes, including reduced anti-social behavior, vandalism, aggression, and instructional time missed due to discipline (Gable et al., 2009; Osher et al., 2010; USDOE, 2014). These student outcomes are also correlated with positive effects on teachers and staff. Through improved student behavior, teachers experience less job-related stress, decreased teacher burnout, and increased self-efficacy (Aloe et al., 2014; Brill & McCartney, 2008; Ross et al., 2012). Despite these positive effects, many teachers and schools struggle to shift practices away from reactive, punitive consequences toward proactive classroom management styles that incorporate these constructive strategies.

Barriers to Increasing Inclusive Practices

Many divisions are working hard to improve teacher knowledge of evidence-based, positive behavioral intervention strategies. Almog and Shechtman (2007) cited multiple self-report studies in which teachers indicated they preferred to use helpful and inclusive approaches that promote positive behavior over punitive approaches. However, a preference for using positive strategies did not always translate into the consistent and equitable use of such strategies in the high-stress setting of a classroom with CBs (Almog & Shechtman, 2007; Pajares, 1992; Sugai & Horner, 2006). Many factors influence teacher behavior in the classroom, including factors outside the teacher's control, such as statewide policies and organizational influences like administrative support, all of which directly and indirectly affect teacher use of research-based interventions and approaches (Domitrovich et al., 2008). In addition, individual factors, such as teacher beliefs, perceptions, and attitudes also influence how teachers respond to students, even when supports that promote the use of evidence-base strategies are in place (Domitrovich et al., 2008; Pajares, 1992; Sugai & Horner, 2006).

Two individual-level teacher beliefs that may be most impactful on day-to-day decision making and use of inclusive practices are the teacher's causal attribution of the problem behavior and their self-efficacy to support the student within the classroom (Morin, 2001; Schultz & Simpson, 2013). Attribution theory defines how individuals observe, understand, and respond to the success and failures of others and themselves (Weiner, 1979, 2001). To explain how attribution affects an individual's behavior, Weiner (1979) used the stimulus-cognition-response (S-C-R) framework. When an individual observes a situation or stimulus (S), they develop thoughts, feelings, and beliefs, including causal ascriptions for how another person acted (C). These influence how the individual responds (R) to the situation. In the classroom, a teacher observing a student refusing to comply with directions (S) will have cognitive reactions (C), both conscious and unconscious. These cognitive reactions include making causal ascriptions for why the individual is performing in such a way. Causal ascriptions can range from believing the student is purposefully and willfully displaying defiance to believing the student is acting out due to something outside their control, such as an inability to regulate their emotions. Depending on their causal ascriptions (C), the teacher may respond (R) in different ways. They may choose to call for the principal to remove the student and hand over a referral for disruption, or the teacher may calmly remind the student of the direction, state that it is okay to feel upset and they believe the student can make a better choice, and then provide the student time to comply.

In addition to perceptions of students, teachers' perceptions of themselves, including their self-efficacy to effectively implement the positive strategies and support the student within their classroom, can also influence decision making. Self-efficacy is not a measure of how capable an individual is of achieving a given outcome, but rather, a measure of an individual's belief they are capable of the behavior required to bring about the desired outcome in the given situation

(Bandura, 1997). An individual's level of self-efficacy influences how likely they are to take on difficult tasks, the amount of effort and time they will spend on the tasks, and their willingness to persevere in the face of obstacles (Bandura, 1997). In education, it is helpful to look more closely at teacher self-efficacy (TSE), which examines teacher confidence to perform specific classroom and teaching tasks in each unique context (Tschannen-Moran et al., 1998). Each task a teacher must perform across the school day, whether teaching content standards or addressing CB, can elicit different feelings of TSE to accomplish the goal of the task successfully (Tschannen-Moran et al., 1998). As teachers assess each teaching task, they consider the specific context and are influenced by their beliefs about the students' abilities and motivations (Tschannen-Moran et al., 1998).

Attribution theory and TSE considered together may explain some of the differences in a teacher's reaction to different students with similar CB. When a teacher observes a CB, their TSE to address the behavior successfully with inclusive strategies may depend, in part, upon the attribution they make for the student's difficulties. For example, teachers may feel less capable of supporting a student when their behavior is attributed to an emotional or behavioral disorder, but more confident supporting a student with the same behavior and an intellectual disability. Their beliefs about the attribution of the behavior may cause them to feel that the student will be less successful in the general education setting than other students who exhibit similar behavioral challenges but for different reasons. Some attributions for CB may lead teachers to believe the student will take a considerable amount of effort to support, leading to a decrease in their TSE and to the belief that the student's behavior will have a greater impact on daily classroom functioning. These beliefs may lead teachers to feel the general education setting is not appropriate for the student and that they would be better served in another setting, such as a

special education classroom. Teachers may not persevere in their use of proactive and inclusive strategies for students with specific characteristics and behavioral attributions. Instead, they may choose to use exclusionary practices, like suspension, to avoid the difficult task of shaping more positive behavior within the general education setting.

Statement of the Problem

Teachers may unknowingly perceive and treat students with similar conduct challenges differently based on student characteristics, potentially increasing the use of punitive strategies, inequitable access to the general education setting, and decreases in TSE and job satisfaction. Despite the implications, research examining the associations between attribution theory and TSE is limited (Frohlich et al., 2020; Zee et al., 2016). Additionally, research in this area tends to investigate different topographies of behavior or focus on a specific disability (Alevriadou & Pavlidou, 2016; Lucas et al., 2009; Poulou & Norwich, 2002). Research has not yet addressed how TSE and beliefs about students with CB vary based on the cause of the behavioral difficulty, such as a disability, history of trauma, or negative student attitude. This study used researcher developed vignettes to present realistic descriptions of students with CB, allowing investigation into the relationship between the causes of problem behaviors and how teachers perceive struggling students in three related aspects: (a) the teacher's self-efficacy to support the student in their classroom, (b) the impact the student will have on the class, and (c) how appropriate the general education setting is for the student.

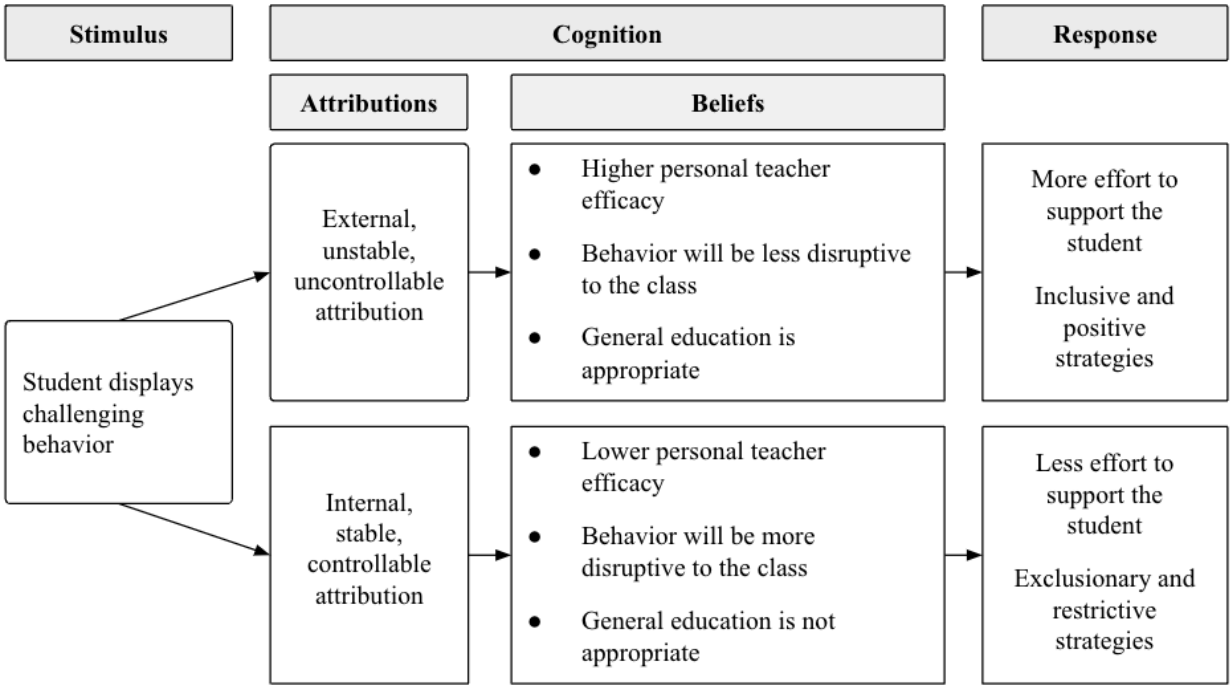
Conceptual Framework

The conceptual framework for this study is based on the S-C-R model used by Weiner when describing attribution theory (Rudolph et al., 2004; Weiner, 1974). The conceptual framework, shown in Figure 1, displays how the S-C-R model applies to this study. Although the

model displays the entire S-C-R chain, this study will primarily investigate the S-C relationship, specifically how variations in the implied attribution of the stimulus will influence the teacher's cognition while the CB remains consistent. Although each segment in this chain warrants further understanding, it is the moment of interpretation that ultimately determines how a teacher responds to a student with CB (Bibou-Nakou et al., 2000; Morin & Battalio, 2004).

Figure 1

Conceptual Framework



This study captured some of the beliefs and perceptions teachers have when working with students with CBs. For this study, general education teachers read the same short vignette describing a student who consistently displayed CB during the previous school year. The

vignette was the stimulus, represented under the "stimulus" column in the conceptual framework. Although each teacher read the same behavioral description, the experimental vignettes included varied implied attributions for the CB, including an emotional or behavioral disability, an intellectual disability, a history of trauma, autism, or a negative attitude toward school. Although the implied cause of CB varied, this study did not measure the teachers' attributions, as shown in the "attributions" column of the conceptual framework. Rather, it focused on the "beliefs" column. Teachers answered questions related to their self-efficacy to support the student depicted in the vignette, their perceptions about how disruptive the behavior would be to the class, and the appropriateness of the general education classroom for the student. How teachers responded to the student, based on their beliefs, is depicted in the final column labeled "response." However, this study did not attempt to measure directly the teachers' responses to the student.

Research Questions

This study explored the impact of different implied attributions for CB on general education teachers' expectations for the student and their TSE for supporting the student. It was hypothesized that the various implied attributions would reveal differences in beliefs around how disruptive the CB would be to the class, expectations for successful inclusion in the general education setting, and TSE for supporting the student. This study addressed the following research questions:

1. What is the relationship between different attributions for challenging student behavior and the teachers' self-efficacy in supporting students?

2. What is the relationship between different attributions for challenging student behavior and how disruptive teachers feel the behavior will be to the general education classroom?
3. What is the relationship between different attributions of a challenging student behavior and teachers' beliefs about students' ability to be successful in the general education setting?

Significance of the Study

It is vital that teachers feel effective in supporting students with CB, regardless of the cause of the behavior. CB result in students' being removed from the general education classroom, as well as teachers becoming frustrated and dissatisfied. This study helped fill a gap in the understanding of how teacher beliefs and perceptions influence their expectations and TSE for supporting such students. If differences are present in teacher beliefs between a student with and without a disability or between disability categories, it is likely that there are also differences in these students' access to the general education setting. This inference is not an attempt to blame teachers for inequalities. Instead, it is an effort to point out a possible omission in the support and training provided to teachers, who may be unaware of how their perceptions can impact students.

The goal of this study was to clarify trends in cognitive responses to students with CB to inform policymakers, school and district leaders, teacher preparation programs, and teachers themselves. A better understanding could help improve support, professional development, and interventions around inclusive practices, leading to a more inclusive environment for students and increasing educational equity. In addition, improving support for teachers in this area has

potential implications for decreasing teacher stress and attrition, making it valuable for school and division leadership as they work to improve support and to increase teacher retention.

Definition of Terms

The following paragraphs define terms used throughout this study.

Attribution Theory

A framework for understanding how individuals make judgments about the causes, or attributions, of success and failure. Attributions can be internal or external, stable or unstable, and controllable or uncontrollable by the person. Attributions impact the emotional response an individual has toward a person experiencing failure, which mediates the actions taken to help the person or not (Heider, 1958; Weiner, 1974).

Challenging Behavior

This term refers to "intense behaviors that present physical, instructional, or social concerns to the teacher…Challenging behaviors (CB) are demonstrated frequently by a student and are difficult to manage" (Westling, 2010, p. 50). General examples of CB include both internalizing and externalizing behaviors such as social withdraw, work refusal, defiance, disruption, verbal or physical aggression, and non-compliance.

Co-Teaching

"Co-teaching is a collaborative approach to instruction in which two teachers, typically a general education teacher and a special education teacher, work together to plan and then implement instruction for a class that includes students with disabilities" (Council for Exceptional Children, 2023).

Externalizing Behavior

Externalizing behavior refers to behaviors that impact the student's environment and other individuals, such as defiance, aggression, and class disruption; they can be comorbid with internalizing behaviors **(**Achenback, 1978; Liu, 2004; Splett et al., 2019).

Internalizing Behavior

Behavior that tends to affect the internal and individual state of a child, including social withdraw, shutting down, and avoiding attention are grouped into internalizing behavior problems. These behaviors tend to be associated with feelings of depression and anxiety and can be present alongside externalizing behaviors (Achenback, 1978; Liu, 2004; Splett et al., 2019).

Teacher Self-Efficacy

Tschannen-Moran et al. (1998) described teacher self-efficacy (TSE) as, "The teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233).

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter provides an overview of the relevant extant literature related to this study's constructs and conceptual framework. It first frames the problem through a review of recent findings around the impact of challenging behavior (CB) on students and teachers and the benefits of using inclusive practices in schools. Then the chapter explores the barriers to increasing the use of inclusive practices, including the foundations of attribution theory and teacher self-efficacy (TSE) and the relevant research related to their influence on teacher beliefs around students with CB. Finally, the chapter explores considerations for conducting research using experimental vignette methodology and concludes with a summary.

Impacts of CB

Students of all ages, disability identification, race, and socioeconomic status can present CB during the school day. CB includes a vast array of "intense behaviors that present physical, instructional, or social concerns to the teacher…and are difficult to manage" (Westling, 2010, p. 50). One important classification system used to describe CB includes distinguishing between internalizing and externalizing behavior problems (Achenbach, 1978). Internalizing behavior includes behaviors that primarily affect a child's internal state, such as social withdraw, depressive thoughts, or a lack of participation; while externalizing behaviors are more directed toward the child's external environment, including behaviors such as destruction of property, hyperactivity, and aggression (Achenback, 1978; Liu, 2004). Both internalizing and externalizing

behaviors present significant challenges for students and are related to increased risk for poor academic performance, reduced attendance, special education identification, and later school failure (Liu, 2004; Splett et al., 2019). However, externalizing behaviors tend to receive more attention from teachers due to their nature and tendency to disrupt the learning environment (Splett et al., 2019). Students who display externalizing behaviors, including defiance, work refusal, class disruption, and verbal or physical aggression tend to receive more adult attention and support, due to a phenomenon known as the "squeaky wheel" effect (Bradshaw, Buckley, & Ialongo, 2008). This phenomenon potentially explains why most suspensions are a result of externalizing behaviors, such as defiance/insubordination, disruption, obscene language, disrespect, and walking away (VDOE, 2016a).

CB often coincides with underlying disabilities and mental health concerns. Data analyzed by the Centers for Disease Control and Prevention (CDC, 2022) showed that between 2016 and 2019, 8.9% of children aged 3–17 years were identified as having a behavioral problem. Of these children, more than one in three also had anxiety, and one in five were suffering from depression (CDC, 2022). Additionally, the National Center for Education Statistics (2020) estimated that during the 2017–2018 school year approximately 16.5% of students had at least one mental health disorder. Although it is difficult to measure the rates of CB for specific disability categories, by one estimate, two thirds of students aged 4 to 8 with autism have teacher-reported behavioral challenges (Chandler et al., 2015), and data collected during a national parent survey in 2016 found half of all children with attention deficit hyperactive disorder (ADHD) had a behavior or conduct problem (CDC, 2021). These numbers may be even higher today after years of interrupted learning due to the COVID-19 global pandemic. Since returning to in-person

learning, social, emotional, and behavioral concerns have exacerbated the need for behavioral support in schools (Vestal, 2021).

The Impact of CB on Students

A primary concern for students displaying CB is removal from the general education setting, which causes missed instructional opportunities, as well as decreased time to engage with typically developing peers. Students with emotional and behavioral disorders (EBD) have the third-highest rate of being placed in some of the most restrictive settings for their education (USDOE, 2021). In 2019, 15.8% of students with an emotional and behavioral disorder were placed outside of a traditional public school, compared to 5% of all students with disabilities (USDOE, 2021). The only disability categories that were placed outside of the traditional public school at a higher rate were students with multiple disabilities (23.0%) and students with deaf–blindness (26.5%). Students with autism and students with an EBD were also less likely to spend more than 80% of their school day in the general education classroom, at 39.8% for students with autism and 50.2% for students with EBD. As previously discussed, these students were also more likely to be suspended and to be the recipient of other exclusionary discipline (Colorado & Janzen, 2021; Cunningham & Schreibman, 2006; Gable et al., 2006; USDOE, 2021).

When included in general education, a student's behavioral difficulties may influence how teachers interact with them. For example, Nelson and Roberts (2000) observed how elementary and middle school teachers interacted differently with students they described as "well-behaved" and those with ongoing behavioral difficulties. For the study, 99 students with behavioral challenges, 59 of whom had current individualized education plans, were observed by research assistants over 3 years. Teacher interactions with the well-behaved students were compared to interactions the same teachers had with students identified as having ongoing CB.

In addition to recording the types of behaviors that initially prompted the teacher to address the student, the observers also recorded any following back-and-forth responses between the student and teacher.

During the interactions, teacher responses were coded as one of seven strategies: commands, reprimands, ultimatums, consequences, requests to leave, approval, or ignored by the teacher. Two of these responses, commands and teacher approval, directed attention toward positive behaviors students need to be successful in the classroom. Commands were recorded when the teacher instructed the student to engage in a more appropriate behavior, for example "please read quietly." Teacher approval provided reinforcement when the student improved their behavior, including saying things like "good job" or awarding the student a sticker or points. Alternatively, four of the teacher responses were focused on immediately ending the CB without providing instruction in more appropriate behavior. These responses included reprimands, which were recorded when the teacher told the student to cease a behavior of concern ("stop teasing" or "stop hitting"), consequences (loss of privilege), ultimatums that presented the student with the choice to end the behavior or face a consequence ("If you don't…then I will"…," or "I need you to be quiet, or…"), and a request for the student to leave the classroom. A more neutral strategy was the teacher ignoring the behavior altogether (Nelson & Roberts, 2000).

Surprisingly, Nelson and Robert's (2000) results showed the two groups of students misbehaved at similar rates. There were also no differences in how the two groups behaved in different instructional settings (e.g., independent work, direct instruction, transitions) or in their behavior across content areas (e.g., reading, math). However, differences were found in how the two groups of students responded to the initial teacher correction. Within the groups of well-behaved students, the number of interactions following a disruptive behavior was one with a

standard deviation of essentially zero. This statistic means that these students were not identified as well-behaved because they never acted out, but because teacher correction immediately curtailed the behavior. In contrast, students viewed as having CB had an average of 4.56 back-and-forth interactions with their teacher after being corrected before they became compliant, were ignored, or were asked to leave the classroom.

Nelson and Roberts (2000) also found differences in how teachers addressed CB between the groups of students. When addressing the CB of well-behaved students, there was a conditional probably of 83% (95% CI [78–87]) the teachers would use a command such as "please read your book quietly." However, this number was only 56% (95% CI [46–65]) for the target group of students. In contrast, teachers used reprimands, such as "stop," for the well-behaved peers only 16% of the time (95% CI [12–21]), while the number was over twice as high for students with CB at 37% (95% CI [28–57]). These findings indicated students with ongoing CB were more likely than their peers to receive responses that drew attention to the unwanted behavior rather than prompting a positive alternative (Nelson & Roberts, 2000).

Additionally, if the teacher's initial attempt to repress the CB did not result in obedience, the teachers often used more of the strategies focused on ending the CB, engaging in multiple student–teacher interactions with increasing consequences for the student. These cycles of escalation were recorded for up to seven back-and-forth responses between teachers and target students, with the chance of the teacher using an ultimatum, removal of a privilege, or asking the student to leave the room increasing with each interaction. In addition, the conditional probability that a teacher showed approval of a target student was never above 5% (95% CI [1-9]) (Nelson & Roberts, 2000). These findings indicate that restrictive and exclusionary practices

tend to be used more with the students who are already most likely to struggle with behavior, potentially reinforcing the escalation cycle.

The findings reported by Nelson and Roberts (2000) provided evidence that there are differences in how teachers responded to different types of students exhibiting CB. However, the researchers did not find significant differences in how teachers responded to students in different disability categories or without disabilities. This lack of findings could be a result of the study's design, which measured within teacher differences in behavior. It is also possible that the representation of each disability category was not sufficient to demonstrate statistical significance, as only 59 of the target students had current individualized education plans representing multiple disability categories. Still, this finding was contrary to the hypothesis that specific student characteristics like disability identification influenced teacher responses to students' CB.

Further, Nelson and Roberts (2000) also did not account for two crucial aspects of teacher–student interactions. First, although the observers recorded the teachers' proximity to the students being corrected and found no difference in distance between the two groups, there was no qualitative measure of how the teachers delivered the correction (e.g., tone, intonation, or body language). Nelson and Roberts (2000) reported teachers stating, "Please read quietly in your book," and "I need you to pay attention." However, students could interpret these phrases differently depending on whether they were softly whispered or harshly demanded. Studies that have accounted for the delivery and nonverbal signals used during corrections may reveal additional differences in the treatment of the two groups of students.

Second, there was no mention of the quality of relationships teachers formed with the two groups of students. Positive and trusting student–teacher relationships are critical for classroom

management and prosocial student behavior (Booker, 2021; Longobardi et al., 2021; Poulou, 2020; Roorda & Koomen, 2021). It is possible teachers had stronger relationships with the well-behaved students, explaining why they used more instructive strategies like commands when correcting their behavior, as well as why the well-behaved students responded more positively when corrected. In contrast, a strained student–teacher relationship may have resulted in the students with CB feeling unwelcomed by the teacher. The target students may, therefore, have viewed any teacher correction as a threat to their belonging, prompting them to respond with additional CB rather than compliance.

The teacher-student relationship has been investigated along with the impact of CB and student outcomes. Hamre and Pianta (2001) measured the relationships kindergarten students (n = 179) had with their teachers in a small U.S. city and tracked their academic and behavioral outcomes through eighth grade. Among the data collected were measures of cognitive development, a behavioral rating scale, and a teacher-student relationship rating scale. Results indicated teacher–student relationships were impacted by student behavior, particularly by teacher–student conflict, r (178) = .63, p < .01. In addition, the ratings of teacher–student conflict in kindergarten were weakly correlated with math and language arts grades for male students from kindergarten to eighth grade, with correlation coefficients from -0.22 to -0.29 (p < 0.01) and for female students through sixth grade, with coefficients between -0.21 and -0.22 (p < 0.01). Regression analysis also showed that scores on the relational negativity subscale accounted for a small portion of the variance for students in lower elementary grades (β = -0.23, p < .01). These findings suggested teacher–student conflict and relational negativity have a relationship with future student outcomes. However, the relationships were weak, accounting for only a small portion of the variance in student outcomes; and the interpretation was not able to

distinguish if teacher–student relationships caused these outcomes or if they were both related to other mediating factors. This weak relationship could have been due to limitations of the study, including the lack of repeated measures of teacher–student relationship strength in the years following kindergarten, and failing to account for student' perceptions of their relationships with teachers, which may have been a stronger predictor.

Despite these limitations, Hamre and Pianta's (2001) findings were supported by later research from Baker et al. (2008), who asked kindergarten through eighth-grade teachers ($n = 68$) to rate their students ($n = 423$) on measures of internalizing and externalizing behaviors, classroom adjustment, and positive work habits. The teachers completed the Teacher–Student Relationship scale for each student and collected measures of student academic achievement. Upon initial analysis, Baker et al. (2008) found several moderate correlations between teacher ratings of their students' behaviors, adjustment, achievement, and the strength of the teacher–student relationship, referred to as "closeness." As displayed in Table 1, relevant findings related to the strength of the teacher–student relationship included a moderate negative correlation with conflict between the teacher and student ($r = -0.49$, $p < 0.001$), a moderate positive correlation with classroom adjustment ($r = 0.46$, $p < 0.001$), and a slight positive relationship with reading grades ($r = 0.18$, $p < 0.001$). In addition, student–teacher conflict was moderately negatively correlated with both positive work habits ($r = 0.47$, $p < 0.001$) and classroom adjustments ($r = 0.47$, $p < 0.001$), as well as weakly negatively correlated with reading grades ($r = -0.24$, $p < 0.001$). These relationships indicated a successful classroom experience was related to the closeness of the teacher–student relationship.

Table 1

Correlations Among Relationship and Student Outcome Variables

Variables	Correlations			
	Closeness	Conflict	Reading grades	Positive work habits
1. Closeness				
2. Conflict	-0.49**			
3. Reading grades	0.18**	-0.24**		
4. Positive work habits	0.25	-0.47**	0.41**	
5. Classroom adjustment	0.46**	-0.47**	0.54**	0.30**

Note. Adapted from "The Teacher–Student Relationship as a Developmental Context for Children With Internalizing or Externalizing Behavior Problems," by J. A. Baker, S. Grant., and L. Morlock, 2008, *School Psychology Quarterly, 22*(1), p. 8 (https://doi.org/10.1037/1045-3830.23.1.3). Copyright 2008 by the American Psychological Association.
** $p < .001$

In addition, student externalizing behaviors in the classroom accounted for 10% of the variance in school outcomes, with the teacher–student relationship accounting for an additional 5%. Although these findings were modest, they suggested teacher–student relationships characterized by trust and warmth were associated with higher school adaption, and those characterized by conflict were associated with lower school adaption. However, it is unclear from these results whether student behaviors and achievement impacted the teacher–student relationship or vice-versa. Additionally, due to practical limitations, Baker et al. (2008) did not control for race or gender, which may also have played a role in student outcomes and relationships.

Regardless of the causes of challenging teacher–student relationships, it is widely accepted in the field of education that relationships matter in school and learning (Booker, 2021; Longobardi et al., 2021; Okonofua et al., 2016; Poulou, 2020; Roorda & Koomen, 2021; Zee et al., 2016). Lifelong educator and speaker Pierson (2013) has stated, "Kids don't learn from people they don't like" (1:37). Evidence from Hamre and Pianta (2001) and Baker et al. (2008)

has supported this suggestion and indicates that CB is a cause for turmoil in the teacher–student relationship, which may have a reinforcing effect on the CB displayed by students and the responses of their teachers. In addition, the interconnected nature of the student–teacher relationship means that CB impacts not only the experiences of students but also the experiences and outcomes of their teachers.

The Impact of CB on Teachers

Teachers have continuously named disciplinary problems and CB as a cause of stress and reduced well-being and job satisfaction (Aldrup et al., 2018; Aloe et al., 2014; Brill & McCartney, 2008; Chang, 2013; Geving, 2007; Ramos & Hughes, 2020) as well as a major barrier to teaching (Harrison et al., 2012). For this reason, CB has been the focus of several studies investigating teacher burnout and attrition.

In one such study, Chang (2013) surveyed midwestern teachers (n = 492) in their first 5 years of teaching. Chang asked participants to describe a "recent classroom incident or one memorable disruptive classroom behavior" (p. 803) in which they felt "emotionally challenged" (p. 803) and report the emotions they experienced. The teachers then rated the intensity of those emotions on a 6-point scale with 1 being the lowest intensity and 6 being the highest intensity. The teachers also reported how they coped with the situation and their feelings of overall job-related burnout. In the study, most teachers recounted incidences that included student defiance (59%), resistance toward the teacher (21%), or hostility or aggression toward a teacher or peers (35%). Teachers reported different emotional responses to each type of CB, including higher levels of anger when students were defiant (M = 3.77, SD = 1.27) or when students were hostile (M = 3.61, SD = 1.48). More intense feelings of frustration were reported for passive aggression (M = 4.73, SD = 1.01); hostile aggression (M = 4.66, SD = 1.27); and defiant behavior (M = 4.67,

SD = 1.05). The types of behaviors and intensity of emotions were examined by an analysis of variance (ANOVA), revealing significant differences for the intensity of anger among the different types of misbehavior, $F(6, 485) = 2.46$, $p < 0.05$, but not for the intensity of frustration or other unpleasant emotions.

