

Teacher Perceptions of Functional Behavioral Assessments and Behavior Intervention Plans for
General Education Students

By

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To my extraordinary sons, Aiden and Jonah, who bring inspiration and light to my life

and

To my selfless, wise, and infinitely supportive parents

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CHAPTER I

INTRODUCTION

Students with serious challenging school behaviors are characterized by ongoing academic, behavioral, or social deficits that violate expected social or cultural norms (Kauffman & Landrum, 2009; Walker, Ramsey, & Gresham, 2004). Smith and Fox (2003) defined *challenging behavior* as “any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in pro-social interactions with peers and adults” (p. 5). School behaviors posing the greatest challenge most often include externalizing or antisocial behavior problems (Achenbach & Edelbrock, 1983; McMahon & Washburn, 2003), or dysregulated behaviors expressed outwards that cause harm or disruption to others (Walker et al., 1996). Examples of challenging behaviors include disruptive, noncompliant, and impulsive behaviors (e.g., tantrums, yelling, frequently out of seat or leaving the classroom, touching or bothering peers), and verbal or physical aggression.

Prevalence of Challenging Behaviors in the General Education Classroom

A significant number of students with challenging behaviors do not receive special education services and are supported solely through resources available within the general education setting. While estimates range between 2 and 20%, a conservative consensus exists amongst researchers that *at least* 5% of students exhibit challenging school behaviors at a severity level placing them at risk for future academic or behavioral failure (Costello, Egger, & Angold, 2005; Costello, Foley, & Angold, 2006; Kauffman & Landrum, 2009; Simpson, Cohen,

Pastor, & Reuben, 2008; US Department of Health and Human Services, 2001; Wiley & Siperstein, 2011). For example, a survey conducted by the National Center for Health Statistics during 2005-06 indicated 14.5% of parents reported talking to a health care provider or school staff about concerns related to school behavior difficulties (e.g., social interactions, emotional regulation, or concentration; Simpson et al., 2008). Such estimates are in sharp contrast with reports indicating less than 1% of US public school students qualify for special education services under the disability category for emotional disturbance (ED; Kauffman, Simpson, & Mock, 2009; National Research Council, 2002; Office of Special Education Programs, 2009; US Department of Education, 2005; 2006). Discrepancies between prevalence estimates of students with significant emotional and behavioral challenges and students who actually receive special education services for emotional and behavioral challenges suggest a sizable number of students with behavior needs may be unaccounted for by special education and educated within the general education setting.

General education teachers are responsible for managing and responding to the difficulties students with challenging behaviors bring to the classroom, and many lack adequate strategies to meet this need (Kauffman & Landrum, 2006). According to a survey of 70 teachers by Westling (2010), teachers indicated 12% of general education students in their classes exhibited challenging behavior. The most commonly reported behavior concerns included disruption, defiance and noncompliance, and socially inappropriate behavior (e.g., offensive gestures, inappropriate sounds, or talking too loudly, excessively, or about inappropriate topics). In fact, teachers reported general education students with *no* identified disabilities presented more challenging behaviors than students who received special education services. Merely 31% of general education teachers reported they received support for student behavior problems from

building administrators, and fewer than 25% received support from any other source (e.g., other teachers, behavior specialists, or support teams; Westling, 2010). General education teachers need access to effective and feasible supports, which they may lack, to address the behavioral needs of general education students with challenging behaviors.

Impacts of challenging behaviors on general education teachers and students.

Challenging student behaviors clearly pose a legitimate concern for general education teachers (Kauffman & Landrum, 2006; Westling, 2010). Behavior problems can be detrimental to the classroom environment and incompatible with efficient use of classroom time and engaging instruction (e.g., Conroy, Sutherland, Snyder, & Marsh, 2008; Emmer & Stough, 2001; Sutherland, Alder, & Gunter, 2003; Sutherland & Oswald, 2005; Sutherland & Wehby, 2001). Students who exhibit chronic patterns of challenging behaviors interfere with effective classroom management and are likely to disrupt instruction, procedures, and routines. Access to instruction may decrease for all students, including appropriately behaving peers as well as acting-out students.

Teachers have repeatedly cited student behavior problems as a top priority issue leading to increased stress or burnout (Brouwers & Tomic, 2000; Dunlap et al., 2006; Eber, Sugai, Smith, & Scott, 2002; Grossman et al, 1997; McMahon, Washburn, Felix, Yakin, & Childrey, 2000; Sprague & Walker, 2000; Taub, 2001). In fact, many educators who leave the teaching profession cite an unwillingness or inability to manage student behavior as a main factor (Abidin & Robinson, 2002; Nelson, Maculan, Roberts, & Ohlund, 2001; Van Acker, 1993). More than half of the general education teachers surveyed by Westling (2010) reported challenging student behaviors reduced their effectiveness as a teacher and occupied a significant amount of class

time. The vast majority (more than 80%) of teachers indicated dealing with challenging behaviors increased their own stress and reduced learning for all students in the classroom.

Students with challenging behaviors may also be negatively impacted by their own behavior. In the absence of effective intervention, challenging behaviors are associated with increasingly declining academic, social, and behavioral outcomes over time (Deater-Deckard, Dodge, Bates, & Pettit, 1997; Dodge, Coie, & Lynam, 2006; Dunlap et al., 2006; Kazdin, 1987; Stouthamer-Loeber & Loeber, 2002). For example, researchers have documented a clear link between reading and behavior problems (Coleman & Vaughn, 2000; Levy & Chard, 2001; Nelson, Benner, Lane, & Smith, 2004; Rivera, Al-Otaiba, & Koorland, 2006; Sutherland & Snyder, 2007; Vaughn, Levy, Coleman, & Bos, 2002), and many students with significant challenging behaviors perform below grade level in one or more academic areas (Kauffman, Cullinan, & Epstein, 1987; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). Clear associations have been established between disruptive behavior and decreased academic engagement time, low or failing grades, poor performance on standardized tests, and school retention (Levy & Chard; Shinn, Ramsey, Walker, Stieber, & O'Neill, 1987).

As compared to well-behaved peers, students with challenging behaviors are also more likely to experience social difficulties such as high rates of negative social interactions (e.g., with teachers, family members, or peers) or social rejection by peers. They may experience difficulty interpreting or responding to social cues; regulating behavior, emotions, or activity level; maintaining impulse control; and sustaining attention to instructional tasks or the external world (Cullinan & Sabornie, 2004; Dodge, 1985; Dunlap et al.; Gresham, Lane, MacMillan, & Bocian, 1999; Lane, Kalberg, & Shepcaro, 2009; Wood, Blair, & Ferro, 2009).