Additionally, Chang (2013) found the intensity of anger and frustration experienced while recounting the singular disruptive event positively covaried with the teachers' reports of feelings of overall burnout ($\beta = .42$, $p < .05$). This finding indicated the more intense the teacher's emotional reaction to the CB was, the higher their feelings of overall job-related burnout. However, the findings were not able to distinguish a directional relationship. Partially explaining the intensity of emotions, Chang (2013) found that more intense anger and frustration were driven by a lack of problem-solving efficacy ($\beta = 0.40$, $p < .05$) and the perception that the CB was preventing them from reaching their goals as teachers ($\beta = .28$, $p < .05$). These findings suggested that when teachers are unsure about how to respond to a CB, their feelings of anger and frustration are more intense, which are tied to their feelings of job-related burnout. This study's findings should be interpreted with the understanding that the methodology did not control for the type or intensity of the behavior or the students' characteristics; however, the findings do have implications for understanding why teachers respond to students with CB with restrictive or exclusive practices. Further research is, therefore, needed to identify whether student characteristics (e.g., presence of a disability) also impact feelings of efficacy and teacher burnout.

Chang's (2013) findings linking student behavior and teacher burnout align with later research on student–teacher relationships. Hagenauer et al. (2015) demonstrated that, like the previously discussed impacts on students, the student–teacher relationship is important for the

experiences and outcomes of teachers. The researchers asked 132 secondary teachers in Austria to reflect on a class they taught and answer questions related to their emotions, self-efficacy, and perceptions of student behavior. Findings included a strong correlation between teacher rating of their closeness with students and the amount of joy experienced while teaching ($r = 0.80$, $p < 0.001$). A strong student–teacher connection was also moderately negatively correlated with anxiety ($r = -0.64$, $p < 0.001$) and anger ($r = -0.65$, $p < 0.001$). Additionally, feelings of joy were positively correlated with teacher self-efficacy to build positive relationships ($r = 0.32$, $p < 0.001$), manage the classroom ($r = 0.33$, $p < 0.001$), and build class engagement ($r = 0.61$, $p < 0.001$), while it was negatively correlated with the perception the class lacked discipline (e.g., engaged in excessive talking; $r = -0.61$, $p < 0.001$). Hagenauer et al. (2015) also found that when discipline and engagement were a challenge, teachers felt significantly more anger ($r = 0.74$, $p < 0.001$) and anxiety ($r = 0.58$, $p < 0.001$).

These results have provided evidence that the quality of student–teacher relationships has an important link to the emotions teachers experience while teaching, making it an important consideration for improving teacher retention, burnout avoidance, and willingness to support students with CB. However, the correlations between these variables are complex. Like the studies measuring student outcomes, this study was unable to determine the direction the correlational relationships. It is unclear whether undisciplined classes caused more anger and anxiety, or if the reverse was true. Is the joy teachers experience when they feel close to their students the result of the closeness, or is the closeness a result of joy? Despite the unanswered questions, Hagenauer et al. (2015) demonstrated that the relationships teachers have with students are related to the teachers' emotional experiences, and this connection may influence how teachers interact with their students with CB.

Expanding on the findings of Hagenauer et al. (2015), Aldrup et al. (2018) investigated relationships from both teacher and student perspectives when they asked secondary German teachers (n = 222) and students (n = 4111) to report on their relationships and student misbehavior. The teachers also rated their feelings of well-being, emotional exhaustion, and work enthusiasm. Results showed student–teacher relationships had a small correlation with both teacher ratings of misbehavior (r = -0.28, $p < 0.001$) and student ratings of misbehavior (r = -0.25, $p < 0.01$). Misbehavior was also somewhat correlated with teacher emotional exhaustion for both student ratings of misbehavior (r = 0.24, $p < 0.01$) and teacher ratings of misbehavior (r = 0.28, $p < 0.001$). Teacher work enthusiasm had a weak negative association with teacher ratings of student misbehavior (r = -0.17, $p < 0.01$) but not student ratings of misbehavior. Stronger associations were found between student–teacher relationships and teacher well-being. As relationships improved, emotional exhaustion decreased (r = -0.36, $p < 0.001$), and enthusiasm for work increased (r = 0.42, $p < 0.001$). These results provided additional support that student misbehavior is related to teacher well-being; however, the findings are mostly small. The size of the correlations may be due to the limitations of the methodology. Like the study by Hagenauer et al. (2015), Aldrup et al. (2018) limited their study to how teachers felt about their relationships with a class; individual student–teacher relationships were not measured. Further research into individual student–teacher interactions may reveal different findings and warrant further investigation.

The broader research context around teacher burnout and student misbehavior confirmed some of the findings of Aldrup et al. (2018), with some studies showing stronger correlations. In a systematic review of 21 independent studies from North America, Europe, and Australia, Aloe et al. (2014) investigated the relationships between student misbehavior and three components of

teacher burnout: emotional exhaustion, depersonalization, and personal accomplishment. Correlation coefficients between student misbehavior and teacher emotional exhaustion ranged from .09 to .74, with a median of .42. Depersonalization and student misbehavior were also moderately correlated, with a median of .35 and a range between .10 and .71. Feelings of personal accomplishment had the smallest correlation sizes ranging from –.66 to –.05 with a median of –.29. Although the review may have been subject to publication bias, it does suggest that student misbehavior plays a large role in all three components of teacher burnout.

These studies have suggested that educational leaders should place importance on student–teacher interactions and relationships, particularly for students with CB. Not only for the impact these interactions can have on students, but also because of the impact CB can have on teachers, the primary caretakers and frontline workers in schools who require support to be successful. This notion was reiterated by Cooper (2011), who summarized the importance of teacher well-being when he stated:

> In many respects, the mental health and wellbeing needs of teachers and students in schools are identical, the only important difference being teachers' role and responsibilities in shaping the pupils' environment and managing the teacher–pupil relationship. It follows that one of the ways in which teachers need to be supported is through the creation of a supportive and caring ethos which applies to them as well as their students. (p. 88)

School leaders, teacher preparation programs, and policymakers may benefit from a deeper understanding of how teacher perception of CB influences their student relationships, self-efficacy, and job-related stress to better support and retain teachers. One way to influence these outcomes is to improve classroom management, which research has shown to be vital for student

achievement (Marzano et al., 2009). In addition, the kinds of responses teachers have toward students with CB are critical in developing the classroom climate and influencing future student behavior (Downs et al., 2019; Mitchell & Bradshaw, 2013; Zoromski et al., 2021). Improving the use of inclusive behavior management strategies may lead to behavioral improvements and more connection and joy in the classroom, resulting in more positive and inclusive settings where teachers feel prepared to welcome all students, even those with CB.

Inclusive Practices

There has been an increasing focus on using inclusive practices to support student behavior, such as those supported by the positive behavior interventions and supports (PBIS) framework, which is predicated on the belief that behaviors are predictable and preventable (Scott et al., 2007). The intent of PBIS is to use inclusive and preventative measures (e.g., clearly teaching expectations, rules, procedures; building strong student–teacher relationships) to increase student connection, engagement, and skills to engage in positive behavior (Gable et al., 2009; Ross et al., 2012; Scott et al., 2007). However, even with the best implementation of PBIS strategies, some students still exhibit CB (Hieneman et al., 2005). In response, teachers can choose from inclusive or restrictive strategies to remediate the CB. According to Cunningham and Sugawara (1988), the responses teachers choose can be classified into two categories: helpful and restrictive. Helpful responses are inclusive and emphasize active and empathetic involvement with the student (e.g., teaching a new skill or alternative behavior, taking time to talk with a student, changing the instructional methods used in class). These strategies emphasize long-term change and growth, aligning with the PBIS framework. To the contrary, restrictive strategies aim to bring an immediate cessation of the behavior in the moment and fail to teach the student a new behavior or prevent the behavior in the future (e.g.,

recommending student be moved to another class, sending student to hallway, removing student privileges).

To examine how helpful and restrictive practices are used in classrooms, Downs et al. (2019) observed teachers (n = 65) and students from three states to determine the rates of reprimands and praise for students who were typically behaving (n = 109) and those who were at risk of being identified with an EBD (n = 130). The researchers found teachers responded to both groups of students with significantly more (t = -5.54, p < .001) reprimands per minute (M = 0.07, SD = 0.07) than praise (M = 0.04, SD = 0.05). Differences were also found in the rates of reprimands between the two student groups, with reprimands being used significantly more for students in the at-risk category (t = -6.80, p < .001). Significant differences in the use of praise were not present, although this may have been a result of the low use of teacher praise in general. Additional findings included that students at-risk of EBD were less engaged by approximately 20% (t = -12.31, p < .001) and, unlike the findings of Nelson and Roberts (2000), the at-risk students were disruptive approximately 3 times as often as their peers (t = 9.34, p < .001).

Additional analysis of Downs et al.'s (2019) data revealed correlations between teacher praise and reprimands and student engagement and disruption, especially for students at risk. As teachers praised at-risk students, their rates of engagement increased (β = 5.60, p < .001), but this was not found to be true for students with typical behaviors. Moreover, the use of reprimands was found to be significantly negatively correlated with student engagement for students in the at-risk category (β = -15.42, p < .001) and for typical students, although to a lesser degree. Additionally, reprimands were associated with increased disruption by students at-risk (β = 2.24, p < .001) and less strongly with comparison students.

These findings of Downs et al. (2019) revealed important differences in both teacher use of praise and reprimands and the impact that the opposing strategies have on student behavior and engagement. Students with ongoing CB were more sensitive to the different approaches; they were more engaged and less disruptive in classrooms with higher praise rates and fewer reprimands. However, these students received little praise and more reprimands than their typically behaving peers (Downs et al., 2019). These findings identified a major barrier to inclusion for students with CB. When at-risk students misbehave, using restrictive strategies can perpetuate the misbehavior, potentially launching a cycle of escalation that leads to removal from the classroom in both the short and long term, as seen in Nelson and Roberts' (2000) findings. Although there were some limitations in interpreting these results, such as the research failing to capture nonverbal forms of communication or tone, these findings supported the need to increase the use of helpful response strategies to improve inclusive outcomes for students with ongoing behavioral challenges.

The importance of helpful and inclusive strategies was also emphasized in Mitchell and Bradshaw's (2013) study investigating the impact of exclusionary discipline from the students' perspective. The researchers collected the opinions of fifth-grade students (n = 1902) and teachers (n = 93) in general education settings across 37 Maryland elementary schools. The data included measures of school climate and the teacher's use of positive behavioral strategies and exclusionary strategies. Teachers completed the effective behavior support survey, which measured their use of evidence-based strategies, or as Cunningham and Sugawara (2000) have called them, helpful strategies. Teachers also reported the number of students to whom they had issued an office discipline referral in the current school year. The percentage of students who had

received an office discipline referral was used as a measure of exclusionary discipline strategies for each teacher.

Bivariate analyses showed the students' rating of the school climate factors, including fairness, order, and discipline; student–teacher relationship; and achievement motivation, were highly correlated. Small to moderate associations were found between teacher use of office discipline referrals and lower student ratings of fairness (r = -.21, p = .041) and student ratings of order and discipline (r = -.57, p = .001). Increased use of office discipline referrals was negatively associated with the teacher's scores on the effective behavior support survey, indicating that teachers using more exclusionary practices were using fewer evidence-based strategies (r = -.31, p = .001). The scores on the survey were also associated with higher student-reported order and discipline (r = .27, p = .003) and achievement motivation (r = .29, p = .003).

These findings suggested that fewer office discipline referrals and a heavier reliance on effective behavior support are associated with students feeling more motivation, order, and fairness in their classrooms. However, the correlations were small, suggesting there may only be a weak relationship between the use of office discipline referrals and student perceptions of motivation, order, and fairness. In addition, because the study did not use experimental methodology, it is unclear whether the use of office discipline referrals and effective behavior support were due to the level of order in the classroom, the relationship was in the opposite direction, or there were mediating variables. Mitchell and Bradshaw (2013) also found higher rates of effective behavior support were associated with fewer office discipline referrals, which may indicate that evidence-based strategies decreased the need for exclusionary strategies. Although student ratings of the four school climate factors were highly correlated, only two were

associated with the use of exclusionary practices. This finding may suggest that students separate fairness, order, and discipline from their relationship with their teacher and academic motivation.

Although many of the correlations in Mitchell and Bradshaw's (2013) study were weak, it is possible the study's methodology (i.e., dichotomous answer choices to make the survey more accessible to student participants) affected the findings. Using a more descriptive scale, such as a Likert scale, may have offered more differentiation in answers than simple yes or no questions. In addition, teachers only indicated whether each student had been given at least one office discipline referral in the last year. Stronger correlations may have been revealed if the study accounted for students who had received multiple referrals, or if the measure was based on the total number of office discipline referrals each teacher issued. Nevertheless, these are important findings that warrant consideration when considering support for students with ongoing CB.

Barriers to Inclusive Practice

The influence inclusive strategies can have on students with CB makes them an essential and valuable focus for increasing inclusion for students with CB. The Virginia Tiered System of Supports network supports schools and divisions across Virginia as they seek to improve their knowledge of such inclusive strategies. However, as demonstrated by the inequitable use of suspension in Virginia (JLARC, 2020; Losen & Martinez, 2020; VDOE, n.d.), knowledge of the strategies does not always lead to consistent and equitable use in schools (Almog & Shechtman, 2007; Pajares, 1992; Sugai & Horner, 2006). Many barriers prevent teachers from using more inclusive strategies in their daily interactions with students, including their personal beliefs and perspectives about themselves and their students.

Exploring teacher knowledge and use of strategies, Almog and Shechtman (2007) found teacher knowledge of helpful response strategies did not equate to the use of such strategies in authentic classroom interactions. The researchers used a combination of vignette-based surveys, interviews, and classroom observations to investigate the practices of elementary teachers (n = 33) in inclusive settings in Israel. The teachers read vignettes based on nine behavioral typographies, including disobedience, hostility and aggression, impulsiveness, hyperactivity, passive-aggression, low achievement, social rejection, shyness, and failure syndrome, and then described how they would respond to the situations in their classrooms. Teacher responses were coded as helpful or restrictive approaches, as described by Cunningham and Sugawara (1988). After providing their responses to the vignettes, the participating teachers were then observed by research assistants multiple times over the course of an academic school year. The observers documented the authentic behaviors of students along with their teachers' responses. The student behaviors were sorted into the same nine topographical types that were represented in the vignettes, and the teacher responses were coded as restrictive or helpful.

Almog and Shechtman (2007) found teachers were significantly more likely to respond with restrictive practices over helpful practices in their own classrooms when students displayed hostility and aggression ($\chi 2 = 7.76$, $p < .01$), passive–aggressive behavior ($\chi 2 = 4.57$, $p < .05$), or disobedience ($\chi 2 = 11.57$, $p < .01$). In response to the vignettes, teachers reported being significantly more likely to use helpful strategies when they observed low achievement ($\chi 2 = 10.80$, $p < .001$), social rejection ($\chi 2 = 13.33$, $p < .001$), shyness ($\chi 2 = 22.53$, $p < .001$), and failure syndrome ($\chi 2 = 27.12$, $p < .001$). A more detailed report of the relationships found is included in Table 2.

Table 2

Distribution of Teachers' Responses for Authentic and Hypothetical Behaviors

	Authentic Responses			Hypothetical Responses		
Incident Type	% restrictive	% helpful	$\chi 2$	% restrictive	% helpful	$\chi 2$
Disobedience	82.1	17.9	11.57**	63.3	36.7	2.13
Passive–aggressive	78.6	21.4	4.57*	28.0	72.0	4.84
Hostility/aggression	75.9	24.1	7.76*	58.1	41.9	0.53
Impulsiveness	65.2	34.8	2.13	46.7	53.3	0.13
Under-achievement	65.0	35.0	1.80	-	-	-
Low achievement	57.9	42.1	0.47	20.0	80.0	10.80***
Failure syndrome	57.4	42.6	0.05	3.3	96.3	27.12***
Immaturity	48.1	51.9	0.04	-	-	-
Hyperactivity	41.7	58.3	0.67	41.9	58.1	0.81
Perfectionism	40.0	60.0	0.60	-	-	-
Social rejection	40.0	60.0	1.00	16.7	83.3	13.33***
Shyness	35.7	64.3	1.14	6.7	93.3	22.53***

Note. Three typographies of behavior were not included in teacher interviews and therefore are not reported in the chart. Adapted from "Teachers' Democratic and Efficacy Beliefs and Styles of Coping with Behavioural Problems of Pupils with Special Needs," by O. Almog and Z. Shechtman, 2007, *European Journal of Special Needs Education, 22*(2), pp. 122-123. (http://doi.org/10.1080/08856250701267774). Copywrite 2022 by Informa UK Limited.
*$p < 0.05$; **$p < 0.01$; *** $p < 0.001$

Although only a minority of behavioral typographies showed significant differences in teacher responses, comparing the types of behaviors that elicited restrictive practices (aggression, hostility, disobedience) to the behaviors that evoked helpful strategies (low achievement, social rejection, shyness, failure syndrome) is revealing. It appears teachers tended to use restrictive practices when student behavior was external, disruptive, or directly challenging to the teacher, but they choose helpful strategies when the behavior was internal to the individual student.

Additionally, though Almog and Shechtman (2007) did not report any statistical analysis directly comparing how teachers responded to the vignettes and how they responded to similar authentic situations, an inspection of the percentages of restrictive and helpful

responses showed interesting and meaningful patterns. For example, in responses to passive–aggressive behavior, 72% of responses to the hypothetical vignettes included helpful strategies; however, in the authentic observations, only 17.9% of actual responses were helpful. The differences found between the hypothetical and authentic responses has suggested that factors other than knowledge of practices are preventing teachers from using helpful strategies. Replication of this study with a larger sample size and direct comparisons between the hypothetical and actual strategies used by teachers could reveal additional trends in how teachers respond to various types of CB.

Other research into the factors affecting equitable and consistent use of inclusive strategies has identified barriers at the macro-, school-, and individual-level (Domitrovich et al., 2008). Individual-level barriers, which the present study sought to investigate, include teacher factors, such as professional characteristics, perceptions and attitudes, and psychological characteristics (Domitrovich et al., 2008). Individual-level barriers were well studied during the 1980s and 1990s, with research focusing on how teachers' perceptions, attitudes, and beliefs directly influenced their decision-making and classroom behaviors (Nespor, 1987; Pajares, 1992). Much of the research focused on student inclusion, TSE, and teacher beliefs about the causes of student behavior, with findings suggesting the beliefs a teacher holds influence the teacher's behavior and practices (Brophy, 1985; Cunningham & Sugawara, 1988; Graham, 1984; Jordan et al., 1993; Meijer & Foster, 1988; Podell & Soodak, 1993; Scruggs & Mastropieri, 1996; Taylor et al., 1983). More recent research has also supported this claim (Gilor & Katz, 2019; Hind et al., 2019). The specific teacher beliefs investigated in this study were attribution theory and TSE, as they may be the most influential in interactions teachers have with individual students (Morin, 2001; Schultz & Simpson, 2013). Both constructs attribution theory and TSE

are further explored in the next section, followed by a description of relevant research on how attribution theory and TSE impact student–teacher interactions, expectations, and outcomes.

Attribution Theory

Heider (1958), who was the first to describe the components of attribution theory, used it to explain human perception of behavior. He founded his exploration of human interactions on what he called "common-sense psychology," laying the foundation for the theory of attribution, stating:

> In everyday life we form ideas about other people and about social situations. We interpret other people's actions, and we predict what they will do under certain circumstances. Though these ideas are usually not formulated [consciously], they often function adequately. (p. 5)

Heider (1958) postulated that an individual's beliefs influence their treatment of others, regardless of the truth of those beliefs or the individual's awareness of the beliefs. Later, Weiner (1974) credited Heider's work as a foundation for his exploration of attribution theory within the stimulus-cognition-response model. Weiner (1974, 1979) explained that causal ascriptions are made along multiple dimensions, including the locus of causality, stability, and control. The locus of causality credits the outcome of an individual's situation to either something internal to the person (e.g., effort), or to something external (e.g., circumstance). The stability of an attribution relates to how likely the cause is to change in the future. For example, mood and effort change frequently, but ability is more stable. Controllability describes how much control a person has over the causes of an outcome. A person either has control, such as expending great effort, or they lack control, such as having low natural ability (Weiner, 1979). These dimensions are applied both interpersonally, when individuals make ascriptions for their own successes or

failures, and interpersonally, when individuals make ascriptions for the successes or failures of others (Weiner, 2001).

Weiner (1979) applied attribution theory to education, asserting that teachers make ascriptions across the dimensions when their students exhibit challenges in the classroom, informing how they respond to the student in the moment and in the future. For example, teacher expectations for future behavior are impacted by the attribution of past misbehavior in the classroom. Weiner (1979) summarized, "research in the attributional domain has proven definitively that causal ascriptions for past performance are an important determinant of goal expectancies" (p. 9). He continued to describe how failure ascribed to having low ability, or a task being too difficult, decreased future expectations of success more than failure ascribed to temporary states such as bad luck, mood, or a lack of immediate effort. As attributions for failure became more stable, individuals experienced more stress and less optimism (Weiner, 1980, 1985). In addition, behavior that was viewed to be more controllable created more intense feelings of anger, fear, and antipathy toward the individual (Weiner, 1980, 1985). This finding means that when teachers attributed the CB to a stable and controllable cause within the student, they were' more likely to feel anger, antipathy, and stress, and to have less optimism that the behavior would improve.

According to Weiner (2003), teachers' causal attributions for student failures could be compared to those that a judge makes for an offender. Weiner (2003) described how both judges and teachers use attributions to determine how harshly to react to a given offense. Additionally, the goal of a punishment can be described as either utilitarian or retributive. Punishments with utilitarian goals consider the benefits of a punishment to address the cause and prevent future missteps. Conversely, retributive punishment seeks retaliation and justice for past behavior.

Often, both goals can be achieved with the same punishment. For example, a lengthy prison sentence may simultaneously punish the criminal and provide an avenue for rehabilitation. In the classroom, a low grade on a test may both punish the student for not studying and motivate the student to work harder in the future (Reyna & Weiner, 2001; Weiner, 2003). The description of utilitarian or retributive consequences aligns with the sorting system developed by Cunningham and Sugawara (1989) that identified interventions for CB as either helpful or restrictive.

Although the metaphor of a courtroom seems exceptionally harsh on teachers, who by and large aim to support rather than punish students, teacher responses to and expectations for students do vary depending on their attributions of students' past CB (Weiner, 2003). Such expectations can be formed quickly without the teacher's conscious awareness (Heider, 1958). When CB is observed, the teacher either forms an instantaneous opinion of the causes based on their past experiences and knowledge of the student or suspends judgment until more information can be gathered (Bibou-Nakou et al., 2000). Morin and Battalio (2004) also described the immediate reactions teachers can have to CB in their classroom:

> It is in this moment of interpretation when positively oriented interventions are most vulnerable to erosion from underanalyzed ascriptions about the misbehavior. From this point, teachers may either be launched on a trajectory fueled by intense subjectivity (i.e., anger, retribution) and driven by impulse, or they may adopt a more reasoned perspective, one that is ecologically grounded and more consistent with the tenets of [Positive Behavior Supports] (p. 252)

The process outlined aligns with the conceptual framework for this study. When a teacher attributes a CB to an internal, stable, and controllable cause, they are likely to feel frustrated and pessimistic about the student's ability to improve. As a result, they may feel burned-out and be

less likely to devote a sustained effort to improving long-term inclusion with supportive strategies. Instead, they may shift their focus to having the student removed from the classroom through exclusionary discipline or placement in an alternative setting.

TSE

A second belief that influences teachers' behaviors toward students is their sense of self-efficacy. Bandura (1997) described the construct of self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy is not a measure of actual abilities but of the individual's perception of their ability to reach a goal. An individual's self-efficacy will influence the amount of time and effort they are willing to spend on difficult tasks, their level of perseverance in the face of obstacles, and their resilience following a failure (Bandura, 1997). People with higher levels of self-efficacy tend to view difficult tasks as a challenge that can be mastered, while those with less self-efficacy tend to view such tasks as a threat to be avoided (Bandura, 1986). This distinction has major implications for teachers supporting students with CB in the general education classroom. Supporting students with CB may be viewed as too big of a challenge for teachers with low self-efficacy to attempt.

Rather than being a static trait throughout the school day, TSE varies depending on the context and circumstances of the teaching task. Tschannen-Moran et al. (1998) explained, "Teachers feel efficacious for teaching particular subjects to certain students in specific settings, and they can be expected to feel more or less efficacious under different circumstances" (p. 227–228). For teachers to judge their self-efficacy, they must first assess the difficulty of the goal and what is required to accomplish it in a specific context. This process is called the analysis of the teaching task, and it includes the teacher's perceptions of students' abilities and motivations

(Tschannen-Moran et al., 1998). Therefore, it is likely that TSE varies depending on the characteristics of the student exhibiting CB. For example, a misbehaving student with a history of trauma may elicit different feelings of TSE than a student with the same behavior and an intellectual disability.

The analysis of the teaching task is a focus of the present study. As teachers read the assigned vignette, they used the attributional information included, or not included in the case of the control group, in the analysis of the teaching task. This information may have affected their TSE to support the student and their expectations for the student's outcomes in the general education setting. Although the impact of attribution theory and self-efficacy on teacher behavior have been investigated, only a small minority of studies have included measures for both constructs, and even fewer have focused specifically on student behavior. In the following section, relevant findings investigating attribution theory and TSE in relation to CB are discussed, along with the implications for supporting teachers as they increase their use of inclusive practices.

The Relationships Among Attribution Theory, Teacher Perceptions, and TSE

Attribution theory and TSE have been explored extensively in educational research, including some research investigating how CB influences the relationships between attribution, teacher perceptions, and TSE. The following sections will summarize the previous research used to inform the present study.

Attribution and Teacher Perceptions of Students with CB. Although research investigating student behavior, TSE, and attribution theory is limited, some research has considered both constructs and their effects on teacher interactions with students with CB. Poulou and Norwich (2002) were some of the first to investigate these relationships. The

researchers examined the relationship between teachers' causal attributions for the behavior of a student with EBD and the teachers' emotional and cognitive reactions. Teachers (n = 391) from 60 public elementary schools in Greece, 79% of whom had no prior experience in special education, read short vignettes describing a student with EBD. The teachers then rated their attributions of the CB, their feelings of TSE to support the student, their inclination to help, and the effectiveness of a variety of positive and negative strategies for improving the student's behavior.

Poulou and Norwich (2002) found many small to moderate correlational relationships, including between the intention to help the student and feelings of responsibility to help the student (r = 0.27, $p \leq 0.01$) and the intention to help the student with TSE to support the child (r = 0.20, $p \leq 0.01$). Intention to help was negatively correlated with negative feelings such as anger, irritation, and indifference (r = -0.20, $p \leq 0.01$). Although individual correlations were small, when combined, 25% of the variance in teachers' intention to help the student was predicted by the teachers' perceptions of responsibility, self-efficacy, the nature of the problem, and feelings toward the student, making teacher beliefs an important determinate in teacher behavior. In addition, when teachers attributed the CB to something within teacher control, such as the instructional environment, it predicted perceptions of how remediable the CB was (β = 0.20, $p \leq 0.01$) and feelings of responsibility to find a solution (β = 0.27, $p \leq 0.01$). In contrast, attributing the CB to something within the child, outside of either the school's or the teacher's control, predicted negative feelings (β = 0.18, $p \leq 0.01$), and attribution to school factors, such as large class size or poor disciplinary systems, also predicted negative feelings such as stress and helplessness (β = 0.11, $p \leq 0.05$), but to a lesser extent.

These findings aligned with the predictions of attribution theory; however, other findings in the study were not aligned. Specifically, when teachers attributed the CB to factors within the student, their efficacy to support the student increased ($\beta = 0.21$, $p \leq 0.01$). This finding could be a result of teachers feeling more efficacious supporting students with internal attributions as opposed to CB caused by a challenging home life or lack of school-level support, which teachers might consider further outside of their control. However, the contradictory findings have suggested the dimensions of attribution are nuanced and intricate, making it difficult to predict how teachers will react to complex real-life attributions. More research is needed to bring clarity to this construct.

Stronger relationships were found in how teachers rated the support strategies. Significant positive correlations were present between the teachers' intention to help and the use of positive incentives ($r = 0.45$, $p \leq 0.01$), teaching approaches ($r = 0.35$, $p \leq 0.01$), and referral to external support services like counseling ($r = 0.32$, $p \leq 0.01$). However, the strongest predictor of teachers recommending positive incentives was the belief that positive incentives are effective in general ($\beta = 0.56$, $p \leq 0.01$). Similarly, the belief that negative incentives are effective for all students was a strong predictor of teachers' reporting their use of negative incentives ($\beta = 0.71$, $p \leq 0.01$). This finding may have indicated the strongest determinate of a teacher's response strategy is their beliefs about the strategy, not the student. Although this consideration is important, it focuses on the use of strategies for all students in general, while the current study will investigate differences between responses to individual students. Research comparing the use of strategies among students with different characteristics and similar behavior could reveal additional factors influencing the decision to use one strategy over another.

Many of the correlations found by Poulou and Norwich (2002) were small, and only some of the findings supported the assumptions of attribution theory. However, the participants were asked to make causal inferences with only a very short description of the behavior. In schools, teachers have a much deeper understanding of the child, including having information about their background, home life, disabilities, and past behavior patterns, which may influence teachers' causal ascriptions. Additionally, although the authors implied the results were specific to students with EBD, the vignettes read by the teachers did not include any mention of a disability or potential attribution. The vignettes also presented students with various behavioral difficulties, including conduct, emotional, and mixed difficulties (Poulou & Norwich, 2002). Therefore, research comparing cognitive responses to students with the same behavior and different causal characteristics could provide a better understanding of how these constructs are related.

More recently, Lucas et al. (2009) conducted similar research and found some of the same patterns in teacher responses to students with CB that were perceived to be within student's' control. Classroom staff (n = 60) working in England with students with intellectual disabilities rated their attributions of aggressive student behavior, their inclination to help, and their optimism for both real-life scenarios and vignettes based on their students. When staff members interpreted the real-life aggressive behavior as being within the child's control, they were more likely to report feelings of anger (r = 0.35, p = 0.003), and less likely to report feelings of sympathy (r = -0.37, p = 0.002) and optimism (r = -0.29, p = 0.013). The staff members were less likely to report helping behavior when they believed the student could control the behavior (r = -0.31, p = 0.011). Internal attributions were correlated with feelings of anger (r = 0.22, p = 0.05) and negatively correlated with feelings of sympathy (r = -0.34, p = 0.005). As

expected, feelings of anger were negatively correlated with sympathy (r = -0.47, p = 0.001), optimism (r = -0.27, p = 0.027), and helping behavior (r = -0.40, p = 0.001), while sympathy was positively correlated with helping behavior (r = 0.26, p = 0.028; Lucas et al., 2009).

Lucas et al. (2009) found fewer relationships in staff responses to the vignettes. Staff reported feeling less sympathy when the hypothetical behavior was perceived to be within the child's control (r = -0.30, p = 0.012). However, no other emotions were found to be significantly related to perceptions of student control over behavior. Helping behavior was also not found to be correlated with the dimension of controllability. Like their authentic reactions, when staff attributed the vignette behavior to an internal locus within the student, they reported less sympathy (r = -0.23, p = 0.04) and optimism (r = -0.33, p = 0.007), but they did not report significantly less helping behavior. Feelings of anger in response to the vignettes were negatively correlated with sympathy (r = -0.31, p= 0.009), optimism (r = -0.31, p = 0.01), and helping behavior (r = -.031, p = 0.01; Lucas et al., 2009).

Like those of Poulou and Norwich (2002), most of the findings from Lucas et al. (2009) were relatively small; however, they support the predictions of attribution theory. Attributions to something within the student's control would elicit more anger, and less sympathy, optimism, and inclination to support the student. However, other findings in the study were not in line with the theory. For example, the relationships between internal attributions and the staffs' helping behavior or optimism did not reach significance, neither did the relationships between the dimension of stability and any of the emotional responses or the intention to help. Although not every expected relationship was confirmed, the small to moderate findings provided evidence that the tenants of attribution theory are present in classrooms for students with disabilities and CB.

In addition, limitations may have influenced the findings, including the description of the student and behavior in the vignettes, which only stated that the student had an intellectual disability and exhibited one discrete behavior (e.g., "kicking or attempting to kick"; Lucas et al., 2009, p. 3). The limited description offered little information on which to base attributional ascriptions, which may have decreased the reliability of this study. In addition, the data collection instruments were abbreviated, including only one item for each of the attributional dimensions. Stronger findings may have been revealed if additional attributional questions were included in the questionnaire. Additional considerations for vignette design is discussed later in the chapter.

Though the real-life situations resulted in moderate correlations between attributions and staff emotional responses, Lucas et al. (2009) only measured responses to a single student with an intellectual disability. Additional research is needed that compares teacher reactions to students with different disabilities and those without disabilities. Further, Lucas et al. (2009) were not able to control for the type or severity of CB when collecting staff responses. Experimental research that controls for the severity and type of CB and allows for comparison between a variety of students would shed further light on how different student characteristics influence teacher responses to the CB. Finally, Lucas et al.'s research was conducted in each teacher's self-contained special education classroom, where CB may be more common and tolerated, and with staff who were more likely used to supporting CB. Additional research is needed that explores how general education teachers, who are often gatekeepers to the general education setting, perceive students with ongoing behavioral challenges, as they may have different reactions to CB than their special education colleagues.

Later experimental research has filled some of this research gap by investigating teacher responses to students with CB while controlling how much information the teachers had about the student's' cognitive abilities. Hart and DiPerna (2017) conducted a study with a representative sample of teachers across 33 U.S. states (n = 336). The authors used a posttest-only randomized experimental design, in which teachers read short vignettes depicting a student with significant behavioral challenges. In the study, the control group of teachers read only a description of a student with CBs, while teachers in the experimental condition read the same description but were also provided a skills inventory that depicted the student as having significant weaknesses in language and communication, attention, working memory, emotional and self-regulation, cognitive flexibility, and social thinking.

The results indicated that teachers with information about the student's cognitive weaknesses viewed the student as less likely to be in control of their behavior than teachers without the additional information, $t(252) = -1.66$, $p = .049$; however, the effect size was small, $d = -0.21$, 95% CI [-0.46, 0.04]. A small to medium effect size, $d = 0.35$, 95% CI [0.11, 0.60], was found when teachers in the experimental group responded with more positive emotion toward the student, $t(223.81) = 2.85$, $p = .002$.

Hart and DiPerna's (2017) results suggested that knowledge of a student's cognitive skill deficits influences teacher beliefs and feelings toward the student, therefore potentially influencing the teacher's behavior toward the student in class. However, knowledge of cognitive deficits was not found to affect the tolerance level that teachers reported for the behavior. This finding may indicate that even when teachers feel more positive emotions toward students with disabilities displaying CB, they may be no more likely to use inclusive practices. Though these findings are relatively small, the study only looked at one portrayal of a student with significant

difficulties across many cognitive domains. It is possible that such a profile elicited more sympathetic feelings toward the student, while other student profiles, such as a student with a negative attitude or a student with an emotional and behavioral disability, may have revealed a variety of attitudes toward the students, resulting in larger differences between groups. Research comparing a variety of attributions for CB would be helpful to better understand the influence of causal attributions on teacher cognition. In addition, Hart and DiPerna (2017) measured teacher tolerance with only one item, which may have oversimplified the construct. Significant relationships may have been revealed if the construct had been explored with a multi-itemed scale.

While Hart and DiPerna' (2017) focused on how teacher responses to students with CB differed based on their cognitive development, Alevriadou and Pavlidou (2016) focused on how different types of behaviors influence the causal ascriptions teachers made. The researchers surveyed Greek general and special education teachers (n = 177) to measure their causal attributions for students' CB. Teachers reported the type of behavior displayed by one of their students with an intellectual disability. A causal attribution scale was used to determine how teachers attributed the CB across the three dimensions of attribution theory: stability, controllability, and locus of control. The behaviors teachers reported included self-injurious behavior, stereotypy (i.e., repetitive) behavior, aggression toward people, and aggression toward the environment. Teachers also rated their emotional reactions to the student with CB and their willingness to help the student.

Differences were found between the various behavior types and teacher ratings of the behavior being internal or external, $F(4, 207) = 4.7$, $p < .05$, stable or unstable, $F(4, 207) = 6.0$, $p < .05$, and how in control of the behavior the student was, $F(4, 207) = 5.17$, $p < .05$. These results

suggested the type of behavior students exhibit in class may have a role in the teacher attributions for those behaviors. In addition, the teacher emotional responses to the CB played a mediating role between teacher causal attributions and their willingness to help. When teachers attributed the behavior to a stable cause, presumably their intellectual ability or sensory needs, they were more likely to feel positive emotions ($\beta = 0.595$, $p < 0.05$), and those positive emotions were more related to their willingness to support the student ($\beta = 0.248$, $p < 0.05$). This finding was further evidence that teacher attribution for CB plays a role in teacher responses to students. However, because the teachers were basing their attributional ascriptions on different students, it is possible that other factors, such as other student characteristics and teacher beliefs, were confounding factors. Additional research is needed that controls for the type of behavior and student characteristics and compares students with different disabilities to better understand how these factors influence teacher behavior.

Attribution Theory and TSE. Causal ascriptions have been found to affect teacher cognition, emotions, and intentions to help (Alevriadou & Pavlidou, 2016; Hart & DiPerna, 2017; Lucas et al., 2009); however, these researchers did not investigate feelings of self-efficacy. Earlier work by Almog and Schectman (2007) helped fill this gap. Their work was described earlier, along with their findings, showing teachers reported they preferred helpful strategies but were observed using more restrictive practices in the classroom. The findings also included patterns around how TSE was related to the type of responses they recommended and used to support students with CB. To study this relationship, teachers responded to a questionnaire about their perceptions of personal teaching efficacy, general teaching efficacy (the belief that teachers, in general, can influence student outcomes), and their efficacy in influencing how students interact socially. Teachers then participated in individual interviews ($n = 31$),

responding to nine vignettes describing various types of problem behaviors, including disobedience, hostility and aggression, impulsiveness, hyperactivity, passive–aggressiveness, low achievement, social rejection, shyness, and failure syndrome. Finally, the teachers were observed responding to their students with helpful and restrictive practice.

When Almog and Shechtman (2007) compared the teachers' reports of self-efficacy and their use of restrictive and helpful responses to student behavior, there were significant correlations for both the hypothetical and authentic responses between TSE and the use of helpful strategies for eight of the nine included behavior typographies. The small to moderate correlation coefficients ranged from .20 to .69 ($p < .05$); only failure syndrome did not reveal a significant correlation. Teachers who reported higher levels of TSE tended to respond to nearly every type of CB with more positive strategies in both hypothetical and authentic situations. The findings suggested teachers with higher levels of TSE respond more positively to challenges in the classroom, regardless of the type of behavior, resulting in a more inclusive setting for all students.

Although Almog and Shechtman's (2007) study provided evidence that TSE was related to the use of supportive behavior strategies in the classroom, it did have limitations. Firstly, Bandura's (1986, 1997) definition of TSE did not differentiate between personal and general self-efficacy, and many scholars believe that personal teacher efficacy is more useful and aligned with the original construct (Guskey & Passaro, 1994; Tschannen-Moran et al. 1998). Replications of this study would also benefit from larger sample sizes, which might improve reliability and help detection of additional relationships. In addition, Almog and Shechtman (2007) did not use an experimental design, which might have helped identify the direction of influence between these two variables. The current study will expand on Almog

and Shechtman's (2007) work by looking for discrepancies between feelings of TSE for supporting students with different characteristics but the same kind of CB.

Some of the correlations Almog and Shechtman (2007) found might be partially explained by the relationship between TSE and the teacher's view of how severe the CB is in the classroom. McLean et al. (2019) explored this relationship, finding TSE was a statistically significant predictor of a teacher's rating of students as having emotional and total behavioral problems on a behavioral screening tool. Teachers (n = 56) from K–6 public elementary schools in the southwestern United States completed the social, academic, and emotional behavior risk screener-teacher rating scale for 95% of students (n = 1,314) in their classrooms (5% of students were excluded due to parental opt-out; McLean et al., 2019). This universal screening tool was used to identify students at risk for social, academic, and emotional behavior concerns. Teachers also rated their TSE using the Teacher Sense of Efficacy Scale and levels of burnout on the Maslach burnout inventory.

McLean et al. (2019) did not find TSE to have a significant relationship with the academic or social behavior subscales on the screening tool; however, TSE was predictive of elevated emotional behaviors (t = 2.41, p = .020) and combined score for total behaviors (t = 2.02, p = .049). Further, measures of teacher burnout from the depersonalization subscale within the Maslach burnout inventory were predictive of teacher ratings of emotional behavior (t = -3.08, p = .003) and total behavior (t = -2.69, p = .010). Further, TSE and the depersonalization components of teacher burnout combined accounted for 30% of the teacher-level variance in the ratings of students on the emotional subscale. This finding may indicate that teachers with lower TSE perceived problem behaviors as having greater influences on the student and classroom, causing increased teacher burnout and potentially influencing how they addressed behaviors in

the classroom. However, the study could not identify the causal direction of the relationship between TSE and teacher ratings of student behavior problems, as it did not use an experimental design. Despite this limitation, the relationship between TSE and how acute the behavioral challenge was perceived by the teacher has important implications for the present study. If teachers have low TSE to support students with various disabilities or characteristics, they may view the behavior as more intense or long lasting, further decreasing their TSE and their expectations for student success in the general education classroom.

Recently, Frohlich et al. (2020) investigated how teacher beliefs can vary for supporting students with various disabilities using a convergent mixed-method design. The researchers compared TSE, perceptions, and attributions for the CB displayed by students with ADHD and students with learning disabilities (LD). General education teachers (n = 151) from both primary and secondary schools in Canada responded to open-ended questions, such as "What do you believe is the primary cause of the difficulties experienced by students with [ADHD/LD]?" (p. 255). They also answered questions using a Likert scale inquiring to the causal attributions for challenges students experienced. Finally, teachers completed an abbreviate version of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001), in which one question from each of the domains was asked.

Frohlich et al. (2020) found teacher attributions for the challenges experienced by students differed between students with ADHD and students with LD. For students with LD, teachers most frequently mentioned two uncontrollable attributions for the cause of student challenges: the home and school environment (22% of mentions) and genetics or biology (21%). In contrast, the top reported cause of the difficulties experienced by students with ADHD was a lack of skills (25%), which was viewed as controllable. The next most frequent attribution for

ADHD-related difficulties was genetics or biology (14%; Frohlich et al., 2020). While there were differences in the qualitative data, it is unclear whether these differences were statistically significant because they were not analyzed by the authors.

The quantitative measures revealed further differences in attribution and its influences on TSE. Teachers reported differences in the stability of the difficulties of students with LD and ADHD, $t(150) = 2.59$, $p = .01$, $d = 0.23$. The difficulties of students with a LD were viewed as less stable and more remediable than those of students with ADHD. This finding has implications for how long teachers may be willing to support these two groups of students. However, the quantitative data found no differences in the controllability or locus of causality (internal or external to the student) between the groups of students, and there were no significant correlations found between the demographic characteristics of the teachers such as gender, age, teaching level, or years of experience, and their TSE.

Additional regression analysis showed that for students with a LD, lower levels of self-efficacy were associated with internal causes ($\beta = .34$, $p = .001$) of the challenges, and higher levels of self-efficacy were related to controllable causes ($\beta = -.24$, $p = .009$). However, the relationship between self-efficacy and locus of control did not reach significance for students with a LD. Together, the three dimensions of attribution accounted for 13.9% of the variance in TSE for supporting students with LD. Additionally, the three dimensions of attribution accounted for 12.7% of the variance in TSE for supporting students with ADHD; however only controllability made a significant independent contribution ($\beta = .30$, $p = .005$). For both groups of students, the belief that students could control their behavioral problems increased TSE to support the student. But the stability of the behavioral challenge only influenced the self-efficacy

of teachers for students with LD. This may be because teachers rated ADHD as more stable than LD.

Frohlich et al.'s (2020) findings demonstrated that attribution and self-efficacy vary when comparing different categories of disabilities. These findings supported the application of attribution theory in the context of teacher perception of student behavior and self-efficacy. However, the study does have limitations in how it can be applied to the research questions of this study. First, the research was not experimental, so its findings can be interpreted only as correlational, not causational. Second, rather than being given a consistent student profile on which to base their answers, teachers answered the survey items based on their personal experiences working with students with LD and ADHD, which may have varied dramatically within the sample. For example, some teachers may have had experiences with students who were very challenging, while others had students who presented very little CB. Therefore, the participating teachers may have been comparing students who are influenced differently by their disability and have various types and severities of challenges and behaviors. Results may have been different if participants had been provided with a consistent description of students with LD and ADHD to reference when answering the questions. Finally, the researchers used a shortened version of the TSES and only one item to measure the three causal dimensions. This choice may have affected the size of correlations found and the validity of the measure.

Although each of the studies previously described is valuable in understanding teacher responses to students with CB, they have not investigated how teachers respond to individual students. Research is needed that directly compares variations in attribution and TSE across a variety of common causes for behavioral difficulties, including students with and without disabilities, to answer the research questions in this study. Zee et al. (2016) partially addressed

that research gap in their study of Dutch third through sixth-grade general education teachers (n = 69) and students (n = 526). The authors examined how student externalizing, internalizing, and prosocial behaviors predicted TSE toward individual students. The teachers completed a questionnaire of student social–emotional strengths and difficulties for four randomly selected female students and four randomly selected male students in their classrooms. They also completed the Student-Specific Teachers' Sense of Efficacy Scale (S-STSES) for each of the participating students. The S-STSES was adapted from the TSES (Tschannen-Moran & Woolfolk Hoy, 2001) to measure TSE across multiple teaching domains for one specific student. Teaching domains from the original TSES include instructional strategies, behavioral management, and student engagement, and the S-STSES included an additional domain of emotional support (Zee, Koomen, et al., 2016b).

Internalizing and externalizing behaviors were found to have moderate correlations across all four dimensions of student-specific TSE, as shown in Table 3. Externalizing behaviors had stronger correlations with each of the domains than internalizing behaviors, with the largest difference in the domain of behavior management. On the other hand, student-specific TSE was positively correlated with student prosocial behaviors. Like scores of externalizing behaviors, student scores of prosocial behaviors were most strongly correlated with the TSE domain of behavior management, and prosocial behavior was found to be a stronger predictor than internalizing behaviors for all domains.

Table 3

Correlations Among Student-Specific TSE and Behavior Type

	Behavior		
Domain of S-STSES	Externalizing	Internalizing	Prosocial
Student-specific TSE for instructional strategies	-0.46**	-0.27**	0.45**
Student-specific TSE for behavior management	-0.73**	-0.28**	0.59**
Student-specific TSE for student engagement	-0.57**	-0.31**	0.54**
Student-specific TSE for emotional support	-0.56**	-0.35**	0.56**

Note. TSE = Teacher Self-Efficacy.
Adapted from "Teachers' Self-Efficacy in Relation to Individual Students With a Variety of Social-Emotional Behaviors: A Multilevel Investigation," by M. Zee, P. F. de Jong, and H. M. Y. Koomen, 2016, *Journal of Educational Psychology, 108*(7), p. 1019. (https://doi.org/10.1037/edu0000106).

** $p < .001$

Zee et al.'s (2016) findings suggested teachers have lower feelings of TSE when supporting students who exhibit more externalizing behavior. This relationship may create cycles of negative student–teacher interactions, such as those described by Nelson and Roberts (2000) and Downs et al. (2019). These cycles may further decrease TSE, increase levels of challenging student behavior, hamper student academic success, and contribute to the burnout and stress teachers experience. This theory is supported by Zee et al.'s (2016) findings related to prosocial behavior, which was a stronger predictor of TSE than internalizing behavior across all four dimensions. Positive interactions and observations of prosocial behavior with peers may serve as mastery experiences that increase TSE to support the individual student (Bandura, 1997). Although the findings support this possibility, they did not provide any directional relationship between variables.

Additional findings revealed that type of student behavior had stronger correlations with student-specific TSE than teacher's amount of experience. The average years of experience for the sample was 16.67 years (SD = 11.87 years), and experience was found to be very weakly correlated with instructional strategies ($r = 0.15$, $p < 0.01$), behavior management ($r = 0.11$, $p < 0.05$), student engagement ($r = 0.18$, $p < 0.01$), and emotional support ($r = 0.16$, $p < 0.01$). The small size of these correlations suggested that the type of student behavior is a more powerful predictor of student-specific TSE than the amount of teaching experience the teacher has. In addition, student gender was found to have stronger correlations with student-specific TSE than teacher experience for both behavior management ($r = 0.27$, $p < 0.01$) and emotional support ($r = 0.25$, $p < 0.01$), with teachers feeling more confident supporting female students. Student age also had very weak correlations with three of the domains, with correlation coefficients ranging from -0.13 to -0.17 ($p < .01$). The correlation's small size may have been a result of the students being similar in age (M = 10.57, SD = 1.11). Studies with greater diversity in age may find stronger correlations between age and student-specific TSE, as supporting a kindergarten student with externalizing behavior is a very different teaching task than supporting a teenager.

These findings provided evidence that student-specific TSE varies according to the type of behavior demonstrated, as well as student characteristics like gender and age. Because Zee et al. (2016) focused on the types of student behaviors and did not control for the severity of behavior or student characteristics, their findings cannot be used to support the hypothesis of the current study directly. However, because student-specific TSE was more strongly related to student gender than years of experience, additional research into other student characteristics is warranted. It is possible that other characteristics, like disability category, may also influence

student-specific TSE. The current study will expand on Zee et al. (2016) work by investigating these constructs while controlling for the type and severity of student behavior.

Experimental Vignette Methodology

Some of the previously described research used vignettes to investigate teacher beliefs. Vignette studies consist of "short, systematically varied descriptions of subjects, objects, or situations to elicit respondents' beliefs, attitudes, or intended behaviors with respect to the presented vignettes" (Steiner et al., 2016, p. 52). Experimental vignette methodology has been used extensively in many research fields, including education, because of its unique ability to balance the strengths and weaknesses of experimental design and survey-based studies (Aguinis & Bradley, 2014; Atzmüller & Steiner, 2010). Traditional surveys are comparatively easy to conduct and have high external validity, but they typically cannot identify causal relationships. Experimental designs can produce high internal validity and clear causal relationships; however, they come with logistical and practical constraints along with limitations in external reliability and generalizability (Aguinis & Bradley, 2014; Atzmüller & Steiner, 2010).

Experimental vignette methodology is uniquely able to provide the high internal validity of an experimental design and the external validity and ease of survey-based studies. In addition, because it presents a specific context and can control independent variables, participant answers are less abstract than in conventional survey designs, increasing the construct validity and reliability (Aguinis & Bradley, 2014; Steiner et al., 2016). Experimental vignette methodology also provides a means to measure constructs where it would be impossible or unethical to manipulate the independent variable in a real-life context (Aguinis & Bradley, 2014). Because of its many benefits and ease of use, this approach has been applied to understand many educational concepts better, including TSE (Andreou & Rapti, 2010) and attribution theory (Almog &

Shechtman, 2007; Brophy & Rohrkemper, 1981; Hart & Diperna, 2017; Lucas et al., 2009; Poulou & Norwich, 2002; Reyna & Weiner, 2001; Woodcock &Vialle, 2011). However, the methodology is not without criticism, including its limited ability to provide realistic context or measure real-life behavior. Answers to hypothetical situations only suggest that outcomes can happen, not that they reliably take place (Aguinis & Bradley, 2014). In addition, hypothetical scenarios leave out the rich context of social feedback, high pressure, and human connection that takes place in real life (Hughes, 1998; Lohrke et al., 2010).

As previously described, Lucas et al. (2009) found staff responded differently to vignettes and authentic student behavior. The researchers found real-life experiences elicited stronger correlations between attributional ascriptions and staff emotional responses, such as those between attributions of control and anger and control and helping behavior. In contrast, vignette responses resulted in significantly stronger correlations of sympathy for the student and optimism that the behavior could improve. Almog and Shechtman (2007) also found differences between teacher responses to authentic classroom behavior and vignette descriptions. Both studies demonstrated that vignettes may not accurately represent real staff emotional responses to student CB. However, both methodologies used only a few sentences to describe the students and their CB, which may have influenced the outcomes. With such little context within each vignette, it is possible that the staff members had the tendency to give the student in the vignette the benefit of the doubt and avoided making strong causal ascriptions without additional information.

However, when staff members respond to real-life scenarios, with an abundance of past behavior and student information to base causal ascriptions, they may be more confident in their beliefs, and make more extreme ascriptions for student behaviors. This notion would align with

Weiner's (1979) application of attribution theory, which claims that teacher expectations for future behavior are influenced by the attribution of past misbehavior, which was left out of the short vignettes in the previously mentioned studies. It is possible that with a richer description of the student in the vignette, staff may feel more confident making attributions, revealing larger correlations. In addition, as Almog and Shechtman (2007) used in-person interviews to collect data, it is possible that responses to vignettes were subjected to a greater social desirability bias than reports teachers made via the survey.

Even while considering these limitations, the findings of Lucas et al. (2009) and Almog and Shechtman (2007) posed challenges to the generalizability of vignette-based studies, including this study, which measured only a small piece of student–teacher interactions that took place in complex social settings with elevated emotions and high-stakes outcomes. Reading about hypothetical students with CB may not have elicited the same emotional intensity a teacher experiences when a student misbehaves while the teacher is trying to maintain order and learning in their classroom. Interpretation of any findings must consider the potential that any correlations found in the responses to hypothetical situations may over or underestimate authentic staff perceptions. Although these limitations were present, they were mitigated by careful design of both the vignettes and the data collection methodology (Aguinis & Bradley, 2014). Best practices for designing experimental vignette research include making the experience as relevant and realistic as possible, with consideration in two main areas: vignette construction and vignette presentation (Aguinis & Bradley, 2014; Hughes, 1998).

When constructing vignettes used in experimental vignette methodology, researchers should ensure ample contextual information is included to elicit the same emotions, thoughts, and beliefs that are experienced in the full context of real-life scenarios (Aguinis & Bradley,

2014; Hughes, 1998). However, simply adding more information is not the answer; rather finding a balance of enough information to provide clear context while remaining within the scope of the research questions is key. Including too little context will leave room for more varied interpretations of the vignettes, while providing too much information may introduce confounding variables (Aguinis & Bradley, 2014; Hughes, 1998; Steiner et al., 2016).

A study's methodology should account for the level of immersion needed to provoke realistic responses from participants. Increasing how realistic and immersive the vignette experience is can increase the participants' level of engagement (Aguinis & Bradley, 2014). In addition to more realistic answers, higher immersion increases external validity because it more closely resembles real-life experiences of participants (Aguinis & Bradley, 2014). Although video vignettes are frequently praised for providing high levels of immersion, the financial and logistical considerations limit their feasibility. Creative writing can achieve similar effects with significantly less time and financial commitment (Aguinis & Bradley, 2014). Additionally, there are important considerations around how and where to present the vignette survey. Presenting the survey in the real-life setting and at a realistic time of day or year can increase the immersive experience (Aguinis & Bradley, 2014).

Summary

Challenging student behavior has considerable influences on student and teacher outcomes, making supporting teachers of students with CB and increasing the use of helpful and inclusive practices essential topics for teachers, administrators, teacher preparation programs, and policymakers. Many barriers hamper the use of inclusive practices, including those at the individual teacher level (e.g., TSE and teacher causal ascriptions for behavior). Most of the research described in this chapter aligns with the conceptual framework for this study, which is

based on the S-C-R model and acknowledges that teacher responses to students with CB are influenced by their cognitive reactions, including their causal ascriptions, their TSE, and their belief about whether a student will be successful in the general education setting. Teacher beliefs about students and their behaviors influence teacher causal attributions for said behaviors (Alvriadou & Pavlidou, 2016; Frohlich et al., 2020; Hart & DiPerna, 2017). In turn, causal ascriptions influence teacher cognition, including their TSE, emotional responses, and intention to help (Hart & DiPerna, 2017; Lucas et al., 2009; Poulou & Norwich, 2002). The cognitive reactions and feelings of TSE are related to how acute of a problem a student's behavior is to the teacher (McLean et al., 2019), the likelihood a teacher will respond with helpful over restrictive practices (Almog & Shechtmen, 2007; Lucas et al., 2009), and their persistence and willingness to support the student in their classroom (Bandura, 1997; Tschannen-Moran et al., 1998).