If left untreated, long-term outcomes for students with behavior problems are particularly bleak as academic, social, and behavioral deficits worsen over time (Nelson et al., 2004; Raver & Knitzer, 2002; US Department of Education, 2006). These students are twice as likely to drop out of high school as their typical peers (Levy & Chard, 2001), and more likely to come in contact with the juvenile justice system (Alltucker, Bullis, Close, & Yovanoff, 2006; Webster-Stratton & Taylor, 2001). School failure may ultimately lead to continuing patterns of dysfunction into adulthood, including poor employment outcomes (US Department of Education, 2006).

Need for effective intervention strategies. Persistent patterns of challenging behavior may at best remain stable over time, but are more likely to intensify in later years in the absence of targeted interventions delivered by effective intervention agents (Campbell, 1995; Dunlap et al., 2006; Kazdin, 1987; Nelson et al., 2004; Reid, 1993). Prolonged challenging behaviors are often durable and resistant to intervention efforts and traditional discipline methods, and may become increasingly entrenched in behavioral repertoires and resistant to intervention as students get older (Beard & Sugai, 2004; Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991; Ferguson, Horwood, & Ridder, 2005; Forness, et al., 2000; Kern, Childs, Dunlap, Clarke, & Falk, 1994; Nelson et al.; Tillery, Varjas, Meyers, & Smith Collins, 2010; Walker et al., 2004). Without effective intervention, increasingly resource-intensive strategies or restrictive environments may be required to manage and remediate severe challenging behaviors and related academic deficits.

The evidence is clear that a sizable number of general education students demonstrate serious behavioral needs, and general education teachers are often the first professional to identify and respond to these challenging behaviors. Given effective and feasible intervention strategies appropriately matched to student needs—and adequate training and support for

implementation—general education teachers can be key intervention agents for reducing or reversing problematic student behaviors (e.g., Nahgahgwon, Umbreit, Liaupsin, & Turton, 2010; Northup et al., 1995; Scott & Kamps, 2007). Yet to effectively reduce or reverse the predicted course of serious challenging behaviors, teachers need access to effective, sufficiently intensive, and feasible intervention methods.

Challenges surrounding behavior interventions for general education students.

Unfortunately, many general education teachers report they lack adequate training and skills to effectively respond to and manage the serious challenging behaviors they encounter (Barrett & Davis, 1995; Garrahy, Cothran, & Kullina, 2005; Lane, 2007; Lewis, 1999; Meister & Melnick, 2003; Storey, Lawry, Ashworth, Danko, & Strain, 1994). According to Westling (2010), three of four general education teachers reported feeling ill prepared to deal with challenging student behaviors. Teachers who lack confidence or training in behavior management skills are less likely to use proactive, positive strategies and more likely to respond to problem behaviors with reactive or punitive strategies—which are often ineffective for students with serious challenging behaviors (Alberto & Troutman, 2012; Martin, Linfoot, & Stephenson).

Reactive tactics such as referring students outside of the classroom (e.g., to the office, or in-school or out-of-school suspension) result in restricted access to instruction and may contribute to academic deficits for acting-out students (Polirstok & Gottlieb, 2006). Reactive strategies may also inadvertently reinforce problem behaviors or lead to increasingly problematic behavior as students engage in subsequent challenging behaviors to escape task demands or the classroom setting. While disciplinary strategies may result in immediate reductions or short-term elimination of problem behaviors, desired behavior change is unlikely to sustain over time and instead more likely to worsen (Zhang, Katsiyannis, & Herbst, 2004). Conversely, proactive

interventions aimed at teaching and reinforcing adaptive behaviors are associated with long-term behavioral improvements.

Functional Behavior Assessments and Behavior Intervention Plans

Fortunately, promising intervention strategies are available to support the needs of students with serious challenging behaviors. Functional behavioral assessments (FBA) and function-based behavior intervention plans (BIPs) directly linked to FBA results are considered the gold standard for responding to serious and ongoing challenging behaviors that are unresponsive to less intensive intervention efforts (e.g., Gage, Lewis, & Stichter, 2012; Goh & Bambara, 2012). Existing evidence supports FBAs and BIPs as an efficacious intervention method for addressing serious challenging behaviors of typically developing students in general education classrooms (Crnabori, 2014; Dunlap et al., 2006; Gage et al., 2012; Goh & Bambara, 2012; Moreno & Bullock, 2011; Reid & Nelson, 2002; Sasso, Conroy, Stichter, & Fox, 2001; Scott et al., 2004).

An FBA is a systematic and individualized assessment process conducted to identify predictable associations between the occurrence of challenging behaviors and antecedent or consequent events in the environment, and ultimately to design a highly individualized BIP with a high probability for success (Carr, 1977; Foster-Johnson & Dunlap, 1993; Miltenberger, 1997; O'Neill et al., 1997). Originating from applied behavior analysis, an underlying assumption of FBAs is that challenging behaviors occur for a legitimate reason, or to attain a specific goal or function (Ryan, Halsey, & Matthews, 2003). Thereby, the focus of the FBA process is to understand challenging behaviors based on antecedent events and maintaining functions, or the motivation behind why they occur, rather than solely on behavioral topography. Maintaining

behavioral functions may include access to (positive reinforcement) or escape from (negative reinforcement) attention, activities or tangible items, or sensory conditions (Umbreit, Ferro, Liaupsin, & Lane, 2007).

An FBA is typically comprised of multiple assessment measures, which may include direct and indirect descriptive data sources or experimental manipulations of specific maintaining variables in the environment. Examples of indirect descriptive techniques include interviews with key individuals (e.g., teachers, students, and parents), archival records reviews, behavior rating scales, and checklists. Direct descriptive measures most often involve direct observation of student behavior, including data collection and evaluation of antecedent events, occurrences of challenging behaviors, and consequences obtained following behavioral occurrences (Bijou, Peterson, & Ault, 1968). Examples of experimental manipulations include functional analysis or related experimental procedures used to confirm behavioral functions (Iwata, Dorsey, Slifer, Bauman, and Richman, 1982). After data are collected, the assessment agent aggregates and evaluates information from all sources obtained during the FBA process to describe the most prominent antecedents and behavioral functions observed to maintain target behaviors in the natural environment.

Ultimately, the assessment agent uses FBA results to construct a highly individualized BIP directly linked to hypothesized or identified antecedents and functions for challenging behaviors. Antecedent and consequent conditions in the classroom environment are modified to support more positive replacement behaviors. A quality BIP includes systematic procedures designed to teach socially appropriate replacement behaviors and ensure students access reinforcement for positive behaviors (Wheeler & Richey, 2010). Reinforcement is provided in the form of the hypothesized function that previously maintained problematic behavior, but *only*

upon the occurrence of replacement behaviors and not upon the occurrence of challenging behaviors (Ingram, Lewis-Palmer, & Sugai, 2005; Newcomer & Lewis, 2004; Scott & Kamps, 2007). Ample evidence indicates BIPs developed based upon FBA results are more effective and durable for improving student outcomes than interventions chosen without consideration of behavioral function (Carr, 1999; Didden, Korzilius, van Oorsouw, & Sturmet, 2006; Filter & Horner, 2009; Harvey, Boer, Meyer, & Evans, 2009; Ingram et al., 2005; Newcomer & Lewis).

Support for FBAs and BIPs for general education students. To address growing concerns surrounding challenging behaviors in schools, researchers, education advising agencies, and other prominent professional organizations (e.g., Division for Early Childhood (DEC) of the Council for Exceptional Children, National Association for the Education of Young Children, National Association of School Psychologists, National Association of State Directors of Education, National Institute of Education Sciences, National Institute of Health) issued formal recommendations supporting use of FBAs and BIPs for students with a wide variety of characteristics (DEC, 2007; Dunlap & Fox, 2011; Gage et al., 2012; Goh & Bambara, 2012; Kern, Hilt, & Gresham, 2004; Lane, Bruhn, Crnabori, & Sewell, 2009). While current legislation (i.e., IDEA, 1997; 2004) mandates use in specific situations for students with disabilities, acceptance continues to grow among various professionals for use of FBAs and BIPs as an effective tool for *any* student with qualifying challenging behavior, including general education students with no identified disabilities.

A substantial body of supporting literature exists to document FBAs and BIPs as an effective practice for general education students with ongoing and serious challenging behavior. Authors of recent literature reviews have evaluated and reported ample empirical evidence demonstrating positive outcomes associated with BIPs when implemented with young children

(Wood et al., 2009), elementary-aged general education students with no diagnosed educational disabilities (Crnabori, 2014), students with attention difficulties (Ervin, DuPaul, Kern, & Friman, 1998; Ervin et al., 2000), students with and at risk for emotional and behavioral disorders (Kern et al., 2004; Lane, Umbreit, & Beebe-Frankenberger, 1999; Lane, Kalberg, et al., 2009), and students with aggressive behavior (Lane et al., 2012).

Recent meta-analytic syntheses of single-subject studies evaluating the effectiveness of BIPs provide solid evidence to support use across various student characteristics and school settings, including general education students and classrooms. In a meta-analysis of 69 studies evaluating BIPs with 146 participants, Gage and colleagues (2012) reported an overall reduction of problem behaviors by 70.5% across varying student characteristics. While BIPs were shown as slightly more effective for students identified with emotional and behavioral disorders or attention-deficit hyperactivity disorder, significant intervention effects were obtained for students described as at risk with no identified disabilities. In an analysis of 83 evaluation studies documenting BIP outcomes for 145 participants, Goh and Bambara (2012) found BIPs resulted in moderate or large effects, with no statistically significant difference across varying student characteristics and educational settings (e.g., students with no diagnosed disabilities and general education classrooms).

Practical application of FBAs and BIPs for general education students. A compelling literature base continues to emerge supporting the effectiveness of BIPs for general education students under experimentally controlled conditions and researcher support (e.g., Gage et al., 2012; Goh & Bambara, 2012). Yet, translating this efficacious intervention approach into applied use in naturalistic classroom conditions reveals a research to practice gap which may pose significant challenges for school practitioners. The existing evidence supporting BIPs as an

efficacious practice may be insufficient to draw similar conclusions when FBAs and BIPs are applied by typical school personnel under real-world conditions.

The rigorous and highly resource-intensive FBA and BIP procedures described and validated in the literature may not be possible when teachers and school teams have the sole responsibility for conducting FBAs and designing and implementing BIPs in the absence of researcher support. In fact, evidence suggests training school personnel to successfully conduct FBAs and design and implement BIPs—which are typically based on principles of positive behavior support rather than traditionally used punitive or exclusionary strategies—is an arduous task (e.g., Scott et al., 2005).

Calls for a balance between empirical and social validity of FBA and BIP procedures are well documented in the literature. Researchers have long raised legitimate concerns about challenges and barriers to implementing these strategies under naturalistic school contexts, particularly in general education classrooms (e.g., Conroy, Alter, & Scott, 2009; Crnobori, 2014; Dunlap & Fox, 2011; Fox, Conroy, & Heckaman, 1998; Gresham, 2004; Kern et al., 2004; Quinn et al., 2001; Sasso et al., 2001; Scott, Alter, & McQuillan, 2010; Scott et al., 2004; Scott & Kamps, 2007). In an effort to provide reasonable guidelines that promote effective and widespread application of FBA and BIP procedures in mainstream school settings, a detailed analysis of factors surrounding social validity and feasibility of these strategies is warranted.

Challenges surrounding FBAs and BIPs for general education students. The process required for conducting valid FBAs and designing and implementing BIPs is time consuming and resource intensive for teachers to execute. These high-intensity strategies require a commitment to supporting students with the most challenging behaviors, specialized expertise and training, and ample time for assessment, planning, and implementation—each of which may

not be readily available to general education teachers in typical school contexts. Time constraints, competing duties and responsibilities, large class sizes, inadequate resources, lack of administrative or expert support, and difficulty of collaborating with families and intervention teams are among the challenges school practitioners may face when attempting to conduct FBAs and implement BIPs (Chitoyo & Wheeler, 2009).

Bambara, Goh, Kern, & Caskie (2012) conducted a survey of 293 school practitioners with experience implementing FBAs and BIPs. They identified barriers influencing the degree to which practitioners applied these strategies in practice. The three barriers reported to be the most problematic—and also the most widely experienced—included attitudes and beliefs, time and resources, and training.

To ultimately dedicate the attention and resources needed for successful execution of FBAs and BIPs, school practitioners must first contend with competing beliefs. Examples of such traditionally held beliefs include convictions that students with serious challenging behaviors should be punished or served in alternative or segregated settings, preference for use of reactive approaches, resistance to changing established or familiar behavior management strategies, attributing problem behaviors to factors outside of the teachers' control (e.g., home circumstances, identified or unidentified disability), issues of fairness, or beliefs that intervention should result in immediate and sustained decreases in problem behaviors (Bambara, Nonnemacher, & Kern, 2009). Support for proactive, individualized, and intensive approaches within general education settings must be consistent with the attitudes and beliefs at the individual teacher level as well as the wider culture of intervention teams and schools. For FBA and BIP efforts to be successful, all stakeholders must share a commitment to preventative, supportive, and inclusive practices.