Although the research has generally supported the hypothesis that teacher causal ascriptions for CB are related to their TSE and beliefs about the student, there are limitations to applying these findings. One consideration is the variety in geographic location and time periods in which these studies were conducted. The research is spread over 2 decades, and much of the research in this area was conducted in Europe (Alevriadou & Pavlidou, 2016; Almog & Shechtman, 2007; Lucas et al., 2009; Poulou & Norwich, 2002), with only a few studies focusing on U.S. teachers (Hart & DiPerna, 2017; McLean et al., 2019). Additional research is needed to identify to what extent these constructs are consistent across countries with different educational cultures and school systems. In addition, the research exploring the relationships between attribution and TSE is limited and tends to look across different types of behavior or within one or two disabilities. Directly measuring how teachers respond to various disabilities and other common causes of CB may reveal additional inequities in beliefs and treatment.

CHAPTER 3

METHODS

Teachers may unknowingly perceive and treat students with similar conduct challenges differently based on student characteristics, potentially resulting in differences in teacher self-efficacy (TSE) and inequitable access to the general education setting. To investigate these relationships, this study used an explanatory sequential mixed-methods design beginning with a randomized comparative experiment using a vignette-based survey with a control group, followed by individual teacher interviews (Creswell & Creswell, 2018). The experimental vignette methodology used realistic vignettes to control for the severity and type of student challenging behavior (CB) to examine the relationships between the attribution for the CB and teacher beliefs. The quantitative measures were followed by individual teacher interviews focused on further exploring teacher beliefs. The study investigated the hypothesis that different student characteristics were (a) viewed differently by teachers and (b) influence TSE to support the students described. This chapter presents the research design used for this study. The research questions investigated in this study were as follows:

1. What is the relationship between different attributions for challenging student behavior and TSE in supporting students?
2. What is the relationship between different attributions for challenging student behavior and how disruptive teachers feel the behavior will be to the general education classroom?

3. What is the relationship between different attributions of challenging student behavior and teachers' beliefs about students' ability to be successful in the general education setting?

Study Design

To answer the research questions, general education teachers from across Virginia were asked to read a short vignette depicting a student with CB and report (a) their perceptions of the CB, (b) their expectations for the student, and (c) their feelings of TSE for supporting the student in their classroom. Upon agreeing to participate in the survey, the Qualtrics software used to distribute the survey randomly assigned individuals in the sample to the control group or to one of the five experimental conditions. Participants assigned to the control group read only the description of the CB; they had no information on the student's characteristics or any implied attribution for the behavior described. Participants in the experimental groups read the exact same description of behavior along with additional information about the student's characteristics that provided a causal ascription to one of five characteristics. The experimental conditions included a student with (a) an emotional behavioral disability, (b) autism, (c) an intellectual disability, (d) a history of trauma, and (e) a negative attitude toward school. Each experimental condition explicitly named the cause of the behavior and provided a description of the ways the characteristic influenced the student at school. The vignettes are included in Appendix A. After reading the assigned vignette, participants answered survey items focused on their beliefs related to the three research questions.

Data collected from the quantitative survey measures were then used to inform questions asked during seven individual teacher interviews that further explored the constructs. The interviews provided additional context for the differences found in the survey data. This design

was selected to reveal correlations between teacher beliefs and different causal attributions for CB, while controlling for the type and severity of the CB. Such control over the CB would be nearly impossible with other research methods (e.g., observations or interviews based on real life students or experiences).

Participants

Participants in this study included general education teachers from across Virginia, who worked primarily in Regions 2 and 3, which are in the eastern portion of the state. Regions 2 and 3 were prioritized to represent better the regions I supported through the Training and Technical Assistance Center (T/TAC) at the William & Mary School of Education. To ensure that only general education teachers were included in the sample and eliminate the chances of administrators, special education teachers, or other service providers being included, a question was added immediately after consent was obtained asking participants if they were currently general education teachers in kindergarten through 12th grade.

Vignettes

To achieve a high degree of immersion during the survey, the vignettes aimed to describe a realistic and familiar situation for teachers. The vignettes began by describing a situation where teachers had received their class roster and recognized a name on the list. They knew this student had some significant difficulties with behavior the previous year, and they decided to ask the student's previous teacher for more information. At this point, the previous teacher described the student's CB and, for the experimental conditions only, provided context around the student's characteristics. All vignettes depicted the exact same common externalizing behaviors, such as class disruption, defiance, work refusal, and peer conflict, as these are the behaviors that most

frequently result in suspension (VDOE, 2016a), more restrictive teacher responses (Almog & Shechtman, 2007), and decreased TSE (Zee et al., 2016).

To increase the validity of this study, careful construction and extensive review of the vignettes was vital, as they needed to be as realistic and consistent as possible (Steiner et al., 2016). A panel of three special education teachers from my personal network first reviewed drafts of the vignettes. Upon initial review, the special education teachers read the vignettes with the explicit identification of the attribution of the CB (e.g., "Nicholas has autism") removed. The special education teachers were then asked to identify which of the experimental conditions was being described in the vignette, and in all cases, the teachers were able to identify correctly which disability, if any, was being described. This process ensured the student descriptions clearly and accurately depicted the characteristics of real-life students with each of the identified characteristics.

Following this initial step, the panel members engaged in further discussion around each condition to ensure they were as realistic and consistent as possible. The special education teachers discussed the information included about the disability category being described and whether there was any information that should be added or removed from the vignette. Suggestions included clarifying some language about the student with an intellectual disability and his difficulties with keeping up with peers. In addition, changes were made to the description of the student with an emotional disability, including changes 'to interactions with peers, trusting adults, and being frustrating to work with as a teacher. After the revisions to the vignettes, all three special education teachers agreed that each of the students described could be successfully included in a general education classroom.

Following the review by the special education panel, three experienced general education teachers, including one elementary teacher and two high school teachers who were familiar with the purpose of the study, reviewed the revised vignettes. These teachers provided feedback on the presentation, context, and behavioral descriptions to construct the most immersive experience possible and ensure the behaviors described were CBs commonly seen at all grade levels. They all agreed that the behaviors were not outside the capabilities of a general education teacher to support, and that they could see these behaviors taking place in their classrooms. In addition, when asked to picture the student in kindergarten through 12th grade, they all agreed that the vignettes could be describing a student of any age. After reviewing the additional information provided in the various conditions, the general education teachers had very little to change about the vignettes other than suggestions for minor wording changes that did not alter the meaning of the vignettes. The panel agreed there was no extraneous information or inconsistencies in the formatting of how conditions were presented.

Student-Specific Teachers' Sense of Efficacy Scale

To measure how TSE varied between conditions, the Student-Specific Teachers' Sense of Efficacy Scale (S-STSES) was used. This scale is a modified version of the Teachers' Sense of Efficacy Scale (TSES), which has been found to be a valid and reliable instrument in measuring TSE in three teaching domains: Instructional Strategies, Classroom Management, and Student Engagement (Tschannen-Moran & Woolfolk Hoy, 2001). The S-STSES resembles the TSES, with questions modified to address perceptions toward a specific student rather than a class. For example, "How much can you do to control disruptive behavior in the classroom?" is reworded to "How well can you control disruptive behavior in this student?" (Zee, Koomen, et al., 2016a, p. 53). A few questions were removed from the original scale because the nature of the questions

did not lend themselves to student-specific TSE, including questions related to groups of students. Additionally, the S-STSES added seven additional items to measure the domain of Emotional Support. The resulting instrument contains 25-items that uses a 7-point Likert scale from 1 (*nothing*) to 7 (*a great deal*; Zee, Koomen, et al., 2016a, p. 44). For a full list of included items under each domain, see Appendix B.

The S-STSES was found to be a reliable measure with high internal consistency for Behavior Management (α = .94), Instructional Strategies (α = .89), Student Engagement (α = .90), and Emotional Support (α = .85; Zee et al., 2016). It was also found to be moderately correlated with the original TSES (r = 0.59, p<.001). Although there are some limitations in its generalizability, including its being validated with a sample of Dutch rather than U.S. teachers, its practical application, high internal reliability, and correlation with the well validated TSES made it a useful tool for this study. Zee, Koomen, et al. (2016b) published the full S-STSES with permission to use the questionnaire for research and educational purposes without written permission from the authors. Answers to the S-STSES were be used to address Research Question 1: What is the relationship between different attributions for CB and the ’TSE in supporting students?

Teacher Perceptions Questionnaire

To answer Research Questions 2 and 3, the Teacher Perceptions Questionnaire (TPQ) was developed, critiqued, and pilot tested. To provide consistency with the S-STSES, the TPQ used a continuous 7-point Likert scale with 1 representing *not likely* or *I greatly disagree* and 7 representing *extremely likely* or *I greatly agree*. The TPQ consists of two sections: Section A and Section B. Section A measured teacher beliefs around how disruptive the CB would be to a classroom, including how detrimental the behavior would be to the functioning of the class and

the amount of effort it would require to support the student. Section A was tied to Research Question 2: What is the relationship between different attributions for CB and how disruptive teachers feel the behavior would be to the general education classroom? The section consists of five questions that are averaged to provide a score for the subscale.

Section B of the TPQ investigated teacher perceptions about the student's ability to be successful in the general education classroom and how likely the student would be to benefit from the general education setting. It included eight questions around the likelihood of success and whether the student would best be served in another setting, like special education. This subscale provided insight into Research Question 3: What is the relationship between different attributions of a CB and teachers' beliefs about the students' ability to be successful in the general education setting? The questions in Section B provided a mean score for the subscale. A complete list of items on Sections A and B of the TPQ can be found in Appendix C.

To establish face validity of the survey, the questionnaire was reviewed by two experts on instrument construction and validation, who were aware of the purpose and nature of the study. These experts reviewed each item to ensure (a) there were no leading or confusing phrases, (b) no questions were double-barreled, and that (c) each item was directly related to the purpose of the study. Suggestions from the experts included simplifying wording for clarity (e.g., "Nicholas' classroom behavior" was shortened to "Nicholas' behavior"). The order and grouping of questions were also addressed to ease the cognitive load of the scale changing between questions. This change resulted in grouping items with the same scale into clusters of questions.

Additionally, the items in Section A were made more personal to the teachers by changing the wording on multiple questions from "in the general education classroom" to "in my classroom." Section B, which included two sets of questions with reverse wording, was broken

into sections to provide distance between the negatively and positively worded items. These questions were displayed separately when the participants were taking the survey to reduce the influence of the negatively stated questions on the positively stated questions that followed. These items were also clarified. Specifically, following questions about the likelihood of the student struggling in the classroom, the words "despite any struggles" was added to the items asking about the student's potential success.

Additional shifts included changing the wording of items from questions to statements the participants were asked to agree or disagree with on a 7-point scale. This shift included changing "How appropriate is the general education classroom for Nicholas?" to "To what extent do you agree with the following statements: My classroom is appropriate for Nicholas." Finally, perhaps the largest change that resulted from the experts consultation was the addition of two questions to answer Research Question 3 better within Section B. In these added items, teachers were asked to rate their agreement with two statements on a 7-point scale from 1 (*I strongly disagree*) to 7 (*I strongly agree*). These statements included, "When Nicholas is displaying CB that is disruptive to the class, he should be temporarily removed from my classroom," and "When Nicholas is displaying CB that is disruptive to the class, I am the best person to address his behavior." These items measured more directly the inclusive or exclusive actions a teacher can take when a student is displaying CB in their classroom.

Following revisions and the establishment of face validity, a pilot test was conducted on the TPQ with a convenience sample of five elementary and secondary general education teachers to ensure reliability and provide an initial evaluation of the items (Creswell & Creswell, 2018). The participants in the pilot study took the survey while the researcher listened to their thinking about each question. The teachers thought aloud as they read each question, restating the

meaning of questions when needed to ensure that they were correctly interpreting the intention of the question. In addition to a minor typo found by the sample, the wording of one question was altered: “How much effort will you have to put into supporting Nicholas’ behavior?” was changed to “How much effort will be required from you to address Nicholas’ challenging behavior?” The participants felt this wording more clearly communicated the effort was from the teacher and not from receiving support from other school personnel. The teacher participants were also asked about the ease of completing the survey, including the appropriateness of the scale and the length of time required to complete the survey. They all felt that the survey was straight forward and easy to complete and that the time required was reasonable.

Demographic Information

To be able to describe the sample of teacher participants, twelve demographic items were included on the survey. These items included asking teachers about (a) their division (i.e., rural, suburban, or urban); (b) the level at which they taught (i.e., elementary, middle, or high); (c) years of experience; (d) teacher licensing status; (e) educational level; (f) experiences with special education students; (g) experience coteaching; (h) PBIS; and (i) related professional development. Teachers were also asked to identify if they taught a core content subject (e.g., math, English language arts, science, social studies) or electives (e.g., art, PE, music). All demographic items were close ended to ease data analysis. To protect the identities of the participants, teachers were only asked to report the size of their division (rural, suburban, or urban) and not the division name or the region where their division was located. In addition, all demographic information was reported in aggregate, not broken down by division, and participating divisions were not identified.

The demographic items were also reviewed by the two experts on survey construction. This review resulted in changes to the responses for several items, including breaking up the years of teaching from "less than one year," and "1–3 years," to "I'm starting my first year teaching," "I'm starting my second year teaching," and "I'm starting my third year teaching." This change provided more clarity about the teachers included in the sample. To reduce the total number of questions being asked, an item asking about teacher gender was removed, as it was determined to be the least relevant demographic feature. However, additional questions were asked related to teacher experience with co-teaching, PBIS, and students with disabilities. In addition, three items measuring teacher preparation for supporting students with CB were added. These included, "To what extent did your teacher preparation program help prepare you to support students with challenging behaviors?"; "How much professional development have you had related to supporting students with challenging behavior?"; and "To what extent have you had targeted, job-embedded coaching related to supporting students with challenging behavior?" These questions addressed important considerations around how teachers were prepared to provide inclusive educational supports for students like those described in the vignettes. All demographic questions were included on the pilot tests to ensure clarity, and the participants agreed they were clearly stated, and they were able to easily identify the best answers for themselves. A complete copy of all demographic items is provided in Appendix D.

Teacher Interviews

Following completion of the survey, teachers were given the option to volunteer for an additional one-on-one interview to share additional thoughts related to the topics covered in the study. Forty-eight participants volunteered and provided an email address to be contacted. The list of volunteers was entered into a random name generator, and eight participants were initially

selected and contacted. Two more rounds of eight randomly selected participants were contacted, leading to the scheduling of seven interviews.

All interviews were conducted over Zoom and audio recorded using Otter transcription services. Prior to beginning the interviews, participants were verbally and visually presented the necessary informed consent information, including that their participation was completely confidential and voluntary and that they could choose to discontinue the interview at any time. They were also asked for their consent prior to audio recording the interview. Rather than signing and returning a consent form, participants verbally agreed to participate.

Once the interview began, participants were informed they would hear brief student descriptions and that each student described struggled with the same type and severity of CB (e.g., class disruption, defiance, work refusal, peer conflict). It was shared that these students rarely completed their work, and that they were frequently argumentative with their teachers and peers. After hearing the description of each student and how their disability or other characteristic affected them, participants were asked to describe their reaction to the student, including (a) the effects they believed the student would have on their classroom, (b) how appropriate the general education setting would be for the student, and (c) how confident they would be in supporting the student in their classroom. For the full interview protocol, see Appendix E.

Based on the quantitative findings from the survey, it was determined that all five of the experimental conditions from the survey would be included in the follow-up interviews. Additionally, the demographic questions around experience with PBIS, students with disabilities, and professional development related to supporting students with CB were included in the interviews to further explore how these factors influenced the teachers' perceptions of students.

Table 4

Summary of Research Questions, Data Sources, and Analysis

Research question	Data sources	Data collection	Data analysis
1. What is the relationship between different attributions for challenging student behavior and TSE in supporting students?	S-STSES	Online survey	Descriptive statistics one-way ANOVA
	Teacher interviews	1:1 virtual interviews	Descriptive and values coding
2. What is the relationship between different attributions for challenging student behavior and how disruptive teachers feel the behavior would be to the general education classroom?	TPQ Section A	Online survey	Descriptive statistics one-way ANOVA
	Teacher interviews	1:1 virtual interviews	Descriptive and values coding
3. What is the relationship between different attributions of a challenging student behavior and teachers' beliefs about the students' ability to be successful in the general education setting?	TPQ Section B	Online survey	Descriptive statistics one-way ANOVA
	Teacher interviews	1:1 virtual interviews	Descriptive and values coding

Note: ANOVA = Analysis of Variance; S-STSES = Student-Specific Teacher Sense of Efficacy Scale; TPQ = Teacher Perception Questionnaire; TSE = Teacher Self-Efficacy.

Data Collection

Teachers in the sample received an email with a brief cover letter and a link to the survey materials through their work email. The cover letter explained the purpose of the study and its potential to improve support for teachers of students with CB in Virginia. It also provided information on informed consent, efforts to maintain the confidentiality of participants, and the researcher's contact information. The cover letter was reviewed by the five general education

teachers in the pilot test of the survey and was clearly understood by all participants in the pilot, and can be found in Appendix F.

Initially, the qualitative data collection was intended to be collected solely from census surveys of school divisions within Virginia Regions 2 and 3, as these were the divisions supported by T/TAC William & Mary School of Education. Regions 2 and 3 encompass 32 of Virginia's divisions and include a diverse teacher and student population, including sprawling rural areas and densely populated cities. As a project specialist for T/TAC, I worked to support teachers in these divisions through targeted professional development and coaching, with a specific focus on classroom management and behavioral supports aimed at increasing inclusion in the general education classroom for students with disabilities.

An initial round of data collection was conducted as planned between mid-August and late-September, when five school divisions within Regions 2 and 3 agreed to participate in the study. Three of these divisions sent out the invitation on my behalf from a division-level leader, with two of the divisions sending out two follow up emails at 2- or 3-week intervals and the third not allowing for any follow-up reminder emails. An additional two divisions allowed me to contact their principals directly to ask that they send the invitation emails to their staff at their convenience. Only one of the two divisions resulted in participation from the principals. In total, four divisions within Regions 2 and 3 participated in the original round of data collection, ranging from small, rural with fewer than 50 total teachers, to very large, urban, and suburban divisions with thousands of teachers.

Even with multiple follow up emails and encouragement from administration in some divisions, the participation rate was very low. Although it is not possible to calculate the response rate for each division because the survey responses did not collect the specific division,

I estimated it to be well below 5% of teachers in the participating divisions. In addition, the drop-off rate of participants who opened the survey was high. In the initial round of surveys, a total of 105 general education teachers agreed to participate in the study; however, only 70 teachers (66.6%) continued until the end of the survey.

To boost participation, I initiated a second round of surveys in late September and added a chance to win one of two $25 Amazon gift cards as an incentive. This incentive was included in a follow-up email to two of the divisions already participating as the final reminder. In addition, applications were submitted to conduct research in several Virginia school divisions outside of Regions 2 and 3, and an additional school division was added. This division agreed to let teachers know ahead of time that a research survey would be shared with them on the next teacher workday, and it was shared that one of the division leaders is in the same doctoral program as the researcher conducting the survey. The invitation was then emailed out the night before the teacher workday to give teachers time to complete the survey.

During this second round of surveys, permission was also obtained to share the survey in another large division within Regions 2 and 3; however, instead of sending the survey to the entire division, I was allowed to reach out to individual school principals to distribute the survey at the school level. I reached out to three personal connections I had within the division to share the survey at their schools to increase responses. Two principals agreed not only to share the survey within their large high schools, but also to announce at a staff meeting that the survey would be open to all teachers, share details about the purpose of the study, and encourage their teachers to take the survey on an upcoming teacher workday.

In both later divisions, I believed the additional details shared, careful timing of the distribution, and the incentive increased the participation rate of teachers receiving the email, and

there was slightly less leakage from the sample. A total of 144 general education teachers agreed to participate in these divisions, and 101 of them (70%) completed most of the questions. However, even with the additional responses, more responses were needed. To obtain the remainder of the required responses, a third round of surveys was initiated with less stringent criteria for survey distribution.

During the final round of survey collections, the survey was shared with my personal network of general education teachers and their colleagues between early- and mid-December. This snowball sampling resulted in 50 additional general education teachers agreeing to participate and 37 of them (74%) completing the survey. Although this methodology may have introduced some bias into the sample, it provided enough survey responses to fulfill the conditions of the study.

Data Analysis

The following sections describe how the data collected from the surveys and interviews were analyzed to answer the research questions. In addition, the final paragraph describes how the demographic data were analyzed.

Quantitative Data

All quantitative data were first conditioned to include only the responses from general education teachers who completed surveys and was then analyzed using SPSS 27. Data related to TSE from the S-STSES across all vignettes were reported as a measure of overall TSE within each domain for all participants. Descriptive statistics, including means, standard deviations, skew, and kurtosis, for each of the self-efficacy domains for each of the vignettes were reported. Then, to answer Research Question 1, regarding teacher self-efficacy, the scores from each

domain of the S-STSES between the six vignettes were further analyzed using a one-way ANOVA followed by Tukey's B post hoc tests when needed.

Items within Section A of the TPQ were first analyzed to determine the Cronbach's Alpha score for the section as a measure of the questionnaire's reliability. Data from Section A were analyzed to describe teacher expectations for how the behavior described in the vignettes will the impact on the classroom. Means, standard deviations, skew, and kurtosis for scores on Section A were reported for all vignettes. Then, to gain a better understanding of the influence of attribution on teachers' expectations of how disruptive the CB would be to the general education classroom, mean scores for each vignette condition were compared using a one-way ANOVA. This analysis assisted in bringing clarity to Research Question 2.

Finally, Section B of the TPQ was analyzed to investigate Research Question 3, regarding teacher expectations of success in the general education classroom. Prior to analysis, the scales of four of the eight items on Section B of the TPQ were reversed to provide consistency in the negative wording of all items. The collective data from all vignette conditions were first analyzed for descriptive statistics to depict the overall expectations for success in the general education classroom across all student types. Descriptive statistics for each vignette condition were also reported, including means, standard deviations, skew, and kurtosis. Following these steps, clarity around Research Question 3 was sought by comparing scores on Section B of the Teacher Perceptions Questionnaire across the six vignettes using a one-way ANOVA.

Qualitative Data

Qualitative data collected from the teacher interviews were coded in two rounds. The first round of coding involved descriptive coding, also called "topic coding," in which a short phrase

was used to describe the basic topic of a passage from participants' answers. In a second round of coding, values coding was used to identify the values, attitudes, and beliefs that were present in the statements made by participants (Saldaña, 2016). The descriptive coding and values coding helped to identify the themes present around the constructs of TSE, the type of student behavior expected, behavioral and social success in general education, appropriate placement, and strategies to support the student. Following the two rounds of coding, teacher responses were organized by vignette condition, and themes in teacher perceptions were identified. A subject matter expert familiar with the study and research questions reviewed the qualitative categorizations and groupings of teacher perceptions to increase the reliability of the findings being reported.

Demographic Information

The demographic questions included on the survey were analyzed with Chi-square to identify if the random assignment by the Qualtrics software between the six vignettes resulted in statistically similar groupings. In addition, data from each demographic item was analyzed using a one-way ANOVA or a bivariate correlation analysis to identify trends in the demographics related to TSE and expectations for the student in the general education classroom.

Delimitations, Limitations, Assumptions

The following sections describe the choices made to narrow the focus and improve the methodology of the present study. Additionally, they describe the limitations and assumptions of the study.

Delimitations

This study focused on how general education teacher perceptions and beliefs are influenced by student characteristics that imply causal attributions for ongoing CB. The study did

not attempt to identify or measure causal ascriptions directly. Because these judgements happen unconsciously (Weiner, 1979), it is possible that directly asking about attributions may influence how participants respond to the rest of the questionnaire items. The study also did not compare differences between groups of teachers, such as differences between special and general education teachers. Although such comparison would be beneficial, the purpose of this study was to provide information on how to improve inclusive practices in the general education setting, where general education teachers are likely to be the first adult to respond to CB. In addition, this study did not address how characteristics other than the causal ascription of the problem behavior, such as gender or race, influence teacher perceptions. Although other characteristics are also likely to influence teacher beliefs, including additional characteristics would greatly have expanded the scope of the study. Therefore, all vignettes used the same common boy's name and made no indication of ethnicity or race.

Additionally, research is clear that student–teacher relationships are an important part of managing student behavior, teacher decision making, and teacher feelings of burnout and stress in the classroom (Booker, 2021; Hagenauer et al., 2015; Hamre & Pianta, 2001; Longobardi et al., 2021; Poulou, 2020; Roorda & Koomen, 2021). However, including measures of student–teacher relationships or closeness would have greatly increased the scope of this study. In addition, it would be impossible to realistically simulate the depth and variety of emotions teachers experience in response to various relationships with students through vignette descriptions. Therefore, the vignettes were designed to avoid the confounding variable of the student–teacher relationship by having teachers respond to their expectations and beliefs about a student they had not yet met.

Further, the quantitative measures for this study employed a between-person design, in which each participant responded to only one vignette. This design did not allow for within-person comparisons between participant responses to different vignettes. Because the design required the description of the behavior to remain consistent, presenting multiple vignettes to each participant would not have been an authentic measure for their responses because participants might have recognized the differences between each vignette and been subject to a social-desirability bias. That is, they might have been tempted to answer the second vignette the same as the first to avoid appearing biased toward different students. Additionally, adding multiple vignettes would have greatly lengthened the survey and decreased the completion rate. Instead, teacher interviews were added to provide some insight into within teacher differences in perception.

Another considered option was to have teachers rate a variety of inclusive and exclusive response strategies based on how useful they would be in supporting the student (e.g., likelihood of writing an office referral or reinforcing a more appropriate behavior). However, the intention to use strategies does not always result in actual use (Almog & Shechtman, 2007; Pajares, 1992; Sugai & Horner, 2006), and this measure might also have resulted in a social-desirability bias, especially given that the inclusive strategies are frequently encouraged by school divisions in Regions 2 and 3. The TSE and relative concern for the disruption of the CB were judged to be better indicators of teacher beliefs and perceptions and were, therefore, the focus of this study.

Limitations

This study had several limitations. First, in the complex social world of a school building, teacher behavior is influenced by many confounding factors. Perceived support from administrators, school culture, teacher personality, past experiences, implicit biases, and

professional knowledge and skills are just a few of the factors that contribute to how a teacher perceives and responds to a student with CB. Due to the complex and interconnected nature of such factors, it is beyond the scope of this study to attempt to holistically approach the entirety of how teachers perceive and respond to students. Therefore, this study was limited to a small fragment of the stimulus-cognition-response model.

Additionally, because the study design required tight control over the description of the behavior and student characteristics, the use of a vignette design was convenient. However, the use of vignettes in research has been criticized for a lack of external validity (Aguinis & Bradley, 2014; Hughes, 1998; Lohrke et al., 2010). Some research has found teacher emotional responses to real-life scenarios differed from their reactions to vignettes (Almog & Shechtman, 2007; Lucas et al., 2009). Although steps were taken to ensure the vignettes were as realistic as possible, these actions did not guarantee an accurate portrayal of how teachers perceive actual student behavior. Therefore, there are limitations in applying the findings of this research to teacher behavior in the classroom because the study's findings might over or underestimate the responses teachers have to students in their classrooms.

The data collection methodology for the vignette-based survey was also less than ideal. Although most of the responses were collected through census surveys of schools and divisions, the low response rate led to a loosening of the data collection procedure. This change opened the survey to bias in the selection of some of the participating schools, which were selected based on personal connections, as well as bias from the use of snowball sampling. These limitations might have affected the non-response bias present in the sample, including the low number of participants in their first few years of teaching and the disproportionately low number of provisionally licensed teachers in the sample.

Although the percentage of provisionally licensed teachers for the 2022–2023 school year was not yet available, the Joint Legislative Audit and Review Commission (JLARC, 2022) reported that in the 2021–2022 school year 9.5% of Virginia teachers were provisionally licensed. Some divisions in the commonwealth had even higher rates of provisionally licensed teachers, including at least four divisions with over 20% of teachers holding provisional licenses and one division where that number was over 40% (JLARC, 2020). The sample of teachers for the present study included only 4% of provisionally licensed teachers, which was less than half of the conservative estimate for the population of teachers in Virginia.