Procedures needed to adequately conduct FBAs and implement BIPs are inherently rigorous and time consuming with regard to effort dedicated to one student (as compared to those allotted to peers). Teachers report insufficient time and training as main barriers to implementing educational interventions in general (Vaughn, Klingner, & Hughes, 2000), and BIPs are particularly time and resource intensive. The typical daily schedule and routines in general education classrooms are designed to address instructional, social, behavioral, and physical needs of *many* students with limited time allotted for individual student needs.

Teacher responsibilities are vast, and often insufficient time exists for planning and paperwork. FBAs and BIPs require an extensive amount of planning, observation, and documentation for one student (e.g., to conduct and write the FBA; meet to train or collaborate with others such as specialists, parents, or teams; develop and document BIPs; implement intervention strategies; and collect and analyze data to monitor outcomes). Careful consideration is required to adequately understand how well this efficacious but highly resource intensive approach can effectively fit within the constraints of general education settings.

Current levels of understanding are insufficient in regards to the supports general education teachers most need to promote effective application of FBA and BIP technology. A top priority concern lies in the need to strengthen social validity and feasibility of FBA and BIP procedures, and balance effectiveness and efficiency to sustain this valuable practice for supporting students with the most intensive behavioral needs. More information is needed about how well FBAs and BIPs fit within existing frameworks, practices, and priorities of mainstream schools and teachers, and how existing school practices may be improved to support use (Bambara et al., 2012; Crimmins & Farrell, 2006; Scott & Kamps, 2007).

Purpose and Research Questions

The goal of this study was to explore general education teacher perceptions about social validity and feasibility of FBAs and BIPs for use with elementary-aged students with serious challenging behaviors. I used survey procedures to examine teacher perceptions and address the following research questions:

1. How knowledgeable and confident are teachers about conducting FBAs and implementing BIPs?
2. How appropriate (i.e., suitable) and useful (i.e., likely to be effective) do teachers report FBAs and BIPs are for use with general education students with serious challenging behaviors?
3. How willing are teachers to conduct FBAs and implement BIPs given an optimal teaching situation with ample time and resources available to individualize for varying student needs?
4. To what extent are teachers able to conduct FBAs and implement BIPs given time and resources available within their current teaching situation?
5. What supports do teachers most need to effectively conduct FBAs and implement BIPs?
6. Do teacher perceptions vary between differential school or teacher characteristics (i.e., teacher education level, years of teaching experience, previous training or experience with FBAs and BIPs, availability of additional classroom supports, and presence or absence of school-wide positive behavior support [SWPBS])?

Research Hypotheses

I expected general education teachers to report FBAs and BIPs were an appropriate and useful strategy they would be willing to implement given an optimal teaching situation with ample time and resources available to individualize for varying student needs. In contrast, I expected teachers to report they lacked sufficient knowledge, confidence, and willingness to conduct FBAs and implement BIPs given availability of time and resources within their current teaching position. I also expected teachers to report they needed additional time, training, and assistance (e.g., from an experienced consultant or direct interventionist) to effectively conduct FBAs and implement BIPs. Finally, I expected teachers with more training or experience with FBAs and BIPs to respond to survey questions with more favorable perceptions than less experienced teachers.

CHAPTER II

METHOD

Participants

Participants included 144 general education teachers employed by 23 elementary schools within Metro Nashville Public Schools (MNPS). To be included in this study, respondents must have been a general education classroom teacher of grades kindergarten through four and any content area (academic or related arts). I did not invite non-classroom teachers (e.g., instructional specialists, coaches, interventionists, or other non-classroom roles), pre-K teachers, special education teachers, paraprofessionals, other certified or non-certified staff, or administrators to participate, and excluded respondents who indicated one of these roles.

District and Schools

MNPS, the 42nd largest school district in the United States, was an urban district comprised of 166 schools with approximately 86,000 students enrolled in grades pre-K to 12. A recent report published by the Nashville Public Education Foundation in 2016 indicated 75% of students were considered economically disadvantaged, 12% received specialized services through an individualized education plan (IEP) for an educational disability, and 16% were English-language learners. Approximately 69% of students were from minority groups, with demographic constitutions of racial subgroups estimated as: 45% Black, 32% White, 19% Hispanic, 4% Asian, and less than 1% Native American. The district employed approximately 10,300 employees, including 5,302 certified teachers. At the elementary level, the average

number of years of teacher experience was 13 years. Approximately 40% of teachers held a bachelor's degree, 37% held a Master' degree, 19% held a Master' degree plus, and less than 5% held a doctoral degree (Nashville Public Education Foundation, 2016).

Metro Nashville Public Schools was comprised of 12 geographic clusters for zoning purposes. Upon school or teacher request, a board certified behavior analysts (BCBA) assigned to each cluster of schools provided direct assistance to general education teachers for conducting FBAs, and consultative assistance for implementing BIPs. A behavior support team of BCBA's offered a two-day training series about FBAs and BIPs each month, which was listed in the district professional development catalog and thereby available to any general education teacher or other professional who opted to participate.

Survey Instrument

I drafted a survey instrument comprised of questions related to social validity and feasibility of conducting and implementing FBAs and BIPs in general education classrooms. Next, 10 BCBA's and 3 university professors with expertise in conducting or implementing FBAs and BIPs in public school settings reviewed the instrument and provided feedback. Specifically, I asked for feedback pertaining to clarity of directions and questions, organization, and whether the survey adequately encompassed pertinent factors related to utility and feasibility. Next, I held a 30-minute discussion with a group of 10 BCBA's and 3 behavior specialists employed by MNPS, a district-level administrator, and an expert university professor. I considered all recommendations provided, and incorporated identified improvements into the final, two-part survey instrument (see Appendix A).

The first page of the survey included an explanation of the study purpose, and definitions for FBAs, BIPs, and serious challenging behaviors (including examples). Part 1 contained 17 demographic items related to participant and school demographics (e.g., job descriptors, certifications held, education level, types of students taught, school descriptors) and previous training and experience with FBAs and BIPs. To maintain anonymity of responses, I did not request any identifying information about teachers or their schools.

Part 2 contained 5 sections with 44 outcome items designed to assess teacher perceptions about (a) knowledge and confidence about component strategies (e.g., direct observation of student behavior, FBA interviews, collecting behavioral data, implementing BIPs), (b) appropriateness and usefulness of FBAs and BIPs for use with general education students with serious challenging behaviors, (c) willingness to implement given an optimal teaching situation with ample time and resources available, (d) ability to implement given resources available within his or her current teaching position (e.g., time, training, or support from administrators, behavior specialists, and other staff), and (e) most needed supports for effective implementation. Each section was comprised of between 5 and 16 questions with response options on a 5-point Likert-type scale (e.g., 1 = *totally disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *totally agree*). Higher scores reflected stronger agreement or importance.

All participating teachers completed the survey using paper and pencil or electronically via a survey link generated using the Research Electronic Data Capture (REDCap) secure web application for online surveys hosted at Vanderbilt University (Harris et al., 2009). REDCap is a secure, web-based application designed to support data capture for research studies, providing (a) an intuitive interface for validated data entry; (b) audit trails for tracking data manipulation and export procedures; (c) automated export procedures for seamless data downloads to common

statistical packages; and (d) procedures for importing data from external sources (Harris et al., 2009).

Procedures

Recruitment. After receiving district-level approval, I randomly selected two elementary schools per geographic cluster to be included in this study, yielding a total of 24 total schools identified for potential inclusion. Identified schools comprised a representative sample of the demographic diversity of MNPS while also limiting the number of surveys distributed (due to district restrictions for large-scale survey research as outlined in the *Notes on Pursuing Research within MNPS* provided on the MNPS website). While I included magnet and partial-charter schools in the pool for random selection, I did not consider charter schools, alternative learning centers, or special education schools.

I contacted the lead principal from each randomly selected school via email in March 2016 to request permission to distribute the survey at his or her school site. In the text of the email request (see Appendix B), I provided principals with options of consenting or declining for me to recruit teachers for potential participation in this study. If no response was received after two email attempts, the BCBA assigned to each school requested a response in person during a school visit.

Principals from 20 schools agreed for me to invite teachers at his or her school site to complete the survey. Principals from four schools declined. Thereby, I randomly selected an additional four schools from the corresponding geographic cluster and contacted each principal using the above procedures. Principals from three schools agreed for me to invite teachers to participate, and one principal did not respond despite multiple attempts over time (email and in

person). Due to time constraints (i.e., district-level research protocols surrounding testing windows and proximity to the end of the school year), I did not contact an additional school principal from the corresponding cluster.

Survey dissemination and data collection. I provided three options for data collection to principals who agreed for me to invite his or her teachers to complete the survey: (a) dissemination via email with a link to complete the survey electronically, (b) paper and pencil during grade-level planning periods, or (c) paper and pencil during a regularly scheduled faculty meeting.

Principals from 19 schools granted permission for me to contact teachers electronically via an email request to complete the survey. I obtained email lists for each general education teacher in the school from district databases and emailed study details including the survey link directly to all general education teachers at each school. In one case, a school principal requested I send the email directly to her to forward to teachers. The email invitation for participation included a brief overview of the purpose of the survey, estimated time for completion, assurance of confidentiality, and a link to the online survey (see Appendix C). All electronic surveys were distributed during April and May 2016. To encourage responding, email reminders were sent to all recruited participants 2-4 weeks after initial distribution. Data collection continued until all teachers recruited via email had at least 6 weeks to voluntarily complete the survey.

Three principals chose paper and pencil data collection during 15 min of a regularly scheduled faculty meeting. One principal chose paper and pencil data collection during a full day of regularly scheduled, grade-level teacher planning periods. I disseminated paper and pencil surveys during two faculty meetings in April and May 2016, and a member of the research team disseminated surveys during a faculty meeting in April 2016. The principal and I disseminated

paper and pencil surveys for teachers to complete following grade-level planning meetings at one school during April 2016. All paper and pencil surveys were anonymously submitted by teachers, placed upside down as they left respective faculty or grade-level meetings. I did not review or categorize data by school upon collection. A member of the research team entered all paper and pencil survey responses into REDCap (Harris et al., 2009), with no potential to be linked to data collection method or individual school.

I distributed electronic survey links to 620 teachers from 19 schools and received data for 80 survey responses, yielding a response rate of approximately 13%. I distributed paper and pencil surveys to 91 teachers from four schools and received data for 84 surveys responses, yielding a response rate of 92%. Thus, I distributed survey invitations (electronic and paper and pencil) to 711 teachers at 23 schools. A total of 164 surveys were returned, with an overall response rate of 23%.

Data Analysis

I conducted preliminary analyses to identify missing data and confirm all cases met inclusion criteria. I excluded eight surveys not meeting inclusion criterion for teacher characteristics due to contradictory or insufficient evidence to verify participants were general education classroom teachers (i.e., one respondent reported he or she taught pre-K; five respondents reported they were not general education teachers and selected *other* for role; and two respondents reported they were not general education teachers and selected *instructional coach* for role). Further examination revealed 43 surveys were missing one or more demographic or outcome items (range: 1-44). I excluded surveys with three or more missing items, eliminating

12 additional surveys. Thus, I eliminated a total of 20 surveys, and included 144 surveys in the final sample for data analysis.

I computed sample characteristics by calculating the percentage of respondents and response rate for all demographic categories, including (a) school and classroom characteristics, (b) teacher characteristics, and (c) previous training and experience with FBAs and BIPs. Items in the school and classroom characteristics category included urban or suburban, presence or absence of SWPBS, components of SWPBS present, number of students taught, number of students with challenging behaviors taught, percentage of students with economic need taught, presence or absence of additional supports in classroom, and specific supports (co-teaching, interventionist, or other staff support). Teacher characteristics included primary job role, highest level of education, endorsements held, grade level taught, and years of teaching experience. The previous training and experience category included attendance in formal FBA and BIP training, number of days of training, additional training, and experience with FBAs and BIPs.

I identified 5 predictor variables for analysis, including level of education, years of teaching experience, previous training or experience with FBAs and BIPs, availability of additional classroom supports, and presence or absence of SWPBS. I created dichotomous variables for highest level of education (i.e., bachelor's or lower = 0, master's or higher = 1), years of teaching experience (i.e., 5 years or less = 0, 6 years or more = 1), and presence or absence of additional classroom supports (i.e., no additional supports = 0, any additional supports = 1). I assessed all predictor variables for independence, and found none to be moderately or highly correlated ($r \geq 0.3$). See Table 1 for a bivariate correlation matrix for all predictor variables.

Table 1
Bivariate Correlation Matrix for Predictor Variables

Variable	1	2	3	4	5
Experience with FBA process	–				
Level of education	-.23	–			
Teaching experience	-.08	.10	–		
Additional supports	-.08	-.23	.02	–	
SWPBS	-.07	.13	.13	-.24	–

Experience with FBAs (1 = previous experience); Level of education (1 = master's or higher); Teaching experience (1 = more than 5 years); Additional supports (1 = additional supports available); SWPBS (1 = SWPBS present in school).