Additionally, the sample largely consisted of teachers with four or more years of teaching experience and may not accurately reflect the teaching population across the state. The National Center for Education Statistics (2021) reported that Virginia school teachers with fewer than 3 years of teaching made up 9% of the workforce in the 2017–2018 school year, while this demographic of teachers made up only 4.4% of the sample. This discrepancy indicates that the sample of teachers in this study was likely more experienced than the general population of Virginia teachers. Only 2% of teachers in the sample were in their first year of teaching; 2.4% were in their second year; and 6.8% were in their third year. The experience level of the sample was also evidenced by frequent comments made by interview participants about having had many students like those described in the vignettes. This additional experience with similar students may have served as mastery experiences that led to higher levels of TSE (Bandura, 1997).

Due to underrepresentation of less experienced teachers, the findings of this study might not accurately reflect the beliefs of teachers who hold provisional licenses or who are new teachers. Additionally, the low response rate overall and the underrepresentation of new and

provisionally licensed teachers might be indicators that the sample of teachers felt more capable in their teaching positions and, therefore, had more time available to participate than newer and less prepared teachers with provisional licenses. This concern is a major limitation in the generalizability of this study, especially considering that teachers are leaving the profession at higher rates than previous years and schools are increasingly turning to provisionally licensed and inexperienced teachers to fill the vacancies (JLARC, 2022).

Assumptions

Given the data for this study was collected using self-reported surveys and interviews, it was an assumption of the research that participants responded honestly. It was assumed that participants read the assigned vignette in its entirety and based their answers off a clear understanding of the vignette. In addition, it was assumed that every individual participating in the study had a variety of unique experiences and perspectives that influenced their decision making and could not be controlled for within this study. These influences could have included personal factors like implicit bias, past experiences, and previous trainings, as well as division- and school-wide factors like school culture, discipline policies, and their model of inclusion.

Researcher as Instrument Statement

Both the qualitative and quantitative data collected for this study required my interpretation as the researcher and, therefore, were subject to my perceptions and biases, particularly during the coding and interpretation of the qualitative teacher interviews (Creswell & Creswell, 2018). As a practitioner, I have worked to improve inclusive practices in Virginia, and I am deeply invested in the outcomes of this study. My personal background, biases, experiences, and beliefs had the potential to shape how I interpreted the data, and likely served to frame and shape my findings. For example, the many experiences I have had working with teachers in the

field have left me with likely biased beliefs about teacher perceptions of students with disabilities, specifically students with emotional and behavioral disabilities and autism spectrum disorder. This may have subjected me to confirmation bias as I reviewed teacher responses to students with these disabilities. To minimize the bias of my personal beliefs being introduced into my interpretation of the data, I conducted an internal audit of my biases and beliefs prior to reviewing and coding the raw data. In addition, I incorporated the practices of keeping a reflexive journal to explicitly consider how my personal experiences shaped my interpretation, and peer debriefing was used to increase the validity of the categorization and grouping of teacher perceptions (Creswell & Creswell, 2018).

Ethical Considerations

Prior to conducting this study, approval was obtained from William & Mary's Institutional Review Board, consistent with federal, state, and university policies governing research with human subjects. Permission to conduct the study in the participating divisions was also obtained, and the specifications given by each division were followed throughout the data collection and reporting process. All data collection instruments were reviewed and approved by the William & Mary Human Subjects Review Committee, as well as members of my dissertation committee, prior to their use in the study.

Participants were informed of the topic and purpose of the study, including how their responses might be helpful in providing meaningful information to individuals supporting teachers working with students with behavioral challenges and disabilities. Because it may have influenced the results, participants were not made aware of the experimental design. Participants were informed that participation in the survey and individual interview was completely voluntary and that they were able to withdraw their consent to participate at any time. Consent for the

online survey was implied by the completion of the survey. Consent for participation in the individual interview and permission to audio record the interviews was obtained verbally following a description of the study, its purpose, and the length and content of the interview. Participants were informed that they would be able to review the findings and might benefit from any relevant findings. All data were reported in aggregate and kept strictly confidential. No individual names or identifying information of teachers or divisions was collected or reported. In reporting teacher responses during the interviews, participant numbers were used in place of names and only general information about the participant was provided to protect their confidentiality.

Timeline

Table 5 outlines the timeline used for this research.

Table 5

Timeline of Study Activities

Phase	Activities	Date of Completion
Phase I: Dissertation proposal	Completed proposal (Chapters 1-3 with guidance from dissertation chair)	March-May 2022
	Defended proposal with dissertation committee	June 2022
Phase II: Preliminary steps to conducting study	Requested approval from W&M IRB	June 2022
	Secured permission from school divisions	July 2022
	Conducted pilot study and revised research instruments	May–August 2022
Phase III: Conduct study	Executed study as approved by dissertation committee a. Teacher survey b. Teacher interviews	a. September–December 2022 b. January 2022
	Collected, tabulated, and analyzed data	December 2022–January 2023
Phase IV: Dissertation Defense	Dissertation defended	March 2023

CHAPTER 4

FINDINGS

This study used an experimental design to investigate how teacher self-efficacy (TSE) and predictions of student success in the general education classroom vary based on the implied attribution of a student's challenging behavior (CB). Specifically, it investigated whether general education teachers respond differently to students who exhibit the same behavior when told the student's CB is a result of an intellectual disability, an emotional and behavioral disability (EBD), an autism spectrum disorder, a history of trauma, or a negative attitude toward school. The research questions focused on the influence of these implied attributions on TSE, expectations for the student's success, and expectations for the student's impact on the general education classroom.

This chapter provides the study's findings, including study participant demographics, measure reliability, and variable correlations. Following a description of the sample, the chapter presents the findings by research question. Quantitative findings are first summarized in tables. This study used a significance level of less than or equal to .05. Qualitative findings from the teacher interviews are presented under each research question following the quantitative findings. Finally, additional analysis of the demographic influences on teachers' reported self-efficacy and expectations for students are reported and summarized.

Prior to analyzing the data, the 365 responses gathered were consolidated and conditioned using SPSS 27. The process of conditioning the data began by removing all surveys from participants who indicated they were not general education teachers because they were not

part of the target sample. The removal of these responses left 284 survey responses from general education teachers. These responses were then sorted by the number of missing item responses, and any response with a single missing item was removed from the data set. The final count was 205 survey responses, with a minimum of 32 responses for each vignette. Table 6 displays the number of individual surveys completed for each vignette, along with the percentage of total responses each vignette represented.

Table 6

Survey Response Frequency by Vignette

Vignette	*n*	%
Control	32	15.6
Bad attitude	34	16.6
Intellectual disability	36	17.6
Trauma	36	17.6
EBD	32	15.6
Autism	35	17.1
Total	205	100

Response Rate and Demographics

The 205 general education teachers included in the sample answered 12 demographic questions. The sample primarily comprised core content area teachers of math, English, science, and social studies (n = 169, 82.4%), with the remaining participants being elective teachers (n = 36, 17.6%). Participants were largely professionally licensed teachers (n = 196, 95.6%), with only a small minority having provisional licenses (n = 9, 4.4%). They self-reported their divisions to be rural (n = 68, 33.2%), suburban (n = 104, 50.7%), and urban (n = 33, 16.1%). They taught across all grade levels: elementary (n = 72, 35.1%), middle (n = 51, 24.9%), and

high (n = 82, 40.0%). The group was largely made up of veteran teachers, with 88.8% (n = 182) having taught for more than 3 years, including 58.1% (n = 119) having taught for over 10 years. Very few participants were in their first (n = 4, 2.0%), second (n = 5, 2.4%), or third (n = 14, 6.8%) year teaching. Most of the group reported having moderate to extensive experience with coteaching (n = 134, 65.4%), while an even higher percentage reported having moderate to extensive experience with positive behavioral interventions and supports (PBIS; n = 167, 81.5%). Participants were even more experienced working with students with disabilities; 92.2% (n = 190) reported moderate to extensive experience with this group of students. Participants were also a well-educated group, with 64.4% (n = 132) having earned at least a master's degree.

The group was evenly split on the amount of professional development they had received related to supporting students with CB, with 52.2% (n = 107) reporting no to little experience and 47.8% (n = 98) reporting moderate to extensive professional development related to the topic. When asked to rate the extent their teacher preparation program prepared them to support students with CB on a scale from 1 being the least preparation to 7 being the most preparation, most participants selected the rating between 1 and 3 (n = 126, 61.4%), while the remainder selected a 4 or higher (n =79, 38.5%). Finally, when asked about the amount of targeted, job-embedded coaching they received related to supporting students with CB on the same 7-point scale, the group reported a mean score of 2.81, with 51.5% (n = 106) of participants selecting a 1 or 2, and 48.5% (n =99) selecting a 3 or higher. More detailed breakdowns of the demographic data are reported in Table 7.

Table 7

Participant Demographic Frequencies

Demographic item	Respondent answer	*n*	%
Division type	Rural	68	33.2
	Suburban	104	50.7
	Urban	33	16.1
Grade level taught	Elementary	72	35.1
	Middle	51	24.9
	High		
Content area	Core content area	169	82.4
	Elective classes	36	17.6
Years of teaching experience	I'm starting my 1st year	4	2.0
	I'm starting my 2nd year	5	2.4
	I'm starting my 3rd year	14	6.8
	I'm starting my 4th through 10th year	63	30.7
	I'm starting my 11th through 20th year	61	29.8
	I've been teaching more than 20 years	58	28.3
Licensure status	Provisional licensure	9	4.4
	Professional licensure	196	95.6
Education level	Bachelor's degree	73	35.6
	Master's degree	100	48.8
	Master's +30	29	14.1
	Doctoral degree	3	1.5
Experience with students with disabilities	Little experience	15	7.3
	Moderate experience	127	62.0
	Extensive experience	63	30.7
Experience with PBIS	No experience	8	3.9
	Little or only unsuccessful experiences	30	14.6
	Moderate experience, including both successful and unsuccessful experiences	139	67.8
	Extensive, including mostly successful, experiences with PBIS	28	13.7
Experience with co-teaching	No experience	38	18.5
	Little experience	27	13.2
	Only unsuccessful experiences	6	2.9
	Moderate experience, including successful and unsuccessful experiences	89	43.4
	Extensive experience, including mostly successful experiences	45	22.0
How much professional development have you had related to supporting students with CB?	None	14	6.8
	Little, such as short trainings	93	45.4
	Moderate, such as full day or multi-day trainings	80	39.0
	Extensive, such as ongoing, in-depth training with hands-on learning	18	8.8

Demographic item	Respondent answer	*n*	%
Please indicate the extent your teacher preparation program helped prepare you to support students with CB from 1 (None at all) to 7 (A great deal)	1 (Not at all)	47	22.9
	2	48	23.4
	3	31	15.1
	4	26	12.7
	5	23	11.2
	6	16	7.8
	7 (A great deal)	14	6.8
Please indicate the extent you have received targeted, ongoing, job-embedded coaching related to behavior supporting students with CB.	1 (None at all)	51	24.8
	2	55	26.7
	3	34	16.5
	4	31	15.0
	5	20	9.7
	6	8	3.9
	7 (A great deal)	6	2.9

Note. CB = Challenging Behavior; PBIS = Positive Behavior Interventions and Supports

Because the demographic items related to teacher preparation programs and job-embedded coaching collected ordinal data, additional analysis of the central tendencies was completed. The measures of central tendency for these items are reported in Table 8.

Table 8

Measures of Central Tendency for Demographic Items Related to Teacher Preparation and Coaching

Measure of Central Tendency	Teacher Preparation Program	Coaching Support
M	3.17	2.81
SD	1.874	1.613
Skewness	.569	.736
Kurtosis	-.812	-.243

Note. This table describes teacher responses to two demographic questions including "Please indicate the extent your teacher preparation program prepared you to support students with challenging behaviors" and "Please indicate the extent you've received targeted, ongoing, job-embedded coaching related to behavior." Both questions used a scale from 1 (*None at all*) to 7 (*A great deal*).

Chi-Square Analysis

The demographic items collected from the surveys were analyzed using chi-square goodness of fit to determine equivalencies across the six vignettes. Three questions were analyzed without any needed adjustment of the response categories. These included the division type (rural, suburban, or urban); the grade level taught (elementary, middle, or high); and the content area taught (core or elective class). As indicated in Table 9, the chi-square analysis did not reach significance for any of these three characteristics, indicating the vignettes were randomly distributed across the participants regarding these demographics. For nine of the demographic questions, multiple cells had expected counts of less than five, violating an assumption of the chi-square analysis. To complete the chi-square analysis for these questions, answer choices were consolidated until the assumption was no longer violated. This adjustment made the analysis possible for all but one of the remaining questions. The demographic question about teacher licensure was not able to be consolidated because it had only two original categories. For the remaining eight demographic questions, equivalent assignment appeared to exist across the six vignettes, as none of the chi-square analyses reached significance. Table 9 shows the chi-square analyses for eleven demographic questions across the vignettes.

Table 9

Chi-Square Analysis of Demographic Items

Demographic	$\chi 2$	*df*	*p*
Division type (rural, suburban, urban)	6.20	10	.80
Grade level (elementary, middle, high)	7.08	10	.72
Content area (core or elective)	1.87	5	.87
Years teaching*	11.29	10	.35
Degree that teacher preparation program prepared them for supporting students with CB	10.43	10	.40
Level of education*	9.64	5	.09
Experience with students with disabilities*	6.97	5	.22
Experience with PBIS*	7.51	10	.68
Experience with co-teaching*	6.04	10	.81
Amount of professional development received*	4.73	5	.45
Amount of coaching received*	5.90	5	.32

Note. An asterisk indicates that response categories were consolidated to perform the chi-square analysis. Teacher licensure status is not included because predicted values in multiple cells violated the assumptions of chi-square analysis and answer choices could not be consolidated to calculate chi-square.
CB = challenging behavior; PBIS = Positive Behavior Interventions and Supports

Interview Participants

Initially, 48 teachers from the sample volunteered to be interviewed, and two teachers were eliminated because of a personal relationship with the researcher. Out of the 24 randomly selected teachers who were contacted to participate, 7 responded and were interviewed over a 2-week span in January 2023. Like the survey sample, the interview sample included a mix of elementary and secondary teachers with an average of 11.6 years teaching. All teachers were professionally licensed and teaching a core content area at the time of the interview, although one teacher taught an elective course for most of her teaching career. Table 10 provides more information on the interview participant demographics.

Table 10

Interview Participant Demographics

Division type	Number of Participants
Rural	3
Suburban	3
Urban	1
Grade level	
Elementary	2
Middle	2
High	3
Licensure	
Professional	7
Provisional	0
Content area	
Core	7
Elective	0
Experience with students with disabilities	
Little to moderate	1
Moderate	2
Extensive	4
Years of experience	
Range	7–17
Average	11.6

Note. Demographics are not reported by participant to maintain confidentiality.

Research Question 1: Attribution and TSE

Answers from the Student-Specific Teachers' Sense of Efficacy Scale (S-STSES) were used to investigate Research Question 1, which focused on TSE to support the student in their classrooms. TSE was measured across four domains: Instructional Strategies, Behavioral Management, Student Engagement, and Emotional Support. Table 11 reports the measures of central tendency on the S-STSES for the entire sample of teachers across all vignettes. Higher means on the scale correspond to higher TSE within the domain, with 1 being the lowest possible score and 7 being the highest.

Table 11

Measures of Central Tendency for the S-STSES Domains Across All Vignettes

Domain	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Instructional Strategies	1.00	7.00	5.31	5.30	1.05	-0.62	0.93
Behavior Management	2.00	7.00	4.86	5.00	1.02	-0.21	-0.15
Student Engagement	1.86	7.00	5.07	5.14	0.98	-0.50	0.31
Emotional Support	3.29	7.00	5.65	5.71	0.82	-0.62	0.05

Note. $N = 205$. S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

In addition, Tables 12–15 provide descriptive statistics for each of the four domains measured by the S-STSES by each vignette condition.

Table 12

S-STSES Instructional Strategies Domain Descriptive Statistics by Vignette Condition

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	1.83	7.00	5.21	5.58	1.15	-0.67	0.88
Negative attitude	34	3.83	7.00	5.57	5.67	1.01	-0.06	-1.30
Intellectual disability	36	2.67	7.00	5.17	5.25	1.10	-0.35	-0.66
Trauma	36	2.83	7.00	5.49	5.50	0.92	-0.40	0.61
EBD	32	3.50	7.00	5.30	5.42	0.86	-0.07	-0.76
Autism	35	1.00	7.00	5.10	5.12	1.18	-1.30	3.09

Note. EBD = emotional and behavioral disabilities; S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

Table 13

S-STSES Behavior Management Domain Descriptive Statistics by Vignette Condition

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	2.40	6.20	4.63	4.70	0.97	-0.40	-0.68
Negative attitude	34	2.40	7.00	5.40	5.60	1.21	-0.62	-0.05
Intellectual disability	36	2.60	6.80	4.98	5.00	1.07	-0.35	-0.66
Trauma	36	2.60	6.00	4.70	4.80	0.65	-0.91	2.25
EBD	32	2.60	7.00	4.68	4.80	1.05	-0.23	-0.33
Autism	35	2.00	6.60	4.75	4.80	0.97	0.38	0.45

Note. EBD = emotional and behavioral disabilities; S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

Table 14

S-STSES Student Engagement Domain Descriptive Statistics by Vignette Condition

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	1.86	7.00	4.95	5.00	1.16	-0.74	0.81
Negative attitude	34	2.86	7.00	5.37	5.43	0.92	-0.23	0.82
Intellectual disability	36	3.14	6.43	4.91	4.93	0.96	-0.21	-1.11
Trauma	36	3.14	6.71	5.12	5.14	0.83	-0.05	-0.13
EBD	32	3.29	6.57	5.01	5.00	0.86	-0.11	-0.90
Autism	35	2.00	7.00	5.04	5.29	1.12	-0.87	0.50

Note. EBD = emotional and behavioral disabilities; S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

Table 15

S-STSES Emotional Support Domain Descriptive Statistics by Vignette Condition

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	3.29	7.00	5.63	5.64	0.86	-0.74	0.88
Negative attitude	34	3.29	7.00	5.84	5.92	0.91	-0.84	0.55
Intellectual disability	36	3.86	6.71	5.51	5.64	0.82	-0.51	-0.61
Trauma	36	3.38	7.00	5.77	5.79	0.74	-0.21	-0.17

EBD	32	3.71	6.57	5.52	5.71	0.73	-0.87	0.17
Autism	35	3.71	6.86	5.61	5.86	0.82	-0.84	-0.03

Note. EBD = emotional and behavioral disabilities; S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

To investigate Research Question 1 regarding TSE, the scores from each domain of the S-STSES across the six vignettes were analyzed using a one-way ANOVA. The results of the one-way Analysis of Variance (ANOVA) are reported in Table 16.

Table 16

Analysis of Variance Tests for the S-STSES

Domain		*SS*	*df*	*MS*	*F*	*p*	η^2
Instructional Strategies	Between groups	6.027	5	1.205	1.099	.362	.027
	Within groups	218.261	199	1.097			
	Total	224.288	204				
Behavior Management	Between groups	14.404	5	2.881	2.890*	.015*	.068*
	Within groups	198.366	199	.997			
	Total	212.770	204				
Student Engagement	Between groups	4.700	5	.940	.977	.433	.024
	Within groups	191.528	199	.962			
	Total	196.228	204				
Emotional Support	Between groups	2.963	5	.593	.889	.489	.022
	Within groups	132.609	199	.666			
	Total	135.572	204				

Note. *$p < .05$

As shown in Table 16, the ANOVAs revealed statistically significant differences in TSE within the Behavior Management domain between two vignettes with a medium effect size, $F(5, 199) = 2.890$, $p = .015$, $\eta^2 = .068$. However, this was the only domain on S-STSES that was found to have systematic differences between vignettes. Because of the statistical difference found, post-hoc Tukey's-b tests were carried out for this domain. The tests revealed the mean value of TSE for behavior management was significantly different from the experimental group that responded to a student with a negative attitude toward school (but no disability; $M = 5.40$)

from all other vignettes except for students with intellectual disabilities ($M = 4.98$), as shown in Table 17. This finding indicated teachers felt significantly more confident managing the behavior of the student with a negative attitude than they felt for all other vignettes except for students with intellectual disabilities.

Table 17

Tukey's-B Post Hoc Tests for Behavioral Management Domain of S-STSES

Condition	*n*	1	2
Control	32	4.63	
EBD	32	4.68	
Trauma	36	4.71	
Autism	34	4.75	
Intellectual disability	36	4.98	4.98
Negative attitude	34		5.40

Note. Mean values in the same column are statistically similar. EBD = emotional and behavioral disabilities; S-STSES = Student-Specific Teacher Sense of Efficacy Scale.

The qualitative findings from the teacher interviews provided additional insight concerning the systematic differences in the quantitative data. Specifically, the differences in TSE in behavior management found in the ANOVA were also present in the answers participants gave when directly asked about their level of confidence to support each type of student. However, the qualitative data suggested a much more nuanced level of TSE. Teachers provided a wide variety of answers to questions about TSE, including qualifying their level of confidence with words like "pretty" or "less" confident, as well as using percentages and rating scales to communicate their feelings of efficacy. These answers were grouped into five categories: (a) *not confident*, (b) *less confident*, (c) *moderately confident*, (d) *confident*, and (e) *very confident*. These findings are summarized in Table 18.

Table 18

Participant Confidence Level by Vignette Condition

Vignette condition	Teacher responses (*n*)
Negative attitude	Very confident (2) Confident (2) Moderately confident (3)
Intellectual disability	Very confidence (1) Confident (4) Moderately confident (2)
Autism	Very confident (1) Confident (2) Moderately confident (2) Less confident (2)
History of trauma	Very confident (1) Confident (2) Moderately confident (3) Not confident (1)
EBD	Confident (1) Moderately confident (3) Less confident (1) Not confident (2)

Note. Number in parenthesis denotes the number of teachers stating the response. EBD = emotional and behavioral disability.

Teacher responses suggested the group felt most confident supporting students with a negative attitude or those with intellectual disabilities, as indicated by all seven teachers feeling moderately to very confident managing these students' behaviors. This finding clearly aligned with the quantitative findings. In addition, it was clear teachers felt the least amount of confidence managing the behavior of the student with the emotional and behavioral disorder (EBD). Only one teacher reported feeling confident supporting this student behaviorally, and no teachers felt very confident for this group. Teacher responses also indicated they were

collectively less sure about their ability to support the student with autism or with a history of trauma.

Teachers reported they felt less confident supporting students with EBD due to a lack of specific training. One elementary school teacher reported, “I don’t feel like I have the training for that,” and “someone who has very specific training needs to work with him.” This sentiment was echoed by a respondent teaching middle school:

> I wouldn’t feel capable of addressing how his emotional struggles affect his work. I mean, I could address it at a very high level, but I don’t feel like I have the skill set to go “Okay, now let’s come up with some strategies for that.” I would want a third party to help with that.

Comments such as these supported the quantitative findings that teachers felt less confident working with a student with an EBD.

Contrarily, while the quantitative data suggested teachers had a similar level of confidence to support a student with a history of trauma and a student with an emotional disability, the interview participants indicated more confidence to support the student with trauma. Six teachers reported they would feel confident supporting the student with a stressful home life, with only one of the participants who was from a rural, middle school reporting, “I wouldn’t be very confident without another adult.” The interview participants’ TSE for the student with a history of trauma were more in line with their responses for the student with a negative attitude, both of which were higher than for the student with an EBD. An urban high school teacher stated this student would be easier to support “because this is not a disability. This is just an unfortunate home situation.”

In addition to TSE, other emotional responses varied by vignette condition. This distinction included teachers feeling more frustration and anger toward the student with a negative attitude. These emotions might partially be explained by comments such as, "my first reaction is 'uhh' just because he's so bright, and like there's no reason for this," from one high school teacher. An elementary teacher responded to the student with a negative attitude, stating "He is terrible. He's such a jerk…I have no patience for kids who are bright and don't take advantage of their gifts." In contrast, two teachers communicated about their commitment to support the student with a history of trauma, with five of the teachers reporting empathy or sympathy for the student. One high school teacher from a suburban division reacted to the vignette by stating, "I would want to do as much as I can to help…None of this is any of his fault." Two of the teachers from rural, middle schools who reported neutral feelings explained this was "very common" at their school, so they had no specific emotional response to the vignette other than being "happy when he shows up." Teacher emotional responses to each vignette condition are reported in Table 19.

Table 19

Participant Emotional Responses by Vignette Condition

Vignette condition	Teacher emotions (*n*)
Intellectual disability	Worried (3) Neutral (2) Frustration (2) Conflicted (1)
Negative attitude	Frustrated (1) Annoyed (2) Angry (2) Exhausted (1) Repulsion (1)
EBD	Sadness (2) Pity/feel badly for him (2) Apprehension (1) Eagerness to work with him (1) Exhaustion (1) No emotional "just analytical" (1) Unsure (1) Frustration (1)
History of trauma	Empathy (3) Sympathy (3) "No specific emotion" (2) Sadness (1) Protective (1) Heartbroken (1) Frustration (1)
Autism	Happiness (1) Patience (1) Neutral (3) Intimidated (1) Overwhelmed (1)

Note. EBD = emotional and behavioral disability.

The strategies teachers recommended also revealed patterns that may overlap with their TSE for each student. When asked about strategies to support the student with EBD, two of the seven teachers responded with, "I don't know." EBD was the only vignette condition which elicited such a response. One middle school teacher said she would "struggle with knowing to what degree do I just let him fail. Let him fall on his face, so that he learns that he has to figure

this out." Alternatively, when speaking about the student with a negative attitude, the same teacher recommended using praise, choice, and the student's interest and strengths to get the student to buy into their education. In addition, three of the teachers mentioned collaborating with other professionals, such as special education teachers or school psychologists, when discussing the student with an EBD—a more common response than for any other student type. Similarly, access to the counselor was mentioned only for the students with EBD and a history of trauma, with four mentions for the student with EBD and two for the student with trauma.

An additional pattern was revealed when comparing the most frequently listed strategies for the student with EBD and the student with a negative attitude. Most frequently, teachers felt they could manage the student with negative attitudes and CB through (a) understanding the function of the behavior (4 responses), (b) monitoring their own reaction to the behavior (4 responses), and (c) using positive reinforcement (5 responses) to encourage positive behavior. These strategies were all actions teachers could personally take to support the student, and they were more frequently mentioned for the student with a negative attitude than for any other student type. However, when discussing the student with an EBD, teachers were more likely to involve other adults or reduce the teacher-to-student ratio, such as (a) involving the counselor (4 responses), (b) changing the student's placement to a setting outside of general education (4 responses), (c) adding an additional adult to the room (3 responses), and (d) a smaller class size (3 responses). A summary of the most frequently listed strategies for each student is provided in Table 20.

Table 20

Most Frequently Listed Preventative and Responsive Strategies by Vignette Condition

Vignette condition	Strategies provided (*n*)
Intellectual disability	Breaks outside of class (5) Additional adult in the room (5) Modify work (5) Relationship/Rapport (5) Build classroom community (4) Increase supervision (e.g., "keep an eye out") (4) Use student interests (3) Monitor teacher reaction (3) Clear expectations (3) Partner with a peer (3)
Negative attitude	Positive reinforcement (5) Understand function (4) Monitor teacher response (4) Relationship/Rapport (3) Call administrator (3)
EBD	Counselor (4) Change placement (4) Careful seating arrangement (4) Additional adult in room (3) Smaller class size (3) Breaks outside of class (3) Collaborate with other staff (3) Evacuate the classroom (3)
History of trauma	Access to food (5) Respect student's privacy (e.g., not call attention to him in class) (3) Relationship/rapport (3)
Autism	Routines (5) Breaks outside of class (4) Provide fidgets (3) Careful seating arrangement (3) Advanced warnings (3)

Note. Only the strategies listed by at least three teachers are reported. EBD = emotional and behavioral disability.

Research Question 2: Attribution and Expected Impact on Classroom

Scores on Section A of the Teacher Perception Questionnaire (TPQ) provided a better understanding of how implied attribution influences teacher perceptions on CB disruptions to the general education classroom. First, the five items on Section A of the TPQ were analyzed to find the validity of the researcher-created scale, which was found to have high internal consistency with a Cronbach Alpha coefficient of .88. The descriptive statistics for Section A of the TPQ are reported in Table 21. Across all vignettes, participants reported a mean score of 4.52 on Section A of the TPQ, and the scores appeared to be approximately normally distributed, with a skewness of .05 and kurtosis of -.67.