I categorized outcome variables (i.e., teacher perceptions) into five domains, including: (a) knowledge and confidence, (b) appropriateness and usefulness, (c) willingness to implement given an optimal teaching situation, (d) ability to implement given resources available within current teaching role, and (e) most needed supports. I computed descriptive statistics using SPSS version 9.0 to examine teacher perceptions for all outcome items in each domain.

Next, I assessed outcome variables for co-linearity, and examined results for correlations between similar items. I aggregated 14 variables with moderate to strong correlations ($r \geq 0.6$) indicating they measured similar constructs. For example, questions about necessary time to conduct an FBA and necessary time to design a BIP were moderately correlated ($r = 0.62$), and questions about necessary training to conduct an FBA and necessary training to design a BIP were moderately correlated ($r = 0.61$). Thus, I combined time and training variables respectively for conducting FBAs and designing BIPS. Questions about appropriateness of FBA strategies and usefulness of FBA strategies were highly correlated ($r = 0.88$), and questions about appropriateness of BIP strategies and usefulness of BIP strategies were highly correlated ($r = 0.91$). Thus, I combined appropriateness and usefulness variables respectively for FBAs and BIPS. See Table 2 for all aggregated items and corresponding correlations between original items.

Table 2
Correlations between Combined Items

Survey item	Correlation
I feel knowledgeable and confident about direct observation of student behavior with data collection.	.72
I feel knowledgeable and confident about collecting behavioral data.	
I feel knowledgeable and confident about FBA interviews.	.72
I feel knowledgeable and confident about records reviews.	
I feel knowledgeable and confident about implementing BIPs.	.74
I feel knowledgeable and confident about monitoring BIP outcomes.	
An FBA would be an appropriate strategy for a general education student.	.89
An FBA would be a useful strategy for a general education student with serious challenging behavior.	
A BIP would be an appropriate strategy for a general education student with serious challenging behavior.	.91
A BIP would be a useful strategy for a general education student with serious challenging behavior.	
Assistance with analyzing FBA data is needed to effectively conduct FBAs and implement BIPs.	.83
Assistance with identifying BIP strategies based upon FBA results is needed.	
Consultative feedback and support from a behavior specialist is needed.	.84
Direct implementation assistance for BIP implementation from a behavior specialist is needed.	
I would be willing to independently conduct necessary tasks for an FBA.	.73
I would be willing to participate as part of a team to conduct necessary tasks for an FBA.	
Conducting an FBA for a student with challenging behaviors is a high priority for me.	.64
Implementing a BIP for a student with challenging behaviors is a high priority for me.	
I have necessary administrative support for conducting an FBA.	.71
I have necessary administrative support to implement a BIP.	
I have necessary support from a behavioral specialist to conduct an FBA.	.67
I have necessary support from a behavioral specialist to design a BIP.	
I have necessary support from other staff members to conduct an FBA.	.78
I have necessary support from other staff members to design a BIP.	
I have necessary time for conducting FBA.	.62
I have necessary time for designing BIP.	
I have necessary training for conducting FBA.	.61
I have necessary training for designing BIP.	

Finally, I conducted independent samples *t*-tests to compare the two samples dichotomized for each of five predictor variables to all outcome variables (i.e., teacher education level, years of teaching experience, availability of additional classroom supports, previous experience with FBAs and BIPs, and presence or absence of SWPBS; $p < .01$). I computed Cohen's *d* (Cohen, 1988) to assess magnitude of effect sizes.

CHAPTER III

RESULTS

Sample Characteristics

Most (74.5%) teachers who completed surveys for this study taught in an urban school ($n = 105$), and fewer (25.5%) taught in a suburban school ($n = 36$). A majority (70.6%) of teachers indicated their school had a model of SWPBS in place ($n = 101$), and 29.4% reported their school did not implement SWPBS ($n = 42$). Of the SWPBS schools, 67.1% had commonly defined rules and expectations ($n = 96$), 38.5% had a systematic plan for teaching rules and expectations ($n = 55$), 50.4% had a systematic method for reinforcing or acknowledging positive behaviors ($n = 72$), and 23.8% had multiple tiers of interventions available ($n = 34$). Most (70.8%) teachers reported they had one or more classroom supports available for implementing individualized student interventions ($n = 102$), and 29.2% of teachers indicated they had no additional supports ($n = 42$). Of the teachers who indicated they had additional supports, 23.6% had one hr or less of co-teaching per day ($n = 34$), 13.9% had one to three hr of co-teaching ($n = 20$), 3.5% had more than 3 hr of co-teaching ($n = 5$), 20.8% had interventionist support in the classroom ($n = 30$), and 36.1% indicated they had other staff support in the classroom ($n = 52$).

Most teachers reported they taught 15 to 25 students at a time, with 41.7% indicating 15 to 20 ($n = 60$), and 52.1% indicating 20 to 25 ($n = 75$). Few teachers reported they taught fewer than 15 (2.8%; $n = 4$), or more than 25 students (3.5%; $n = 5$) at a time. The majority of teachers (81.3%) reported they had three or more students with challenging behaviors in the classroom during the last three years ($n = 117$); 13.2% reported two students with challenging behavior ($n =$

19), and 4.9% reported one student with challenging behavior ($n = 7$). One teacher reported not to have any students with challenging behavior during the last year. About one third (32.2%) of teachers reported all or 100% of their students were economically disadvantaged ($n = 46$), 40.6% reported 75% had economic need ($n = 58$), 21% reported 50% had economic need ($n = 30$), and 6.3% of teachers reported 25% or fewer students had economic need ($n = 9$).

Of the 144 teachers who participated in this study, 86.8% were general education teachers ($n = 125$) and 13.2% were related arts teachers ($n = 19$). The sample distribution was fairly even for grade-level taught, with 16.1% comprised of kindergarten teachers ($n = 23$), 18.2% first grade teachers ($n = 26$), 17.5% second grade teachers ($n = 25$), 18.2% third grade teachers ($n = 26$), 15.4% fourth grade teachers ($n = 22$), and 14.7% teachers of multiple grades ($n = 21$). One teacher did not specify grade level taught. The majority (61.8%) of the sample reported they held elementary education (K-6) endorsements ($n = 89$), 20.8% held early development learning (PreK-K) or early childhood education (PreK-3) endorsements ($n = 30$), 4.9% held special education endorsements ($n = 7$), 21.5% held general education academic endorsements ($n = 31$), and 41.7% held occupational or other endorsements (e.g., for teaching gifted or early language learners; $n = 60$).