Table 21

Descriptive Statistics for Section A of the TPQ

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	2.00	7.00	4.71	4.70	1.27	-0.28	-0.41
Negative attitude	34	2.00	7.00	4.69	4.50	1.53	-0.08	-1.14
Intellectual disability	36	2.60	6.80	4.65	4.50	0.97	0.41	-0.13
Trauma	36	2.00	7.00	4.49	4.30	1.31	0.37	-0.41
EBD	32	2.20	6.20	4.28	4.40	1.09	-0.19	-0.79
Autism	35	2.20	6.80	4.31	4.20	1.35	0.06	-1.07
All vignettes	205	2.00	7.00	4.52	4.40	1.26	0.05	-0.67

Note. TPQ = Teacher Perception Questionnaire.

Part A of the TPQ was analyzed using a one-way ANOVA to compare mean scores on the scale across vignettes. No significant differences were present between the vignettes for Section A of the TPQ as shown in Table 22. This finding indicated there were no systematic differences in perceptions of how disruptive various students would be to the learning environment in the general education setting.

Table 22

Analysis of Variance Results for Part A of the TPQ Across Vignettes

SS		*df*	*MS*	*F*	*p*
Between groups	6.117	5	1.223	.764	.557
Within groups	318.562	199	1.601		
Total	324.680	204			

Note. TPQ = Teacher Perception Questionnaire.

While differences in the impact of including these students in the general education setting were not found in the quantitative data, clear differences in how teachers viewed student's potential impact on the general education setting were present during the teacher interviews. The interview participants communicated that the students with EBDs had the most potential for disrupting the classroom environment. This finding included five teachers mentioning the student's behavior being a safety concern, and three teachers commenting on potentially needing to evacuate the classroom due to unsafe student behaviors, a potential action not mentioned during the discussion of any other students. Teachers reported much less of an impact when discussing students with a history of trauma, an intellectual disability, or autism. However, teachers were mixed on their predictions of how a student with a negative attitude would affect the class. Five of the teachers believed the student impact on a class would depend on the other students' reactions. Three teachers reported this student had the potential to be a social leader who could "derail" the class or even "start a mutiny." A summary of the perceived effects teachers reported by each vignette is provided in Table 23.

Table 23

Summary of Teacher Perceptions of Potential Classroom Impact by Vignette Condition

Vignette condition	Perceived Effect (*n*)
EBD	"Significant," "huge," or "untold" effect (3) "More of an effect" than other students (2) Not Significant (1)
Negative attitude	Could start a "mutiny" or "derail" the class (3) Depends on the other students in the class (5) Minimal, others would ignore or be annoyed by this student (2)
Intellectual disability	Depends on the class size, type of peers, and number of teachers in the room (2) Minimal (3) No effect (2)
History of trauma	Moderate (1) Minimal (5) No effect (1)
Autism	Minimal (6) "Might have a higher impact" (1)

Note. Words in quotations are direct teacher quotes. EBD = emotional and behavioral disability.

The descriptive coding also revealed, despite being told and reminded that students all displayed the same types of CB, the teachers pictured each student displaying different types and intensities of CB in their classrooms, which may have influenced the teachers' predictions of classroom effect. As shown in Table 24, when teachers described a mix of internalizing and externalizing behaviors, including the students with a history of trauma, autism, and an intellectual disability, would have less of an effect on the classroom. However, teacher reports of behavior were more specific and nuanced for the student with an EBD and the student with a negative attitude.

Table 24

Teacher Perceptions of Behavior Type by Vignette

Vignette condition	Mentioned Behavior (*N*)
Intellectual disability	Externalizing (2) Internalizing (2) No mention of the type of behavior (3)
Negative attitude	Externalizing and disruptive (6) Power struggles (5) No mention (1)
EBD	Externalizing (5) Internalizing (0) No mention of the type of behavior (2) "Unsafe," "Explosive," "Safety Issue," "Blowing up" (5) Evacuating classroom (3)
History of trauma	Internalizing (4) Externalizing (2) "Being obnoxious" (1) "Stealing food" (1) No mention of behavior (1) Adult attention seeking (5)
Autism	Externalizing, "stemming" (1) "Outbursts" (1) No mention of behavior type (6)

Note. Words in quotations are direct teacher quotes. EBD = emotional and behavioral disability.

Teachers reported the student with an EBD would have much more externalizing and intense behavior, with a particular focus on the unpredictability of the externalizing behavior, which could have a "significant," "huge," or "untold" effect on the classroom instruction and environment. One high school teacher suggested the student with EBD would pose a greater risk in a crowded class and that science labs filled with lab equipment were "asking for a potentially dangerous situation." She continued it is not necessarily "that we have to treat [him] like a bomb about to go off, but can we plan ahead" to decrease the effect this student would have on the other students and overall classroom environment and safety.

Teachers also felt the student with a negative attitude would display more externalizing and disruptive behavior, particularly manifesting as power struggles. However, the teachers felt these power struggles could be avoided by monitoring the teacher's behavior. This statement from a high school teacher illustrated similar thoughts from other participants, "It's all about my response to him arguing…It all goes from there." The teachers felt monitoring their own reactions would reduce or even eliminate the effect and disruption caused to the class. The strategy of monitoring teacher's own reactions was only mentioned for two students—four times for the student with a negative attitude and three times for the student with an intellectual disability.

Finally, when asked to describe the amount of time and effort required to respond to the student, additional patterns emerged in the interview participant responses. Participants were asked to compare the student described in the vignette to a typical student. Responses were grouped into four categories: (a) significantly more, (b) moderately more, (c) slightly more, and (d) no more than the average student. As shown in Table 25, participants predicted the student with an EBD would take the most time and effort to support in the classroom with most ratings of *significantly more*. The student with a negative attitude was the only student who did not elicit the response of *significantly more*. The students with autism, an intellectual disability, and a history of trauma received more mixed responses from participants.

Table 25

Predictions of Time and Effort Required to Support Student

Vignette condition	Response (*n*)
EBD	Significantly more (4) Moderately more (2) Slightly more (1)
Autism	Moderately more (1) Slightly more (5) No more (1)
Intellectual disability	Significantly more (1) Moderately more (5) Slightly more (1)
History of trauma	Significantly more (1) Moderately more (2) Slightly more (2) No more (2)
Negative attitude	Moderately more (1) Slightly more (5) No more (1)

Note. EBD = emotional and behavioral disability.

Additional participant comments related to teachers' time and effort revealed most of the time and effort to support these students would vary based on CB condition. Five of the teachers reported most of the work for the student with an intellectual disability would be used to modify work and classroom tasks to ensure they did not trigger student behavior. However, four teachers felt the student with an EBD would require more in-the-moment support, requiring the teacher to stop instruction to respond to their needs, as well as more time considering how to ensure student safety and collaborating with other staff. Teacher responses were more mixed for the remaining students, with two teachers reporting most of the work for the student with autism would take place at the beginning of the year, through additional considerations in classroom set up and building consistent routines. Finally, one high school teacher remarked the student with a history of trauma would take less of her time to support "because this is not a disability; this is just an

unfortunate home life." This finding stood in contrast to one elementary teacher's comment, "Oh, E[B]D? That's gonna be 80–90% of your day."

Research Question 3: Attribution and Expectations of Student Success in General Education

To analyze the answers on Section B of the TPQ, it was first necessary to reverse the scale for four items to ensure all items were negatively phrased. Then, to measure reliability, the data were analyzed using Cronbach's alpha, resulting in a score of .76. This score indicated the scale has acceptable reliability. The data were then analyzed for descriptive statistics. Across all vignettes, participant responses to Section B of the TPQ had a mean score of 3.76, and the scores were normally distributed, with a skewness of .03 and kurtosis of -.19. Additional descriptive statistics of all teacher responses are shown in Table 26, along with descriptive statistics for each vignette condition.

Table 26

Descriptive Statistics for Section B of the TPQ

Condition	*n*	Min	Max	*M*	*Mdn*	*SD*	Skew	Kurtosis
Control	32	2.25	5.50	3.96	4.06	0.91	-0.03	-0.85
Negative attitude	33	1.75	5.35	3.35	3.25	0.95	0.47	-0.39
Intellectual disability	35	2.75	5.88	3.97	4.00	0.74	0.54	-0.19
Trauma	36	1.50	5.38	3.65	3.75	0.89	-0.39	-0.26
EBD	32	1.50	5.38	3.68	3.69	0.91	-0.35	-0.30
Autism	35	1.75	5.63	3.79	3.88	0.83	-0.16	0.24
All vignettes	205	1.50	6.38	3.76	3.76	0.91	0.03	-0.19

Note. EBD = emotional and behavioral disability; TPQ = Teacher Perception Questionnaire.

Finally, clarity around Research Question 3—inquiring into teacher expectations for success in the general education classroom—was sought by examining teacher responses to Section B of the TPQ across the six vignettes using a one-way ANOVA. As shown in Table 27, no significant differences were found in the scores on Part B of the TPQ.

Table 27

Analysis of Variance Results for Part B of the TPQ Across Vignettes

SS		*df*	*MS*	*F*	*p*
Between groups	8.343	5	1.669	2.048	.074
Within groups	162.115	199	.815		
Total	170.458	204			

Note. TPQ = Teacher Perception Questionnaire

While the ANOVA did not reach significance, there were clear patterns interview participants' beliefs about how successful each type of student would be in the general education setting, including which students would be better served in another setting (e.g., self-contained special education setting, collaborative classroom). Because teachers described students' social and behavioral success in a variety of terms, their answers were grouped into one of four categories: (a) "unsuccessful," (b) "potentially successful," (c) "moderately successful," (d) "successful," and (e) "very successful." Participant answers that qualified the student's success as depending on the peers in the class or the teacher to student ratio were coded as "potentially successful." Table 28 displays a summary of participant reports concerning how successful each student would be behaviorally and socially in the general education setting.

Table 28

Interview Participants' Predictions of Student Social and Behavioral Success

Vignette condition	Response (*n*)
Autism	Successful (5) Moderately successful (1) Unsuccessful (1)
Negative attitude	Very successful (1) Successful (2) Potentially successful (1) Unsuccessful (3)
Intellectual disability	Successful (2) Potentially successful (5)
History of trauma	Successful (3) Moderately successful (2) Unsuccessful (2)
EBD	Moderately successful (2) Potentially successful (1) Unsuccessful (4)

Note. EBD = emotional and behavioral disability.

An additional theme that emerged was that participants believed the personalities and reactions of the students' classmates would determine the student's success in the general education classroom. This finding included comments like, "In my experience, kids have been supportive" from a middle school teacher, and "Most kids are pretty good in the general education setting with trying to help out with students who have those social weaknesses…They don't usually let that be a barrier," shared by a high school teacher. Both comments were made while discussing the student with autism, and similar comments were made about peers being supportive of the student with an intellectual disability.

Across all vignette types, participants mentioned the responses of peers being important, but they had a less positive outlook on how peers would respond to some students, especially the student with EBD. One middle school teacher commented, "I think that social piece would get

really hard for him," so it would be important to seat him "around people that wouldn't egg him on in a negative way." An elementary teacher stated that even with intentional teacher support to help the student with an EBD build peer relationships, "eventually [the peer relationship] just fizzles out because they just get sick of someone being rude to them."

In addition, teachers were directly asked if each student would be better off "in a smaller setting, such as a special education setting," and provided a variety of responses. Their comments were categorized into educational settings in which they predicted each student would be best served. A summary of the recommendations for educational placement is displayed in Table 29, which showed general education was most frequently recommended for students with a negative attitude (7 responses) and a history of trauma (6 responses), followed by the student with an autism (4 responses). One high school and one elementary school teacher did mention that students with autism would be better served in a self-contained setting rather than the general education setting, but only if the student were "nonverbal."

Participants felt the student with an intellectual disability would do best in a co-taught classroom where a special education teacher and a general education teacher teach side-by-side (3 responses), in the general education setting for only part of the day or with the support of a paraprofessional (2 responses), or in a self-contained special education classroom (2 responses). Finally, the student with the EBD was believed to be served best in the general education setting by only one teacher, and was the only student recommended for a more restrictive placement such as in a specialized program specifically for students with EBD or in an alternative school setting such as a virtual program.

Table 29

Interview Participants' Predictions of Where Students Would Best Be Educated

Vignette condition	Recommended educational setting or placement (*n*)
Negative attitude	General education (7)
History of trauma	General education (6) A smaller setting with two adults (1)
Autism	General education (4) General education "with supports" or co-taught class (2) Special education setting/self-contained (1)
Intellectual disability	Co-taught setting (3) General education "with supports" (paraprofessional or pull-out services for part of the day; 2) Special education/self-contained setting (2)
EBD	General education (1) Resource or collaborative classroom (1) Special education/self-contained setting (3) E[B]D classroom (1) Alternative education (virtual; 1)

Note. EBD = emotional and behavioral disability.

Demographic Influences on TSE and Expectations

The demographic data related to the type of division, grade level and content area taught, and teacher licensure were analyzed to identify whether differences in these demographics to scores on the S-STSES, Sections A, or Section B of the TPQ were seen. As shown in Table 30, an ANOVA revealed no differences between teacher answers on any of the measures between teachers in rural, suburban, or urban divisions.

Table 30

Analysis of Variance Results for Teacher Division Type and Scores on the S-STSES and TPQ

Scale	*SS*		*df*	*MS*	*F*	p	η^2
S-STSES Behavior Management Domain	Between groups	.088	2	.044	.042	.96	.00
	Within groups	212.68	202	1.05			
Section A of the TPQ	Between groups	5.73	2	2.86	1.81	.17	.018
	Within groups	318.95	202	1.58			
Section B of the TPQ	Between groups	.912	2	.46	.88	.42	.01
	Within groups	104.70	202	.52			

Note. S-STSES = Student-Specific Teacher Sense of Efficacy Scale; TPQ = Teacher Percetion Questionnaire.

Table 31 summarizes the findings of independent t-tests comparing teachers with provisional and professional licensure. No differences were found in the scores on any of the measures between teachers with provisional licenses and those with professional licenses. However, as shown in Table 32, an independent t-test revealed a significant difference in scores on Section A of the TPQ based upon the content area taught. The mean scores indicated elective teachers ($M = 4.89$) felt each student's behavior would have a slightly larger effect on the rest of the class than core content teachers ($M = 4.45$).

Table 31

Independent t-Test Results for Provisionally and Professionally Licensed Teachers on the S-STSES and TPQ

Measure	Provisional		Professional		*t*-test outcomes			
	M	*SD*	*M*	*SD*	*t*	*p*	*df*	*d* [95% CI]
S-STSES Behavior Management Domain	4.60	1.47	4.87	1.00	-.55	.60	8.35	-.267 [-0.935 – 0.40]
Section A of the TPQ	4.80	1.48	4.51	1.25	.68	.50	203	.23 [-0.44 – 0.90]
Section B of the TPQ	4.18	1.22	3.74	.90	1.42	.16	203	.49 [-0.19 – 1.16]

Note. S-STSES = Student-Specific Teacher Sense of Efficacy Scale; TPQ = Teacher Perception Questionnaire.

Table 32

Independent t-Test Results for Content Area Taught and Scores on the S-STSES and TPQ

Measure	Core content		Elective				*t* test outcomes	
	M	*SD*	*M*	*SD*	*t*	*p*	*df*	*d* [95% CI]
S-STSES Behavior Management Domain	4.87	.99	4.81	1.16	.36	.72	203	.07 [-0.30 – 0.44]
Section A of the TPQ	4.45	1.25	4.89	1.27	-1.94	.05*	203	-.36 [-0.90 – 0.01]
Section B of the TPQ	3.73	.89	3.89	1.01	-.90	.37	203	-.17 [-0.48 – 0.17]

Note. S-STSES = Student-Specific Teacher Sense of Efficacy Scale; TPQ = Teacher Perception Questionnaire.
*$p \leq .05$

An analysis of variance (ANOVA) revealed additional statistical differences between grade levels for Section A of the TPQ, $F(2, 202)= 6.510$, p=.002, with the mean score for elementary teachers ($M = 4.9222$) being statistically higher than the mean scores for middle ($M = 4.45$) and high school teachers ($M = 4.21$). Eta-squared for the analysis was .061, indicating a medium effect size, as shown in Table 32. Because the ANOVA indicated differences in the

answers on Section B of the TPQ between teachers of various grade levels, Tukey's-B post hoc analysis was conducted. As shown in Table 33, the follow-up test indicated elementary teachers felt the students described in the vignettes would have a greater effect on the functioning of the classroom than their secondary counterparts did.

Table 33

ANOVA Results for Teacher Grade Levels and Scores on the S-STSES and TPQ

Scale	*SS*		*df*	*MS*	*F*	*p*	η^2
S-STSES Behavior Management Domain	Between groups	2.04	2	1.02	0.98	.38	.010
	Within groups	210.73	202	1.04			
Section A of the TPQ	Between groups	19.66	2	9.83	6.51*	.002*	.061
	Within groups	305.02	202	1.51			
Section B of the TPQ	Between groups	1.14	2	0.57	0.68	.51	.007
	Within groups	169.32	202	0.84			

Note. S-STSES = Student-Specific Teacher Sense of Efficacy Scale; TPQ = Teacher Perception Questionnarie.
*$p \leq .05$

Because of the small number of elementary teachers participating in the teacher interviews, it was not possible to find patterns in their responses to the students; however, three teachers commented on the differences between elementary and secondary classrooms. One high school teacher, after describing how she would be confident supporting the student with an intellectual disability, added that elementary teachers might feel like it would be a more challenging job because the student would be in their classroom for the entire day. The teacher stated, "How long you are with a student like [this] also has an effect as to how you view having [this student] in your classroom." Similarly, a middle school teacher remarked that for the

student with an intellectual disability "especially in middle school…there's always the chance that kids would be cruel to him." Similar comments were made for the student with an EBD, like this comment about the student's social success from a middle school teacher, "If he was in elementary grades, maybe he would be doing better, but…in middle school, I think he would have a hard time." These comments suggested teachers viewed grade level as an important aspect of the social and behavioral success of these students in the general education setting. Additional analysis was carried out to identify relationships in how TSE and expectations for student success were related to demographic items with scores on the S-STSES and Sections A and B of the TPQ. Table 34 summarizes the findings.

Table 34

Tukey's B Follow Up Analysis for Grade Level Taught and Section A of TPQ

Grade Level	*n*	1	2
High	82	4.21	
Middle	51	4.45	
Elementary	72		4.92

Note. Mean values in the same column are statistically equivalent. TPQ = Teacher Perception Questionnaire.

Finally, the remaining demographic questions were analyzed using Spearman's rho to identify correlational relationships between a variety of demographic characteristics and answers on each domain of the S-STSES, Section A of the TPQ, and Section B of the TPQ. Results are displayed in Table 35.

Table 35

Spearman's Rho Correlations Between Teacher Perceptions and Demographic Features

Demographic Question	Statistical Measure	Inst. Strat.	Behavior Man.	Student Eng.	Emo. Support	Section A of TPQ	Section B of TPQ
How many years of experience do you have?	ρ	.15*	.15*	.09	.09	.05	.02
	p (2-tailed)	.03	.03	.18	.21	.52	.81
	N	205	205	205	205	205	205
What is your highest level of education?	ρ	.20**	.12	.15*	.11	0.77	-.09
	p (2-tailed)	<.001	.10	.03	.13	.27	.19
	N	205	205	205	205	205	205
What is your experience with students with disabilities?	ρ	.17*	.23**	.14*	.12	-.04	-.18**
	p (2-tailed)	.01	.001	.04	.08	.59	.01
	N	205	205	205	205	205	205
What is your experience with co-teaching a class with a special education teacher?	ρ	.16*	.20*	.19**	.18*	-.13	-.22**
	p (2-tailed)	.02	.005	.007	.01	.07	.001
	N	205	205	205	205	205	205
What is your experience with PBIS?	ρ	.26**	.21**	.21**	.21**	-.06	-.25**
	p (2-tailed)	<.001	.002	.003	.002	.41	<.001
	N	205	205	205	205	205	205
How much professional development have you had related to supporting students with CB?	ρ	.25**	.31**	.16*	.18*	-.02	-.19**
	p (2-tailed)	<.001	<.001	.03	.01	.81	.01
	N	205	205	205	205	205	205
To what extend did your teacher preparation program prepare you to support students with CB?	ρ	.10	.22**	.14	.11	-.18*	-.21**
	p (2-tailed)	.14	.002	.05	.12	.01	.002
	N	205	205	205	205	205	205
What extent have you received targeted, ongoing, job-embedded coaching related to supporting students with CB?	ρ	.06	.20**	.11	.11	.02	-.10
	p (2-tailed)	.36	.004	.13	.11	.82	.18
	N	205	205	205	205	205	205

Note. PBIS = Positive Behavior Interventions and Supports; TPQ = Teacher Perception Questionnaire.
** $p \leq .05$, ** $p \leq .005$*

The Spearman's rho correlation revealed that years of teaching experience was slightly correlated with scores on the Behavioral Management ($\boldsymbol{\rho}$ = .15, p = .03) and Instructional Strategies ($\boldsymbol{\rho}$ = .15, p = .03) domains of the S-STSES. Teachers with higher levels of education also felt slightly more confident in the domains of Student Engagement ($\boldsymbol{\rho}$ = .15, p = .03) and Instructional Strategies ($\boldsymbol{\rho}$ = .20, $p \leq .001$). Experience with working with students with disabilities had small positive correlations with the TSE domains of Instructional Strategies ($\boldsymbol{\rho}$ = .17, p = .01), Behavior Management ($\boldsymbol{\rho}$ = .23, p = .001), and Student Engagement ($\boldsymbol{\rho}$ = .14, p = .04), and it was slightly negatively correlated with scores on section B of the TPQ ($\boldsymbol{\rho}$ = -.18, p = .01). These correlations indicated teachers who had more experience with students with exceptionalities were slightly more optimistic that they would be successful in the general education classroom. Very similar relationships were found with experience with coteaching. Teachers who had more experience with coteaching felt slightly more confident with Instructional Strategies ($\boldsymbol{\rho}$ = .16, p = .02), Behavior Management ($\boldsymbol{\rho}$ = .20, p = .005), Student Engagement ($\boldsymbol{\rho}$ = 19, p = .007), and Emotional Support ($\boldsymbol{\rho}$ = .18, p = .01). They were also more likely to feel the student could be successful in the general education setting, as participant scores on Section B of the TPQ were negatively correlated with their experiences co-teaching ($\boldsymbol{\rho}$ = -.22, p = .001). However, none of these factors were found to have a significant correlation with how significantly the student's CB would affect the classroom.

The relationships found in the quantitative data between experience and TSE were echoed in the teacher interviews. Six teacher participants reported having moderate to extensive experience working with students with disabilities, at least three of whom had extensive experiences coteaching with a special education teacher. All participants agreed these experiences improved their ability to support students with CB in the classroom. This finding

was supported by statements such as, “Experience is the best teacher,” and “Necessity is the mother of invention.” Participants also spoke about how the “experience of doing” added skills to their “toolbelt” and allowed them to “put a different lens on” how they perceived CB.

Similarly, having experience with PBIS, as well as having received professional development related to supporting students with CB, were weakly correlated with several of the predictions of TSE and student success in general education, but were not found to correlate with how the student would affect the classroom setting. Experience with PBIS was slightly positively related to all domains of TSE: Instructional Strategies ($\boldsymbol{\rho} = .26$, $p < .001$), Behavior Management ($\boldsymbol{\rho} = .21$, $p = .002$), Student Engagement ($\boldsymbol{\rho} = .21$, $p = .003$), and Emotional Support ($\boldsymbol{\rho} = .21$, $p = .002$). In addition, the amount of experience with PBIS was negatively correlated with scores on Section B of the TPQ ($\boldsymbol{\rho} = -.25$, $p < .001$).

When asked about PBIS, interview participants had various understandings of what PBIS was. Four teachers reported having little experience with PBIS and equated it to a token economy, which they felt was ineffective. The remaining three teachers described how PBIS’s intentions of systematically teaching and reinforcing positive behaviors was good in theory; however, none of them felt that PBIS had been effectively or consistently carried out in any of their schools. They felt that when PBIS had been attempted, it had “not been allowed to work” due to changes in administration or a lack of teacher “willingness to try new things.” In addition, two teachers who saw PBIS as a systematic approach to teaching behaviors felt PBIS did not do enough to respond to severe CB, stating “the willingness to be firm is something that PBIS sometimes lacks.”

Similarly, the amount of professional development was also slightly positively correlated with all four of the TSE domains: Instructional Strategies ($r = .25$, $p < .001$), Behavior

Management (r = .31, $p < .001$), Student Engagement (r = .16, $p = .03$), and Emotional Support (r = .18, $p = .01$). Professional development was another factor negatively correlated with scores on Section B of the TPQ (r = -.19, $p = .002$), indicating teachers with more professional development and experience with PBIS were slightly more likely to feel general education was an appropriate placement for students with CB. Teachers were also asked about the extent their teacher preparation program prepared them to manage challenging student behaviors, which was found to be slightly correlated with their TSE within the Behavior Management domain (r = .22, $p = .002$), as well as negatively correlated with their score on both Section A (r = -.18, $p = .01$) and Section B (r = -.21, $p = .002$) of the TPQ. This finding was the only demographic found to have any significant relationship with Section A of the TPQ, with the slight negative correlation indicating teachers who felt their preparation program better prepared them to support students with CB were slightly less likely to feel CB would affect the classroom. Finally, the amount of targeted, ongoing, and job-embedded coaching related to supporting students with CB was only found to have a slight positive correlation to TSE of the Behavior Management domain of the S-STSES (r = .20, $p = .004$). These findings may have been influenced by the fact that over half the participants responded with 1 or 2 out of the 7-point scale, with 7 being the highest and 1 being the lowest.

Because the strongest correlation between TSE within the Behavior Management domain and any of the demographic factors was teachers' experience with professional development related to supporting students with CB, interview participants were asked to share their experiences with related professional development. All teachers reported they had little to moderate amounts of professional development related to supporting students with CB. When asked what would make professional development more meaningful, five teachers mentioned

they would prefer practical strategies they could "take and use the next day." This focus on practicality was a theme emerging through the values coding and was reflected in the comments of one middle school teacher who stated, "The classroom is a system," and that behaviors "don't happen in a vacuum…One student's behavior, and your response to it, affects the other students." This teacher, along with another high school teacher, recommended the use of a coaching model that could be more responsive to how students are actually acting in the classroom.

For more traditional professional development opportunities, teachers wanted more examples of strategies to be modeled, with two teachers suggesting videos of student behavior and how to respond. One high school teacher suggested, "Seeing the kind of behavior you can have in a classroom is perhaps the only way to really prepare for it. Seeing it in a paragraph blurb—I don't think quite gives the same effect." Finally, three teachers reported wanting more professional development specific to supporting students with disabilities, including how to better include students with autism and how to modify assignments for students with intellectual disabilities.

Summary of Findings

The quantitative and qualitative findings presented in this chapter explored the influence different attributions for CB have on TSE, expectations for student success, and perceptions of CB effect on the classroom. A moderate effect size was found in the relationship between the attribution of the CB and TSE to support the student within the Behavior Management domain of the S-STSES. However, the quantitative findings did not reveal any other significant relationships related to attribution of the CB. Teacher interviews, however, revealed the implied attribution of CB influenced teacher perceptions in multiple ways, including TSE, type of

behavior expected, effect on the classroom, and appropriateness of the general education setting for the student. In addition, quantitative findings revealed several demographic characteristics of teachers also influenced their perceptions of TSE and student success, most notably their experiences with students with disabilities, co-teaching, PBIS, and related professional development. The implications of this study, as well as suggestions for further research, are reported in Chapter 5, the final chapter.

CHAPTER 5

RECOMMENDATIONS

In this chapter, I discuss and interpret findings of the current study through my lens as researcher. First, major findings related to each research question are summarized, followed by a discussion around the major findings, including findings related to demographic characteristics of teachers. The discussion includes how the finding are related to the relevant previous research highlighted in Chapter 2. Following this initial interpretation, practical implications for school and divisions related to supporting increased inclusion for all students is addressed, and recommendations for future research are provided.