The sample mean for number of years of experience was 12.3 years ($SD = 9.7$, range = 1-36). Thirteen percent were first-year teachers ($n = 18$), 25.2% had between two and five years of experience ($n = 35$), and 61.9% had more than five years' experience ($n = 86$). Five teachers did not report years of experience. One third (33.3%) of teachers reported highest level of education as a bachelor's degree or less ($n = 48$, including one teacher who indicated alternative teacher preparation program), 58.3% held a master's degree or hours beyond a master's degree ($n = 84$), 4.9% held an educational specialist degree ($n = 7$), and 3.5% held a doctoral degree ($n = 5$).

More than half (53.5%) of teachers reported they had participated in the FBA process before ($n = 77$), and 46.5% of sampled teachers had no previous experience with the FBA process. The majority of the sample (78.5%) reported they did not have any formal FBA or BIP training ($n = 113$). Of the 21.5% of teachers who reported formal FBA or BIP training ($n = 31$), 71% attended one day ($n = 22$), 13% attended two days ($n = 4$), and 16.1% attended more than two days ($n = 5$) of training. More than half of sampled teachers reported other training related to FBAs and BIPs, including 22.9% via individualized training or feedback from a behavior specialist ($n = 33$); 19.4% via some other form of training ($n = 28$); 18.8% via books, professional literature, or other training materials ($n = 27$); 7.6% via follow-up consultation after attending formal training ($n = 11$); 6.3% via college or university training ($n = 9$); and 4.2% via a conference ($n = 6$). Less than half (40.3%) reported they had not received formal or any other type of FBA or BIP training.

How Knowledgeable and Confident are Teachers about FBAs and BIPs?

Table 3 summarizes overall teacher ratings for the knowledge and confidence domain, including percentage of respondents indicating each Likert-type response, and means and standard deviations for all survey items. The distribution was skewed in the direction of *not confident* with means across all items in the knowledge and confidence domain ranging between 2.1 and 3.0 (1 = *not at all*, 3 = *neutral*, 5 = *very*), and standard deviations ranging between 0.9 and 1.2. The most frequently reported response category was *neutral* for all items in the knowledge and confidence domain (range: 33.8% to 44.1%), with the exception of knowledge and confidence with designing BIPs, for which *not at all confident* was the most frequently reported response.

Table 3

Descriptive Statistics for the Knowledge and Confidence Domain

Survey item	Percentage selecting					<i>M (SD)</i>
	Not at all confident	Not confident	Neutral	Confident	Very confident	
Direct observation of student behavior	15.3%	13.2%	41.0%	25.0%	5.6%	2.92 (1.10)
Collecting student behavioral data ^a	18.9%	9.8%	37.8%	26.6%	7.0%	2.93 (1.19)
Behavior rating scales or questionnaires	13.2%	10.4%	43.1%	27.1%	6.3%	3.03 (1.08)
FBA interviews	25.0%	20.1%	39.6%	13.9%	1.4%	2.47 (1.06)
Records reviews ^a	21.0%	23.8%	44.1%	9.1%	2.1%	2.48 (0.99)
Systematic manipulations of classroom conditions	14.6%	18.1%	36.1%	25.0%	6.3%	2.90 (1.12)
Designing BIPs ^a	39.4%	21.1%	33.8%	4.2%	1.4%	2.07 (1.02)
Implementing BIPs ^a	31.0%	16.9%	34.5%	16.2%	1.4%	2.40 (1.13)
Using behavioral data to monitor BIP outcomes ^a	25.4%	26.1%	37.3%	9.9%	1.4%	2.36 (1.01)

^a Data were not available for all respondents in categories indicated (range for $n = 142-143$).

Between 13.2% and 39.4% of teachers reported they were *not at all confident* with FBA and BIP procedures listed in survey items, 9.8% to 26.1% reported they were *not confident*, 4.2% to 27.1% reported they were *confident*, and 1.4% to 7.0% reported they were *very confident*. Overall, teachers reported they were most knowledgeable and confident about direct observation of student behavior, behavior rating scales or questionnaires, collecting behavioral data, and systematically manipulating classroom conditions. Teachers indicated they were least confident about designing BIPs based on FBA results and implementing BIPs in their classrooms.

Table 4 lists correlations and corresponding Cohen's d values for all predictor and outcome variables in the knowledge and confidence domain. Teachers who had previously participated in the FBA process reported significantly higher knowledge and confidence with FBA and BIP procedures assessed for all survey items in this domain (range for $d = -0.6$ to -0.9 , $p = < .01$).

Table 4
Differences in the Knowledge and Confidence Domain

Survey item	Relationship to other factors				
	<i>Level of education</i>	<i>Years teaching</i>	<i>Any classroom support</i>	<i>SWPBS</i>	<i>Experience with FBA process</i>
Direct observation and collecting student behavioral data ^{ab}	0.01	-0.20	-0.33	-0.12	-0.81**
Behavior rating scales or questionnaires	-0.01	-0.24	-0.19	0.01	-0.77**
FBA interviews and records reviews ^{ab}	-0.12	-0.25	-0.31	-0.11	-0.94**
Systematic manipulations of classroom conditions	0.22	-0.14	-0.39	-0.37	-0.67**
Designing BIPs ^b	-0.17	-0.03	-0.11	-0.11	-0.64**
Implementing BIPs and using data to monitor outcomes ^{ab}	0.10	-0.10	-0.37	-0.19	-0.77**

^a Aggregated variable

^b Data were not available for all respondents in categories indicated (range for $n = 142-143$).

All predictor variables were recorded as a Cohen's d effect size.

* Statistical tests were significant at $p < .01$

** Statistical tests were significant at $p < .001$

How Appropriate and Useful do Teachers Perceive FBAs and BIPs?

Table 5 summarizes overall teacher ratings for the appropriate and useful domain, including percentage of respondents indicating each response, and means and standard deviations for all survey items. The distribution was slightly skewed toward *agree* with means across items ranging between 3.1 and 3.5 (1 = *totally disagree*, 3 = *neutral*, 5 = *totally agree*), and standard deviations ranging between 0.9 and 1.1. The most frequently reported response category was *neutral* for all items in the appropriate and useful domain (range: 34.0% to 55.6%).

Table 5
Descriptive Statistics for the Appropriate and Useful Domain

Survey item	Percentage selecting					<i>M (SD)</i>
	Totally disagree	Disagree	Neutral	Agree	Totally agree	
An FBA would be appropriate ^a	7.6%	6.9%	34.0%	30.6%	20.1%	3.49 (1.13)
An FBA would be useful ^a	6.3%	4.9%	38.9%	31.9%	17.4%	3.50 (1.04)
A BIP would be appropriate ^a	8.3%	4.2%	39.6%	31.3%	15.3%	3.42 (1.07)
A BIP would be useful	7.6%	3.5%	45.1%	27.8%	16.0%	3.41 (1.05)
A BIP would be more appropriate and useful than one not based on an FBA ^a	7.6%	9.0%	55.6%	18.1%	8.3%	3.11 (0.96)

^aData were not available for all respondents in categories indicated (range for $n = 142-143$).