Summary of Major Findings

This study investigated the relationship between the attribution for challenging behaviors (CB) of students and teacher perceptions of students, including how successful students would be in the general education setting, the effect students would have on the classroom, and the teachers' self-efficacy (TSE) to support the students. The study made use of vignette research methodology within a survey to measure the constructs using an experimental design with six conditions, including a control. Following the collection of survey data, seven teachers participated in individual interviews to investigate how their perceptions varied across the experimental vignettes. While the quantitative data provided evidence the attribution of CB only influenced TSE, the qualitative data suggested that attribution influenced teacher expectations for success, on classroom effect, and on where the student should be educated. Summaries of how the quantitative and qualitative data answered each research question follow.

Research Question 1: Attribution and TSE

The survey data from the present study found TSE was only influenced by the implied causal attribution within the Behavior Management domain of the Student-Specific Teachers' Sense of Efficacy Scale (S-STSES), with teachers feeling significantly more confident supporting the student with a negative attitude than all other vignette students, except the student with an intellectual disability. The qualitative descriptions of TSE between vignettes further supported the quantitative findings, as rankings of self-efficacy for the vignettes appeared to be in the same order for both the quantitative and qualitative data. However, TSE in all other domains, including Instructional Strategies, Emotional Support, and Student Engagement, was not systematically influenced by attribution for the CB, indicating the influence of attribution may be limited to behavioral supports only.

Research Question 2: Attribution of CB and Effect on Classroom

Quantitative data from the teacher surveys revealed no significant relationships between the vignettes and scores on Section A of the Teacher Perception Questionnaire (TPQ). The mean score on Section A of the TPQ across all conditions was 4.52 on a 7-point scale with 1 being the lowest and 7 being the highest. This finding indicated teachers perceived all students as having equal potential to disrupt the functioning of the class and predicted students would take an equal amount of time and effort to support. However, this expected outcome was not found in the teacher interviews. Most notably, teachers felt the student with an emotional and behavioral disorder (EBD) would have a "significant," "huge," or "untold" effect on class functioning. The intensity of these feelings was not present in teacher responses for any other student, perhaps because teachers felt this student could make the classroom setting unsafe. The pattern of concern for student safety, despite there being no mention of unsafe behaviors in the vignette,

may indicate an implicit bias present in how teachers perceived students with EBD. Teachers felt the student with a negative attitude had the next highest potential to effect classroom functioning; however, teachers also felt more confident they could manage this student's behavior and reduce the potential effects through thoughtful behavior management and teacher responses. It is possible teachers felt both students could equally effect the classroom; however, since interview participants had more TSE to prevent CB from the student with a negative attitude, they ultimately felt the student with an EBD would take a more significant toll on the class. This interpretation also aligned with the more varied feelings of TSE and mixed predictions on how disruptive students with a history of trauma, autism, or an intellectual disability would be to the classroom.

Research Question 3: Attribution of CB and Expectations for Student Success

Relationships between attribution for CB and teacher expectations for the student to be successful in the classroom did not reach significance on the quantitative measures; however, clear patterns were again found in the teacher interview responses on how successful the students would be in general education, as well as teachers' recommendations for the most suitable setting for the students to receive their education. First, teacher responses suggested they felt the student with autism would be the most successful. Teachers also felt this student's peers would be supportive and understanding of the cause of his CB. While the students with a negative attitude, intellectual disability, and a history of trauma received more moderate and mixed predictions of success, it was clear the student with an EBD was predicted to be the least successful.

Additionally, teachers most strongly felt the students with a negative attitude and a history of trauma belonged in the general education classroom, rather than a smaller setting or a

special education setting. This finding was, perhaps, not surprising, given these students were not identified with a disability, even if the students presented the same behavior in the classroom. However, differences were still present between students with disabilities, including the general and collaborative setting being more often recommended for the student with autism, and a self-contained setting being more frequently recommended for the students with an intellectual disability and an EBD. Perhaps the most notable recommendations were those for the student with an EBD to be educated in some of the most restrictive settings, including a special education program for students with EBD and an alternative setting such as virtual education, despite their behavior being the same as that of the other students described.

Inconsistency Between Quantitative and Qualitative Findings

As described in the preceding paragraphs, two research questions had conflicting findings, with qualitative findings showing differences in teacher perceptions not revealed in the quantitative data, which used a much larger sample. This discrepancy was perhaps due to the nature of the quantitative data measuring between-teacher differences, with each teacher responding to only one student with CB, while the qualitative interviews measured within-teacher differences in perception, with the participants responding to five different students. It is possible the act of comparing the students side-by-side influenced the teachers' perceptions. This difference may have made the vignettes somewhat more realistic, because teachers have many students in their classes to compare when they are addressing CB. However, it was unclear whether this is the case, and this inconsistency is a limitation of the study.

Demographic Influences on TSE and Teacher Perceptions

While there were many correlational relationships found between various demographic features and perceptions of students and TSE, all of them were small in magnitude. Most

notably, while the years of experience had very little relationship to any of the dependent variables measured, specific types of experiences, including experience with students with disabilities, coteaching, positive behavior interventions and supports (PBIS), and professional development related to supporting students with CB, had the greatest number of significant relationships. This finding suggested specific experiences may be more influential than the other demographic characteristics (e.g., years of experience, education level, size of school division). The strongest correlation ($\boldsymbol{\rho} = .31$, $p < .001$) found was the relationship between professional development and TSE on the Behavior Management domain of the S-STSES, although this relationship was still small. However, even though the correlations were small, these findings indicated additional training and experiences related to supporting students with disabilities and CB could benefit both teachers and students—making teachers more confident in their abilities to support students and increasing optimism that students will be successful and belong in the general education setting.

In addition, the demographic data revealed two groups of teachers who may benefit from additional experiences with professional development and with students with disabilities. The data revealed teachers for elective classes and elementary school teachers felt the student behaviors described in the vignettes would have more of an effect on the functioning of their classrooms. While quantitative data did not find either group was less likely to believe the student could succeed in the general education setting, it is possible the belief the student has a greater chance of disrupting the classroom environment could lead to more exclusionary responses and strategies when these students engage in CB, a pattern found in the qualitative data.

Discussion of Findings

Although research around the specific relationship between TSE and attribution for CB is limited, the findings of the current study are in alignment with previous research. Like the present study, Frohlich et al. (2020) also found that teacher perceptions and TSE varied based on the student's disability. Specifically, teachers viewed the challenges of students with learning disabilities as more remediable and less stable than those of students with attention deficit hyperactivity disorder, and TSE increased when teachers believed the student could control their CB (Frohlich et al., 2020). Similar trends were found in the present study, as there were clear differences in TSE and expectations of success between students with different causes of their challenging behavior, including disability status.

In addition, increased student control over behavior has also been found to be moderately positively correlated with feelings of anger, while less control leads to increased feelings of sympathy and a greater intention to help the student (Alevriadou & Pavlidou, 2016; Lucas et al., 2009). Although student control over the CB and teacher intention to help were not directly measured by the present study, patterns in the qualitative data supported the findings of Alevriadou and Pavliadou (2016) and Lucas et al (2009). Most clearly, teachers in the present study responded sympathetically to the student with a history of trauma and indicated this student had less control over his behavior with statements such as "none of this is his fault." Similar responses were present in the teacher's emotional responses to the student with EBD, although the feelings of sympathy for the student with EBD seemed to be less intense. This suggests teacher emotions may be influenced by their perception of student control over the behavior, which aligns with the predictions of attribution theory (Heider, 1958; Weiner, 1979). The present study also found patterns of teachers feeling inclined to help various students,

including statements about having a commitment to support the student with trauma, and an "eagerness to work with" the student with EBD.

However, positive emotional responses and an intention to help did not seem to increase TSE in the qualitative findings of the present study, as TSE to support the students with EBD and trauma was lower than for the student with a negative attitude, despite teacher emotional reactions being more positive. This may be partially explained by Poulou and Norwich (2002), who found that TSE was predictive of their intention to help, rather than intention to help predicting TSE. This may explain why interview participants in the present study still expressed intentions to support the student with a negative attitude despite the student eliciting feelings of frustration, annoyance, anger, exhaustion, and repulsion towards that student. The teachers may have been more inclined to help the student with a negative attitude because they felt capable of doing so, as would be suggested by attribution theory (Heider, 1958; Weiner, 1979). However, the correlations found by Poulou and Norwich (2002), as well as other research measuring similar constructs, have all been weak correlations, and other factors are also likely influencing teachers' intentions to help (Hart & DiPerna, 2017; Lucas et al., 2009).

In addition, the qualitative findings suggested the attribution for the CB was a consideration when teachers were predicting the potential for class disruption and the amount of time and effort needed to support each student, as would be predicted by Heider (1958) and Weiner (1979). Comparing statements made by teachers in the present study when they were asked how much time and effort required to support the student (i.e., "This isn't a disability" for the student with a history of trauma and "Oh, E[B]D? That's gonna be 80–90% of your day" for the student with an EBD), suggested attribution was influencing teacher perceptions. These statements were examples of how attribution for CB influenced the teacher's emotional and

cognitive reactions to the students as predicted by attribution theory (Heider, 1958; Weiner, 1979).

Previous research supported this conclusion as well, including research by Hart and DiPerna (2017) who found teachers rated a student with CB as slightly less in control of his behavior when the teachers were given additional information about student weaknesses in multiple cognitive domains. However, although Hart and DiPerna (2017) found teachers with the additional information had more positive emotions toward the student, the teachers were no more likely to use more inclusive practices. The qualitative findings of the present study supported Hart and Diperna's (2017) findings because teachers reported more positive emotions for the student with an EBD than for the student with a negative attitude but recommended more restrictive strategies (e.g., changing the student's placement). However, contrary evidence was also found in the present study when teachers recommended more helpful strategies (e.g., positive reinforcement, building a relationship) for the student with a negative attitude, despite teachers responding with the most negative emotions. This finding indicated teacher emotional responses to various attributions for CB may have a more nuanced relationship than suggested by Hart and Diperna (2017), Heider (1958), and Weiner (1979).

In addition, strategies recommended by teachers varied based on the attribution in the vignette, which aligned with the findings from Weiner (2003) and Reyna and Weiner (2001), who classified the consequences teachers assigned to student behavior as utilitarian or retributive. Utilitarian consequences sought to prevent unwanted behavior from happening again in the future, while retributive consequences sought justice for past behavior by punishing the student (Reyna & Weiner, 2001; Weiner, 2003). There were similarities between this

categorization and the classification system used by Cunningham and Sugawara (1989), which sorted teacher support strategies as either helpful or restrictive.

In the present study, the patterns of recommended strategies included only helpful or utilitarian strategies for the student with a history of trauma (e.g., access to food, respect student privacy, build relationships and rapport). While teachers recommended at least one restrictive strategy for all other students, they generally recommended more utilitarian and helpful strategies for the students with an intellectual disability (e.g., modify work, clear expectation, monitor the teacher's reactions, build class community); autism (e.g., routines, fidgets, advanced warnings); and a negative attitude (e.g., positive reinforcement, understand function, monitor teacher response, build relationship). However, the student with EBD elicited more restrictive or retributive strategies in comparison to helpful or utilitarian strategies than any other student (e.g., change placement, smaller class size, evacuate the classroom). While patterns were present in the findings, it would be unfair to describe the teacher participants as seeking retribution or punishment when they discussed most of these strategies. As the researcher, I felt strongly that the teachers were overwhelmingly focused how to support the student and prevent CB from happening in the first place rather than how to punish the student's behavior. Although some teachers discussed discipline having a place in education, with only a few exceptions, the teachers were focused on support rather than punishment and viewed the restrictive strategies as ways to help the student be more successful in the future.

Despite their positive intentions, the teachers' recommendations for student placement mirrored those seen in Virginia, where students with EBD and intellectual disabilities are two of the three disabilities categories to spend the least amount of time learning alongside general education peers. In Virginia, 15.8% of students with an EBD and 6.7% of students with an

intellectual disability are educated outside of a traditional public school, compared to 5% of all students with disabilities (USDOE, 2021). While interview participants were optimistic about using an inclusive model for the autistic student presented in the vignette, two teachers did comment they would be better off in a special education setting if they were "nonverbal." The teacher placement recommendations most clearly illustrated how a different attribution for the same problem behavior might influence a student's access to the general education setting.

Rather than the restrictive strategies participants recommended being an attempt to punish the students for CB, they may have, instead, been the result of teachers feeling less confident in their abilities to use inclusive strategies. A teacher's level of self-efficacy influences the amount of effort and time they will be willing to invest in a difficult task, as well as their perseverance, when taking on challenges (Bandura, 1997). In the process of responding to each individual student, teachers in the present study performed an analysis of the teaching task, including how difficult it would be in the context of a general education classroom to include the student (Tschannen-Moran et al., 1998). It appeared teachers viewed the inclusion of some students, such as the student with a negative attitude and the student with an intellectual disability, as challenges they were capable of overcoming, as demonstrated by their more frequent mention of strategies they could personally implement. However, teachers in the present study seemed more likely to view the inclusion of the student with an EBD as a challenge they were not prepared for, as the strategies they recommend for this student were more frequently relying on support from other staff members and removing the student from the classroom.

Behavior Type as a Mediating Factor for TSE, Student Success, and Classroom Effect

Because the design of this study intended to hold the type and intensity of CB consistent between vignettes, participants were not asked to describe how they anticipated the students

would behave. It came as a surprise when teachers started describing how each student's behavior would present differently across the vignettes. It was clear in the teacher interviews, even when reminded that all students engage in the same CB during the school day, teachers still associated different types of CB with each student description. Specifically, teachers associated the negative student attitude with students getting into power struggles and arguments with their teachers to disrupt class intentionally, and the student with a history of trauma was more often predicted to have internalizing behavior and seek adult attention. Perhaps most notably, teachers expected the student with an EBD to have more intense externalizing behavior that would be a safety risk for other students. Students with an intellectual disability and students with autism had fewer mentions of the type of CB they would display.

Although the teacher descriptions of how students would behave came as a surprise, they might provide more insight into teacher perceptions across the student descriptions than the original research questions. The types of behaviors described by teachers across the vignettes seemed to better explain their TSE, expectations for students' success, effect on the classroom, recommendations for educational placement, and strategies they would use to support students. Most clearly, this interpretation seemed to be the case for the student with an EBD, who teachers predicted would have externalizing behavior that could be unsafe. This student was predicted to be the least successful socially and behaviorally in the classroom, as his behavior could have an "untold" effect on the classroom. The teachers reported the least amount of self-efficacy to support the student with an EBD and recommended strategies that involved removing the student from the general education classroom or enlisting the support of another adult more often. They also recommended the most restrictive educational placements for this student, despite being told the type and intensity of his behavior was the same as the other described students.

This profile of a student with an EBD is in sharp contrast to the student with a history of trauma, who teachers described as engaging in more adult attention seeking and internalizing behaviors, which they predicted would have a minimal effect on the classroom and felt more confident supporting. In addition, teachers felt the general education setting was best for this student and that the student's behavior could be addressed through actions within the general education teacher's control (e.g., providing access to food, building a relationship, respecting privacy through private conversations). Teachers felt this student had a better chance of being successful in general education than the student with an EBD.

This finding suggested the type of behavior teachers expect the student to engage in may have a larger role than the cause of the behavior when it came to expectations for the student and TSE, at least when the student and behavior were presented in a vignette format. This relationship was previously found by Zee et al. (2016), when the authors compared scores on the S-STSES across different types of student behavior and found externalizing behavior to be more strongly correlated with all four of the domains on the S-STSES than internalizing behavior, with the strongest correlation between externalizing behavior and scores of TSE on the Behavior Management subscale. Other studies have found externalizing behavior was given more attention in the classroom (Bradshaw et al., 2008; Splett et al., 2019), and Downs et al. (2019) found students who were identified as at risk for an EBD received more reprimands than their peers. Additionally, McLean et al. (2019) investigated TSE and found it a statistically significant predictor of their rating of students as having emotional and total behavioral problems. Because the present study aimed to hold student behavior constant, the patterns in the teacher interviews around the type and intensity of each student's CB suggested the predictions teachers made about

the type and intensity of CB may have played a mediating role in teacher expectations for them to succeed in general education and TSE to support the student.

Teacher Bias. The findings of the present study, along with the findings of Downs et al. (2019), McLean et al. (2019), and Zee et al. (2016), may suggest a specific teacher bias when predicting outcomes for students with CB based on the attribution. Implicit bias, which is defined as "introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought or action toward social objects" (Greenwald & Banaji, 1995, p. 8), has also been found to influence teacher perceptions of students. Bias, both conscious and unconscious, has been found to influence student–teacher relationships, student motivation, TSE, academic achievement, and teacher well-being (Childs & Wooten, 2022). This bias included bias related to student disability status, because teacher perceptions of students with EBD revealed their explicit biases, such as in the findings of Avramidis and Norwhich (2002), who found teachers reported students with EBD as the most challenging to educate in an inclusive setting. In addition, teachers have often viewed interacting with students with EBD as tense and aversive (Southerland et al., 2008). Contrarily, teachers have been found across several studies to have positive attitudes toward the inclusion of autistic students in the general education setting (Russel et al., 2022). This positive bias toward students with autism was also found in the present study, as teachers were more likely to recommend the general education setting for the student with autism than for the student with an intellectual disability or the student with EBD.

Both implicit and explicit bias were revealed in teacher descriptions of the students in the present study, including in their predictions of which students would be successful in general education, what strategies would be helpful for different students, and in the types of behaviors teachers expected students to exhibit in a classroom. Research has shown that teachers have

negative associations with students with more significant disabilities and are more in favor of including students who require lower levels of support (Avramidis et al., 2000; Avramidis & Norwich, 2002; Subban & Sharma, 2006). Teachers in the present study seemed to base their predictions for the student, at least in part, on information that was not present in the vignettes, and assumed the student labeled with EBD would automatically require more support than the other students described. This bias may explain some of the disproportionality seen in student suspension rates and placement in more restrictive settings for groups of students with disabilities (USDOE, 2021; VDOE, 2016b, 2016c).

Conceptual Framework

The design of this study was largely based on the conceptual framework shown in chapter one, which describes the cognitive reactions that individuals have when observing a student with challenging behavior. The framework outlines the stimulus-cognition-response (S-C-R) process that explains how the attribution made (C) for an observed behavior (S) may influence the response of the teacher toward the student (R). In the case of this study, it was clear that the attribution was playing a role in the responses the teachers had to the various students.

Although this study did not attempt to directly measure teacher attribution for the various students' behaviors across the three domains of attribution theory (i.e., internal vs. external, stable vs. unstable, controllable vs. uncontrollable), it did measure the beliefs and cognitive reactions that are described in the conceptual framework. The findings of this study did show that the beliefs teachers had about their self-efficacy, how disruptive the behavior would be, and the appropriateness of the general education classroom influenced with the response strategies teachers listed and the settings teachers recommended for the student. This was most notable in the reactions to the student with an emotional and behavioral disorder when compared to the

other students. However, the true relationship taking place between attribution and teacher responses appear to be more complex than is shown in the conceptual framework. Additional research and exploration may bring a clearer picture as to how teachers use attributional information to inform their responses in the classroom.

Implications for Policy and Practice

Based on the findings of this study, as well as previous research, there are clear implications for policy and practice. The following section provide my recommendations as the researcher on how the present study, along with previous research, can help address the equitable inclusion of all students. While the implications are based on the findings of the present study, the limitations and delimitations must be considered. Specifically, this study included a population of teachers from Virginia who were mostly veteran and professionally licensed teachers and, therefore, may have limited generalizability. In addition, there were contradictory findings between the quantitative and qualitative measures used. The implications are largely based on the differences found in the qualitative data, including patterns in teacher perceptions, that were not present in the quantitative data. Finally, the study used vignette research methodology, which may not accurately represent teacher responses to their students in the classroom. The three implications along with the related recommendations and supporting literature are summarized in Table 36.

Table 36

Summary of Key Findings, Recommendations, and Supporting Literature

Findings	Related recommendations	Supporting literature
Implicit bias is present in teacher beliefs about students with CB, which may lead to inequitable access to the general education setting	Adopt a systems-based approach that uses research-based strategies and disaggregated school and division-level data to prevent bias from influencing student outcomes	Center on PBIS, 2023a, 2023b; Meek et al., 2020; Smolkowski et al., 2016
Teachers want to provide inclusive settings for all students but feel less confident in supporting students with behaviors they view as more intense. Teachers want professional development that is relevant, practical, and can be implemented in their teaching practice.	Provide teachers with the support needed to cultivate inclusive classrooms, including providing job-embedded and teacher-driven professional development on preventing and responding to student behavior with a focus on practical application and making teacher mental wellness a priority	Cooper, 2011; Meek et al., 2020; Scanlon & Barnes-Holmes, 2013; Schaubman et al., 2011; Tschannen-Moran & Tschannen-Moran, 2020; Zinsser et al., 2019
Teachers of elementary grades and teachers of elective classes view student behavior as potentially more disruptive to the classroom than secondary teachers or teachers of core content.	Ensure professional development focused on behavior management and inclusion is targeted toward teachers in these groups, as they are key to increasing inclusion for students with disabilities	Meek et al., 2020; Scanlon et al., 2020

Adapt a Systems-Based Approach

As the researcher, I felt the teacher interview participants in the present study were exceptional teachers. Every teacher communicated a variety of clearly helpful strategies, displayed empathy and compassion for the hypothetical students presented, and discussed how they had worked in the past to support similar students. I felt strongly the interview participants were overwhelmingly in favor of inclusive education for all students, even when it required them to take on additional work. Had I been a principal seeking to staff a school with high-quality teachers, I would have hired almost every teacher I interviewed for this research. However,

based on the findings, there would still be bias present in how my hand-picked staff would perceive students, the strategies they would select to support CB, and in the recommendations they would make to their individualized education plans teams about where each student would best be educated. This finding pointed to the importance of addressing bias at a systemic level to reduce the influence it has over student outcomes.

Policy Decisions. It is important for leadership and policy makers to prioritize systems-based approaches to address bias in schools, including disciplinary and educational placement policies (Meek et al., 2020). Failing to establish clear disciplinary policies leaves room for bias to enter disciplinary decisions and leads to a continuation of disparities in student suspension and expulsion (Meek et al., 2020). However, policies must be carefully chosen, and outcomes must be closely monitored, as many policies have increased disparities in student discipline data, such as zero-tolerance policies (Skiba, 2010).

PBIS is one systems-based approach that has been shown to decrease student exclusionary discipline rates and make outcomes more equitable (Center on PBIS, 2023a). For example, Vincent et al. (2011) found, over a 3-year period, schools implementing PBIS decreased rates of disparity in exclusionary discipline, while the inequalities in disciplinary outcomes at similar schools who were not implementing PBIS grew wider. Other studies have found similar outcomes (Center on PBIS, 2023a). Although most research investigating the effectiveness of PBIS has focused on racial inequities, the effects can be extended to other inequities, including between students with different kinds of disabilities. PBIS's ability to improve equitable outcomes may be due to its focus on a system of intervention that focuses on the needs of the students and families, prioritizing helpful and instructional approaches to

preventing and addressing behavior over punitive or reactive approaches, and its focus on using disaggregated school data (Center for PBIS, 2023b).

Policies around data disaggregation should be given consideration to address disproportionate outcomes for students with various causes of CB because better data disaggregation could be used to highlight and address outcomes subject to implicit bias (Smolkowski et al., 2016). Through thoughtful use of school data, inequitable outcomes among students with various characteristics and disabilities could be identified more readily, and teams could create more targeted plans to address the inequities through a systems approach (Meek et al., 2020). Currently, schools in Virginia are required to submit disciplinary and placement outcomes comparing only students with and students without disabilities (VDOE, 2022). Policy makers should consider adding additional disaggregation requirements to each division's annual required reporting, including breaking down the data by disability category when reporting Indicator 4, measuring suspension and expulsions disproportionality, and Indicator 5, measuring student educational placement (VDOE, 2022). This practice would ensure staff were made aware of the specific inequities present within their divisions. In addition, school-level leadership should consider looking more closely at other exclusionary discipline practices (e.g., collecting and analyzing office referral data based on disability category), which would help school teams better identify and address patterns of staff behavior that could potentially lead to more significant exclusion (i.e., suspension, being moved to a more restrictive setting).

Leadership and Implementation. Even with the necessary data, schools would struggle to address the present inequities if they failed to implement interventions with fidelity and consistency. This fact was a particular point of frustration for the teachers interviewed for the present study, who reported that PBIS is a promising intervention that has "not been allowed to

work" due to inconsistent implementation and a lack of teacher support or understanding. Properly implementing PBIS depends on strong and committed leadership (Center on PBIS, 2023c), as clearly noted by the participants in the study. School and division-level leadership aiming to improve equitable outcomes for all students with CB should keep in mind how maintaining a continued focus on PBIS and building a common vision across the division, would increase the effectiveness of PBIS implementation (Goodman, 2020). In addition, division leadership seeking to improve implementation of PBIS should consider the division's role in creating a culture of competence around implementation and how the division fits into a cascading educational system (Goodman, 2020). Just as school leadership teams seek support from the division as they implement PBIS, division leadership can gain support from regional support centers (Goodman, 2020). In Virginia, regional and state support can be obtained through Training and Technical Assistance Centers across the state and the Research and Implementation Center located at Virginia Commonwealth University.

Provide Teachers with the Necessary Support to Cultivate an Inclusive Environment

It is important to recognize that both the teachers in this study and the majority of teachers across the country intend to support all students as best they can. However, teachers cannot support students without being properly supported themselves. To improve inclusive education for all students, teachers need support from their school and division leadership in many ways. Two types of support that would help teachers provide more equitable access to the general education setting include (a) providing the necessary professional development related to supporting students with CB and (b) ensuring teacher wellness and mental health are a priority in all schools. Schools and divisions should adopt policies that address both supports simultaneously.

Professional Development in Behavior Management. Classroom management is a major component of teaching kindergarten through 12th grade. Yet, many teachers are underprepared for this aspect of the job (Schaubman et al., 2011). This lack of training can reduce opportunities for positive student–teacher interactions and instead increase opportunities for negative interactions (Scanlon & Barnes-Holmes, 2013). Therefore, improving teachers' abilities and skills to respond to CB should be a priority to increase student inclusion (Scanlon & Barnes-Holmes, 2013). The teachers interviewed for the present study agreed more professional development for teachers is needed. The teachers reported a desire for training to center on concrete strategies, avoiding lingering in the theoretical realm of behavior management. Rather, training should focus on strategies teachers can use both to prevent CB through a tiered systems approach such as PBIS and to deescalate student CB once it is in action. In addition, as specified by two teacher participants, professional development should include video scenarios and strategies the teachers could "use the next day" to respond to the behavior displayed. The teachers in the present study also reported professional development could be made more applicable to their teaching if teachers were able to provide specific examples of student behavior taking place in their classrooms. Finally, they reported wanting more training in how to support students with specific disabilities in their classes.

Generally, the teachers in the study wanted professional development that is job embedded and based on their specific needs. School, division, and regional leadership should seek to provide professional development opportunities that are ongoing and teacher led. One option for providing such professional development is through teacher coaching, which has been found to be the most effective means of supporting teachers as they reach for substantial and long-lasting change in their teaching practices (Tschannen-Moran & Tschannen-Moran, 2020).

Schools could provide opportunities for teacher–leaders who have expertise in behavior management to serve as peer coaches, providing them with additional training on effectively coaching others. Schools might also consider creating dedicated coaching positions specific for supporting teachers as they include students with CB in their classrooms. Regardless of format, educational leadership should make professional development focused on preventing and managing student behavior a priority because when teachers are offered these opportunities, the use of exclusionary discipline decreases (Zinsser et al., 2019).

Teacher Mental Wellness. When teachers feel their relationships with students are strong, they experience significantly more joy in the classroom (Hagenauer et al., 2015), and they report decreased emotional exhaustion, increased enthusiasm for work, and greater wellbeing (Aldrup et al., 2018). However, when student behavior is challenging, the student–teacher relationship is affected, and teachers feel more anger and frustration (Chang, 2013; Haenauer et al., 2015). These feelings are tied to increased teacher burnout (Chang, 2013), which may further negatively influence the student–teacher relationship. In addition, teachers who are feeling more depressed and higher levels of stress have been found to use more exclusionary discipline (Meek et al., 2020; Gilliam, 2008). This link between challenging student behavior and teacher burn out is of the upmost importance, especially when considering that 59% of teachers reported feeling burnt out and 73% reported frequent job-related stress in 2022 (Steiner et al., 2023). Teachers feeling overwhelmed, frustrated, and angry are more likely to use exclusionary practices when students display CB (Meek et al., 2020). School leadership must value the mental wellbeing of teachers, as well as students, as their needs for wellness are identical (Cooper, 2011).

Policy and leadership that improve teacher working conditions and mental health, including lowering teacher stress, may decrease teacher reliance on exclusionary discipline (Meek et al., 2020). Policy reforms could include lowering the teacher–student ratio, providing sufficient paid time off, and protecting breaks during the school day (Meek et al., 2020; Gilliam, 2008). At a minimum, school leadership should ensure teachers are taking their sick days and that duties and meetings do not encroach on breaks during their workday to encourage teacher wellness. In addition, division leadership should conduct division-wide audits of their staffing policies to ensure every school has enough counselors, school psychologists, and social workers who can work directly with students and their families. In the absence of these professionals, teachers must take on the additional work, which is often emotionally and mentally taxing without proper training (Meek et al., 2020). Such supports for improving teacher mental wellness and workplace conditions have been found to decrease exclusionary discipline (Meek et al., 2020).

In addition to a focus on improving the school climate and ensuring teachers feel valued through being given access to basic needs like breaks and reasonable workloads, some research has found providing employees with stress-management interventions reduces work-related stress (Bond & Bunce, 2000). In addition, Scanlon and Barnes-Holmes (2013) found when teachers were provided with stress-management interventions and specific training for supporting students with EBD, they had less negative bias toward students with EBD and lower levels of burnout, depression, and emotional exhaustion. School leadership should consider taking concrete steps, such as providing specific training in stress management and offering resources to support teacher mental wellness, alongside efforts to increase their skills for managing behavior.

Focus Inclusive Efforts on Elementary and Elective Teachers

The only demographic factors found to influence any of the perceptions were content area and grade level taught. Teachers who taught elementary school and teachers of elective classes (e.g., physical education, music, art) reported the behaviors described in the vignettes would have larger effects on classroom functioning. Elementary school is a critical point where students can be included or excluded, and teachers are less likely to feel confident supporting a student with EBD if the student had been previously taught in a more restrictive setting (Scanlon et al., 2020). In addition, children who start education in segregated programs during preschool are more likely to stay in self-contained classrooms and programs throughout their K–12 educations (Meek et al., 2020). This finding indicated once students are removed from the general education setting due to CB, teachers are less likely to have high TSE and, thus, are less willing to persevere with inclusive practices, making it difficult for students to return to the general education setting once they have been removed.

Similarly, teachers of elective classes, often called specials classes in the elementary grades, are in a unique position to provide students with opportunities for inclusion. Although benefits of inclusion depend largely on the amount of time and the variety of social and learning experiences students are exposed to alongside typically developing peers (Justice et al., 2014), successful inclusion in specials and elective classes may provide a starting point for increasing opportunities for inclusion. Initial efforts to increase inclusion of students with disabilities is rooted in the practice of mainstreaming, where students with disabilities who were not able to fully participate in the general education setting were first included in classes like art, music, physical education, and computer classes (Isherwood & Barger-Anderson, 2008; National Council on Disability, 2018). Improving the ability of specials and elective teachers to support

students with CB may result in more successful inclusion experiences for the students that can lead to additional inclusion opportunities in the future.

Recommendations for Future Research

This research provided insight into how the attribution for challenging student behavior may influence teacher perceptions; however, many questions remain unanswered, and additional research is needed to find further clarity around the constructs. The following section provides three ideas for validating and extending the present study.

Replication With Various Teacher Populations

The sample in this study included teachers with specific characteristics, and it may be beneficial to replicate this research with a greater variety of teachers. Specific groups of teachers who should be included in future replications include teachers in the first three years of their careers and teachers provisionally licensed, as this is a growing teacher demographic for Virginia (JLARC, 2022). In addition, an increased focus on the beliefs of elementary teachers and teachers of elective classes might provide added insight into the barriers they perceive when it comes to increasing the level of inclusion for students with CB. Future researchers might also consider including special education teachers or adapting the protocol to include the perspectives of administrators. Replications with a wider variety of teachers would allow for comparisons in teacher demographics and might identify more targeted groups of teachers who could benefit from additional professional development opportunities.

Changes to Methodology

In addition to replications, future research should consider changes to the methodology used in the present study. Although vignette research methodology allows direct manipulation of variables that would be impossible or unethical to control in a classroom, it does have

limitations. Specifically, it cannot accurately depict the myriad factors that can influence teachers. However, it can still be a useful research methodology. One recommendation to improve future studies into these relationships is to use video to convey student CB. The use of written descriptions of the students might have allowed more room for interpretation, which might have influenced the findings of both the quantitative and qualitative data. As one interview participant said while discussing professional development, "Seeing the kind of behavior you can have in a classroom is perhaps the only way to really prepare for it. Seeing it in a paragraph blurb, I don't think quite gives the same effect." Experimental studies using video might better control how teachers envision the student behaving in their class and, therefore, might better isolate the influence of the CB attribution.

In addition, the findings from the qualitative data revealed a much richer depiction of how teachers viewed each student using within-participant comparisons. Future research might clarify the relationships and reveal additional patterns by collecting within-participant responses to the quantitative data. It might also be helpful to have teachers directly rank the students based on their TSE and expectations for the student in general education. Additionally, if qualitative measures were to ask about the control condition, where there is no implied cause of the CB, it might lead to a better understanding of how teachers use such information in their decision-making process or how it might consciously or unconsciously influence their perceptions and expectations.

Additional Areas of Research

Research is needed to assess how a variety of training and professional development opportunities might influence these constructs. Future research using experimental designs (e.g., pretest–posttest, pretest-only design with a control group) would help identify how specific

interventions influence TSE and teacher perceptions of including students with CB in their classroom (Creswell & Creswell, 2018). Future research should also consider directly measuring how teachers' perceptions vary across the dimensions of attribution theory, including locus of control, stability, and controllability of behavior for students with various disabilities. This research would provide a more direct measure of how a specific implied attribution might be related to teachers' emotions, TSE, and expectations for student success. Finally, future research might focus specifically on teacher perceptions across various disability labels, including a focus on EBD and expanding to include other disability categories. Further understanding of how teachers perceive various disability labels might help to better identify interventions to reduce inequities, as "Teachers have tremendous power in schools and in the lives of students, as either a risk or protective factor against the discrimination and inequities students experience" (Childs & Wooten, , 2022, p. 21). As such, identifying additional trends in teacher perceptions and bias might be a significant factor in increasing equitable outcomes for diverse students (Childs & Wooten, 2022).

Conclusion

This study focused on the influence of attribution for CB on teacher perceptions of students and TSE to support students in an inclusive setting. I used an experimental design with vignette descriptions of students with a variety of attributions for the same CB and individual teacher interviews to explore further how the constructs were related. Quantitative findings showed attribution influenced self-efficacy within the Behavior Management domain, with teachers feeling significantly more confident supporting students with a negative attitude than students with an EBD, autism, or history of trauma. Qualitative findings showed teachers used attribution for the CB when making decisions about how the student would affect the class, the

strategies that would be helpful to support the student, how successful the student would be in the general education setting, and where the student would best be educated. Findings revealed teachers might have a more negative bias against students with EBD because they expect this group of students to have more externalizing and potentially dangerous behavior, which might play a role in the inequitable outcomes these students experience. Recommendations for policy and practice, include using a systematic approach to addressing student behavior to reduce the influence of bias, supporting teachers through job-embedded professional development in behavior management and through mental wellness supports, and ensuring support, is provided to elementary and elective teachers, as these teachers may play a critical role in long-term inclusive outcomes.

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Appendix A

Vignettes

Each condition began with the same introduction to the vignette and included the same description of the problem behavior. The control condition included no additional information, while the test conditions included a causal statement such as "Nicholas has an emotional and behavioral disability, so he really struggles at school." Each vignette ended with the description of the challenging behavior displayed in class.

Control Vignette: No Implied Attributional Information

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicolas really struggles at school. Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Vignette 1: Negative Attitude Towards School

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicholas has a bad attitude, so he really struggles at school. He always has to be the one in charge. If someone does something that he didn't like, he'll start an argument. It's not that he isn't capable, actually, he's really bright. Some of the things he said in class made me wonder if he's gifted. But he would never make it in a gifted program because he's too lazy to take advantage of it. I think his biggest challenge is his bad attitude.

Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Condition 2: Trauma and Difficult Home Life

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicholas has a really hard home life, and he's experienced a lot of trauma, so he really struggles at school. He's a smart kid, but he's got the cards stacked against him. Dad's been in and out of jail. I think there was some domestic violence going on. He's always coming to school hungry, and I think they were living in a house with a lot of other family members. Academically, he's capable, but he was really far behind. I think his biggest problem is the instability he experiences at home and the trauma he's had in his life.

Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Condition 3: Intellectual Disability

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicholas has an Intellectual Disability, so he really struggles at school. He's interests are immature for his age. He processes and learns very slowly, and he really struggles with reasoning and problem solving. Almost every assignment had to be modified for him and broken down with adult support. I think his biggest challenge is that he doesn't understand the world around him the way everyone else does.

Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Condition 4: Emotional Disability

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicholas has an emotional and behavioral disability, so he really struggles at school. He always seems to be upset or unhappy about something and has over the top reactions to small things. He has a really hard time making friends, and he can be frustrating to work with even as an adult. He's a smart kid, capable of doing the work, but he had poor grades. I think his biggest challenge was managing his emotions; they seemed to just take over his whole day.

Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Condition 5: Autism

"Upon the start of the new school year, you receive your class roster. On the list, you see some familiar names. One name stands out: Nicholas. You remember his teacher from last year telling you about the constant disruptions that he caused in her class. You decide to ask her for some more information about him. When you ask her about Nicholas, she tells you the following:

Nicholas has Autism, so he really struggles at school. He's a smart kid, but he has a really hard time with social interactions. I don't think he always understands what other kids were saying to him, and I always had to be really explicit with my instructions. He has a lot of sensory problems. Lights and noises and different textures, things like that really bothered him. He also really didn't like if there was a change in the schedule or if I had to change our routine, especially if I didn't give him a heads up. I think his biggest challenges are his inflexibility and his sensory needs not being met.

Last year, he constantly disrupted class. He was out of his seat, walking around the room and talking to other students, often about inappropriate topics. When he was in his seat, he was calling out, throwing items, or making disruptive noises. Multiple times last year he was aggressive toward other students, and he got upset when things didn't go his way. When I had to tell him "No," he would become argumentative and defiant, always causing a scene. When he was really upset, he would just walk out of the room without saying where he was going, usually with a curse word or two. On the few times that he did complete work, his work was sloppy and disorganized."

Appendix B

Student-Specific Teachers' Sense of Efficacy Scale

The Student-Specific Teachers' Sense of Efficacy Scale is a 25-item instrument that asks teachers to rate items on a 7-point scale from 1 (*Nothing*) to 7 (*A great deal*) (Zee, Koomen, et al., 2016b).

Instructional Strategies Domain

Please indicate your level of agreement for the following questions from 1 (*None at all*) to 7 (*A great deal*).

	1	2	3	4	5	6	7
To what extent can you provide an alternative explanation or example when Nicholas is confused?	○	○	○	○	○	○	○
To what extent can you craft stimulating questions for Nicholas?	○	○	○	○	○	○	○
How well can you let Nicholas apply alternative problem-solving strategies?	○	○	○	○	○	○	○
How well can you adjust your lessons to the proper level for Nicholas?	○	○	○	○	○	○	○
To what extent can you gauge Nicholas' comprehension of what you have taught?	○	○	○	○	○	○	○
How well can you provide appropriate challenges for Nicholas?	○	○	○	○	○	○	○

Behavior Management Domain

Please indicate your level of agreement for the following questions from 1 (*None at all*) to 7 (*A great deal*).

	1	2	3	4	5	6	7
How well can you control Nicholas' disruptive behavior?	○	○	○	○	○	○	○
How well can you get Nicholas to follow classroom rules?	○	○	○	○	○	○	○
How well can you calm Nicholas when he is disruptive or noisy?	○	○	○	○	○	○	○
How well can you prevent Nicholas from negatively affecting the classroom atmosphere?	○	○	○	○	○	○	○
To what extent can you make your behavioral expectations clear to Nicholas?	○	○	○	○	○	○	○

Student Engagement Domain

Please indicate your level of agreement for the following questions from 1 (*None at all*) to 7 (*A great deal*).

	1	2	3	4	5	6	7
How well can you get Nicholas to believe he can do well in schoolwork?	○	○	○	○	○	○	○
To what extent can you help Nicholas to value learning?	○	○	○	○	○	○	○
To what extent can you motivate Nicholas for his schoolwork?	○	○	○	○	○	○	○
How well can you help Nicholas to understand the learning content?	○	○	○	○	○	○	○
How well can you help Nicholas to think critically?	○	○	○	○	○	○	○
To what extent can you help Nicholas to explore new things?	○	○	○	○	○	○	○
How well can you get through to Nicholas?	○	○	○	○	○	○	○

Emotional Support Domain

Please indicate your level of agreement for the following questions from 1 (*None at all*) to 7 (*A great deal*).

	1	2	3	4	5	6	7
To what extent can you respond to Nicholas in a sincerely positive way?	○	○	○	○	○	○	○
To what extent can you provide positive feedback to Nicholas?	○	○	○	○	○	○	○
How well can you provide a safe and secure environment for Nicholas?	○	○	○	○	○	○	○
To what extent can you recognize that Nicholas does not feel well in a timely fashion?	○	○	○	○	○	○	○
How well can you provide timely support to Nicholas when he is upset?	○	○	○	○	○	○	○
To what extent can you provide Nicholas with the autonomy to make his own choices?	○	○	○	○	○	○	○
To what extent can you adjust learning tasks to Nicholas' needs and interests?	○	○	○	○	○	○	○

Appendix C

Teacher Perception Questionnaire

Teacher Perception Questionnaire Section A:

Please indicate your level of agreement for the following questions from 1 (*Not disruptive at all*) to 7 (*Extremely disruptive*).

	1	2	3	4	5	6	7
How disruptive will Nicholas' behavior be to the **academic success** of your **class**?	○	○	○	○	○	○	○
How disruptive will Nicholas' behavior be to the **social success** of your **class**?	○	○	○	○	○	○	○

Please indicate your level of agreement for the following questions from 1 (*Not likely at all*) to 7 (*Extremely likely*).

	1	2	3	4	5	6	7
How likely is Nicholas' behavior to **interrupt the daily functioning** of your **classroom**?	○	○	○	○	○	○	○

Please indicate your level of agreement for the following questions from 1 (*No time at all*) to 7 (*A significant amount of time*).

	1	2	3	4	5	6	7
How much time do you anticipate Nicholas' behavior will **take away from your ability to instruct**? (1)	○	○	○	○	○	○	○

Please indicate your level of agreement for the following questions from 1 (*No effort at all*) to 7 (*A significant amount of effort*).

	1	2	3	4	5	6	7
How much **effort** will be required from you to address Nicholas' challenging behavior?	○	○	○	○	○	○	○

Teacher Perception Questionnaire Section B:

Please indicate your level of agreement for the following questions from 1 (*Extremely unlikely*) to 7 (*Extremely likely*).

	1	2	3	4	5	6	7
How likely is Nicholas to **struggle behaviorally** in your classroom?	○	○	○	○	○	○	○
How likely is Nicholas to **struggle academically** in your classroom?	○	○	○	○	○	○	○
Despite any struggles, how likely is Nicholas to be **successful behaviorally** in your classroom?	○	○	○	○	○	○	○
Despite any struggles, how likely is Nicholas to be **successful academically** in your classroom?	○	○	○	○	○	○	○

Please indicate your level of agreement for the following questions from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

	1	2	3	4	5	6	7
My classroom is appropriate for Nicholas.	○	○	○	○	○	○	○
Nicholas would have better outcomes if he was served in a smaller setting, such as a special education classroom.	○	○	○	○	○	○	○
When Nicholas is displaying challenging behavior that is disruptive to the class, he should be temporarily removed from my classroom.	○	○	○	○	○	○	○
When Nicholas is displaying challenging behavior that is disruptive to the class, I am the best person to address his behavior.	○	○	○	○	○	○	○

Appendix D

Demographic Section Items

1) Which best describes the division where you teach?

- ○ Rural
- ○ Suburban
- ○ Urban

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2) What grade level do you currently teach?

- ○ Elementary
- ○ Middle
- ○ High

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3) Do you primarily teach core content areas (math, English/language arts, science, social studies) or elective classes (art, PE, music, drivers' education, etc.)?

- ○ Core Content Area
- ○ Elective Classes

---

4) How many years of teaching experience do you have?

- ○ I'm starting my 1st year
- ○ I'm starting my 2nd year
- ○ I'm starting my 3rd year
- ○ I'm starting my 4th through 10th year
- ○ I'm starting my 11th through 20th year
- ○ I've been teaching more than 20 years

5) Please indicate the extent your teacher preparation program helped prepare you to support students with challenging behavior from 1 (*None at all*) to 7 (*A great deal*)

	1	2	3	4	5	6	7
To what extent did your teacher preparation program help prepare you to support students with challenging behaviors?	○	○	○	○	○	○	○

6) What is your current teaching licensure status?

- ○ Provisional licensure
- ○ Professional licensure

7) What is your highest level of education?

- ○ Bachelor's degree
- ○ Master's degree
- ○ Masters +30
- ○ Doctoral degree

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8) What is your experience with students with disabilities?

- ○ I have **very little** experience working with students with disabilities
- ○ I have a **moderate** amount of experience working with students with disabilities
- ○ I have **extensive** experience working with students with disabilities

---

9) What is your experience with Positive Behavior Supports and Interventions (PBIS)?

- ○ I have had **no** experience with PBIS
- ○ I have had **little** experience or only unsuccessful experiences with PBIS
- ○ I have had **moderate** experience, including both successful and unsuccessful experiences with PBIS
- ○ I have had **extensive**, including mostly successful, experiences with PBIS

---

10) What is your experience with co-teaching a class with a special education teacher?

- ○ I have had **no** experience co-teaching a class
- ○ I have had **little experience** co-teaching
- ○ I have had **only unsuccessful** experiences co-teaching
- ○ I have had **moderate** experience, including **both successful and unsuccessful** experiences co-teaching
- ○ I have had **extensive**, including **mostly successful**, co-teaching experiences

---

11) How much professional development have you had related to supporting students with challenging behavior?

- ○ I have had **no** professional development
- ○ I have had **little** professional development, such as short trainings
- ○ I have had a **moderate** amount of professional development, such as full day or multi-day trainings
- ○ I have had **extensive** professional development, such as ongoing, in-depth training with hands-on learning experiences

---

12) Please indicate the extent you've received targeted, ongoing, job-embedded coaching related to behavior from 1 (*None at all*) to 7 (*A great deal*).

	1	2	3	4	5	6	7
To what extent have you had **targeted, ongoing, job-embedded coaching** related to **supporting students with challenging behavior**?	○	○	○	○	○	○	○

Appendix E

Teacher Interview Protocol and Questions

Study: The Influence of Teacher Attribution for Challenging Behavior on Teacher Self-efficacy and Expectations for Student Success

Date:

Time of Interview:

Location: Virtual on Zoom

Interviewer: Mackenzie Turbeville-McCorry

Participant Number:

[Describe the study, including (a) the purpose of the study, (b) the participants and sources of data being collected, and (c) how long the interview is expected to take.]

The purpose of this study is to investigate the influence that different causes of student behavior have on the teacher's beliefs about the student and their self-efficacy to support the student with the CB.

As you know, it started with a survey that you participated in and now I'm trying to get some more detailed information and identify some of the feelings and thoughts behind the answers on the survey. Teachers from across the state answered the survey and like you, some of them also volunteered to participate in the interviews. Participants for these interviews were randomly selected from the list of volunteers.

I expect this survey to take about 30-40 minutes to complete, but of course that's going to depend on how much information you want to share with me. I'm very flexible if time goes over, but I want to respect your time and make sure that this isn't an overly burdensome process.

[Display the consent form, summarize it verbally and allow time for the participant to read if they would like. The obtain verbally consent to participate and use audio recording.]

[Begin audio recording of the interview.]

Begin by asking teachers to report their:

Division Size: (urban, suburban, or rural)

Grades/Level Taught:

Content Area:

Years of Experience:

Teacher Licensing Status:

[If the answers are short or unclear, probing questions may be used to gain additional information such as:

- "Tell me more about that"
- "I would appreciate more detail on that"
- "Could you explain your response more?"
- "What does 'not much' (or other vague term) mean?"]

Interview Questions

"I'm going to read you a short description of five different students. Each of these students struggles with challenging behavior in the classroom, such as disrupting the class, calling out,

throwing things, and making noises. They also all struggle with peer conflict and are argumentative with their teachers and peers. Rarely do they complete their work.
After hearing about each student, I'm going to ask you a few questions about how the student would impact you and your classroom."

[While reading each student description, the description display description on the screen for the participant to follow along in order to increase comprehension. Each student description will be followed by the same questions.]

1) What emotions would you feel if this student were in your classroom?
2) How much time and effort would it take you to prevent and respond to behavior for this student?
    a) Why do you feel this way?
3) Can you describe the impact you feel this student's behavior would have on the rest of the class?
    a) Why do you feel this way?
4) How confident would you be in your ability to support this student behaviorally?
    a) Why do you feel this way?
5) Can you describe how successful this student would be socially and behaviorally in the general education setting?
6) Would he be better off in a smaller setting, like special education?
    a) Why do you feel this way?
7) What strategies or interventions do you think would be helpful to prevent this student's challenging behavior?
8) What strategies would be helpful for responding when this student's behavior starts to escalate?

Student Descriptions

Student 1:

“Nicholas has a bad attitude, so he really struggles at school. He always has to be the one in charge. If someone does something that he didn’t like, he’ll start an argument. It's not that he isn't capable, actually, he's really bright. Some of the things he said in class made his teacher wonder if he’s gifted. But he would never make it in a gifted program because he’s too lazy to take advantage of it. His biggest challenge is his bad attitude.”

Student 2:

“Matthew has a really hard home life, and he's experienced a lot of trauma, so he really struggles at school. He's a smart kid, but he's got the cards stacked against him. Dad's been in and out of jail. There might be some domestic violence going on at home. He’s always coming to school hungry, and he’s living in a house with a lot of other family members. Academically, he’s capable, but he is really far behind. His biggest problem is the instability he experiences at home and the trauma he’s had in his life.”

Student 3:

“Chris has an Intellectual Disability, so he really struggles at school. His interests are immature for his age. He processes and learns very slowly, and he really struggles with reasoning and problem solving. Almost every assignment had to be modified for him and broken down with

adult support. I think his biggest challenge is that he doesn't understand the world around him the way everyone else does."

Student 4:

"Ron has an emotional and behavioral disability, so he really struggles at school. He always seems to be upset or unhappy about something, and has over the top reactions to small things. He has a really hard time making friends, and he can be frustrating to work with even for adults. He's a smart kid, capable of doing the work, but he has poor grades. His biggest challenge is managing his emotions; they seemed to just take over his whole day."

Student 5:

"Andrew has Autism, so he really struggles at school. He's a smart kid, but he has a really hard time with social interactions. He is always misunderstanding what other kids were saying to him, and his teachers have to be really explicit with instructions. He has a lot of sensory problems. Lights and noises and different textures, things like that really bothered him. He also really didn't like if there was a change in the schedule or routine, especially if he doesn't get a heads up. His biggest challenges are his inflexibility and his sensory needs not being met."

Additional Questions: [These questions are also displayed on the screen to increase participation comprehension of lengthy questions.]

1) Can you describe the amount of professional development that you've had related to supporting students with challenging behaviors in the classroom?
   a) None
   b) Little, such as short trainings

c) Moderate, such as half or full-day or multi day trainings
d) Extensive, such as ongoing, multi-day, in-depth trainings or coaching

Follow Up Questions

- If participant answered with "None," ask, "What kind of professional development do you feel would be helpful for you in order to support students struggling with CB?"
- If participant answered with "Little," ask "Do you feel the PD you've experienced has better prepared you to support struggling students?"
- "What kind of additional professional development do you feel would be helpful for you in order to support students struggling with CB?"
- If participant answered with "Moderate or Extensive," ask, "What made those experiences most beneficial to you?"
  "What kind of additional professional development do you feel would be helpful for you in order to support students struggling with CB?"

2) How would you describe your experience working with students with disabilities?
   a) None
   b) Little
   c) Moderate
   d) Extensive

   Follow Up Questions:

   - If the participant answered "none" or "little," ask "Do you feel that more experience working with students with disabilities would help you better support them in your classroom?"
   - If the participant answered "moderate" or "extensive," ask, "Do you feel that your experience with students with disabilities has helped you become, better at supporting them in your classroom?"

9) How would you describe your experience with Positive Behavior Interventions and Supports (PBIS)?

   a) No experience
   b) Little or only unsuccessful experiences
   c) Moderate, including both successful and unsuccessful experiences
   d) Extensive, including mostly successful experiences

   Follow Up Questions:

- If the participant answered “no experience” or “little or only unsuccessful experiences,” ask, “Do you feel additional exposure and experience with PBIS would improve your ability to support and respond to students with CB?”
- If the participant answered “moderate” or “extensive,” ask “How has your experiences with PBIS shaped how you respond to and support students with challenging behavior?”

10) Do you have anything else you want to share with me related to students with challenging behaviors in your classroom?

[Thank the individual for their time and participation in this interview. Ask if they are open to additional contact if needed to clarify any of their answers. Assure the individual that they will have the opportunity to see the final research product.]

Appendix F

Participant Informed Consent Form

You have been invited to participate in a research study entitled The Influence of Teacher Attribution for Challenging Behavior on Personal Teacher Efficacy and Expectations for Student Success. This study is being conducted by Mackenzie Turbeville, a doctoral student at William & Mary under the supervision of Dr. Thomas Ward, Professor of Education at William & Mary.

Purpose: This study will help inform future supports provided by specialists at William & Mary's Technical Training and Assistance Center (T/TAC) for teachers supporting students with challenging behaviors in inclusive settings.

Duration of Participation: This survey will take approximately 8 minutes to complete.

Procedures: As a participant in this study, you will complete several short questionnaires and a demographics form.

Confidentiality: The survey is anonymous, and your participation is confidential. Please do not type your name anywhere on this survey. Your data will not be associated with your name. Your responses cannot be linked to your name in any way.

Voluntary Participation: Your participation in the research is voluntary. You may choose not to answer any or all questions and may stop the survey at any time. There is no penalty for not taking part in this research study. Complete and accurate responses will help us to understand what we are investigating better. Participation requires successfully completing attention checks. Failure to do so will result in exclusion from the study.

Discomforts and Risks: There are no known risks associated with this study. You will be simply asked to respond to several survey items.

If you have any questions regarding this study, please contact Mackenzie Turbeville at 757-221-0613 or mcturbeville@wm.edu.

THIS PROJECT (EDIRC-2022-07-06-15703-mcturbeville) WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 7-11-2022 AND EXPIRES ON 7-11-2023.

You may report any dissatisfaction with this study to Dr. Thomas Ward, the Chair of the Protection of Human Subjects Committee by telephone (757-221-2358) or email (tjward@wm.edu).

Thank you for your consideration!

VITA

Mackenzie Turbeville-McCorry

Education

William & Mary, Williamsburg, VA — May 2023

- Doctor of Education in Educational Policy, Planning and Leadership
- K-12 Administration

William & Mary, Williamsburg, VA — August 2015

- Master of Arts in Education
- Endorsement in Special Education, General Curriculum, K-12

James Madison University, Harrisonburg, VA — May 2014

- Bachelor of Arts, English
- Double Major in Education, Secondary and Elementary

Certifications

- Post Graduate Professional License, Valid through 6/30/2030
  Endorsement in Special Education– General Curriculum K–12

Professional Experience

William & Mary Training and Technical Assistance Center, Williamsburg, VA

- Project Specialist — August 2021–Present

Hanover County Public Schools, Hanover, VA

- Behavior Consultative Teacher — November 2018- August 2021

Broward County Public Schools, Fort Lauderdale, FL

- Exceptional Student Education Specialist — August 2018– November 2018
- General and Special Education Teacher, Grades 2-3 — August 2015-August 2018