Between 8.3% and 20.1% of teachers reported they *totally agreed* FBAs or BIPs would be appropriate and useful, 18.1% to 31.9% reported they *agreed*, 3.5% to 9.0% reported they *disagreed*, and 6.3% to 8.3% reported they *totally disagreed*. Teachers most agreed that FBAs would be appropriate and useful for general education students with serious challenging behavior, and most disagreed that BIPs were more appropriate and useful than interventions not based on FBA results.

Table 6 lists correlations and corresponding Cohen's *d* values for all predictor and outcome variables in the appropriate and useful domain. No significant correlations were found for this domain ($p < .01$).

Table 6
Differences in the Appropriate and Useful Domain

Survey item	Relationship to other factors				
	<i>Level of education</i>	<i>Years teaching</i>	<i>Any classroom support</i>	<i>SWPBS</i>	<i>Experience with FBA process</i>
An FBA would be appropriate and useful ^{ab}	-0.11	0.18	-0.05	-0.11	-0.06
A BIP would be appropriate and useful ^{ab}	-0.18	0.09	0.04	0.00	-0.12
A BIP would be more appropriate and useful than one not based on an FBA ^b	0.11	0.30	-0.05	0.15	-0.15

^a Aggregated variable

^b Data were not available for all respondents in categories indicated (range for $n = 142-143$).

All predictor variables were recorded as a Cohen's d effect size.

How Willing are Teachers to Conduct FBAs and BIPs given an Optimal Teaching Situation?

Table 7 summarizes overall teacher ratings for the willingness given an optimal teaching situation domain, including percentage of respondents indicating each response, and means and standard deviations for all survey items. The distribution was slightly skewed in the direction of *agree* with means across all items in the willingness domain ranging between 3.0 and 3.6 (1 = *totally disagree*, 3 = *neutral*, 5 = *totally agree*), and standard deviations ranging between 1.0 and 1.1. The most frequently reported response categories were *neutral* and *agree* for items in the willingness domain (range for *neutral*: 27.1% to 39.6%; range for *agree*: 20.1% to 38.2%).

Table 7
Descriptive Statistics for the Willingness to Implement Domain

Survey item	Percentage selecting					<i>M (SD)</i>
	Totally disagree	Disagree	Neutral	Agree	Totally agree	
Independently conduct necessary tasks for an FBA	9.0%	13.2%	29.2%	34.7%	13.9%	3.31 (1.14)
Participate as part of a team to conduct FBA tasks	4.9%	10.4%	27.1%	37.5%	20.1%	3.58 (1.08)
Collect ongoing behavioral data	8.3%	6.9%	29.9%	38.2%	16.7%	3.48 (1.11)
Wait to intervene until an FBA was completed	10.4%	18.8%	39.6%	20.1%	11.1%	3.03 (1.12)
Temporarily manipulate the conditions in my classroom ^a	6.9%	9.7%	35.4%	31.3%	15.3%	3.39 (1.08)
Implement a BIP in my classroom ^a	4.2%	6.3%	33.3%	31.9%	22.9%	3.64 (1.04)

^a Data were not available for all respondents in categories indicated (range for $n = 142-143$).

Between 11.1% and 22.9% of teachers reported they *totally agreed* for willingness to conduct and implement FBA and BIP procedures given an optimal teaching situation, 6.3% to 18.8% reported they *disagreed*, and 4.2% to 10.4% reported they *totally disagreed*. Teachers reported they most agreed they were willing to participate as part of a team to conduct FBA tasks and implement a BIP in their classroom. Teachers reported they were least willing to wait to intervene until an FBA was completed.

Table 8 lists correlations and corresponding Cohen's *d* values for all predictor and outcome variables in the willingness domain. No significant correlations were found for this domain ($p < .01$).

Table 8
Differences in the Willingness to Implement Domain

Survey item	Relationship to other factors				
	<i>Level of education</i>	<i>Years teaching</i>	<i>Any classroom support</i>	<i>SWPBS</i>	<i>Experience with FBA process</i>
Conduct necessary FBA tasks independently or as part of a team ^a	0.07	0.37	0.08	-0.31	0.09
Collect ongoing behavioral data	0.06	0.12	0.11	-0.11	0.02
Wait to intervene until an FBA was completed	0.04	0.19	0.05	0.09	0.36
Temporarily manipulate the conditions in my classroom ^b	-0.11	0.06	0.24	-0.06	0.05
Implement a BIP in my classroom ^b	-0.11	0.28	0.05	-0.07	-0.16

^a Aggregated variable

^b Data were not available for all respondents in categories indicated (range for $n = 142-143$).

All predictor variables were recorded as a Cohen's d effect size.

How Able are Teachers to Conduct FBAs and BIPs given their Current Situation?

Table 9 summarizes overall teacher ratings for the ability given resources available within current teaching position domain, including percentage of respondents indicating each Likert-type response and means and standard deviations for all survey items. The distribution was skewed in the direction of *disagree* with means across all items ranging between 1.7 and 3.1 (1 = *totally disagree*, 3 = *neutral*, 5 = *totally agree*), and standard deviations ranging between 0.9 and 1.2. The most frequently reported response category was *neutral* for most items in the ability domain (range: 18.8% to 38.9%), with the exception of four items about ability to conduct FBA and BIP tasks given available time and training, in which *totally disagree* was the most frequently reported response (range: 12.5% to 52.8%).

Table 9
Descriptive Statistics for the Ability to Implement Domain

Survey item	Percentage selecting					<i>M (SD)</i>
	Totally disagree	Disagree	Neutral	Agree	Totally agree	
I have necessary time to conduct an FBA ^a	48.6%	25.0%	20.8%	3.5%	1.4%	1.83 (0.97)
I have necessary time to design a BIP directly related to FBA results	44.4%	27.1%	23.6%	4.9%	0.0%	1.89 (0.93)
I have necessary time to implement a BIP in my classroom ^a	28.5%	21.5%	38.9%	9.0%	1.4%	2.33 (1.03)
I have necessary training to conduct an FBA	51.4%	20.8%	22.2%	4.9%	0.7%	1.83 (0.99)
I have necessary training to design a BIP	52.8%	24.3%	18.8%	4.2%	0.0%	1.74 (0.91)
I have necessary training to implement a BIP in my classroom	38.9%	20.1%	32.6%	7.6%	0.7%	2.11 (1.04)
I have necessary consultative support from a behavioral specialist ^a	20.8%	19.4%	37.5%	16.0%	4.9%	2.64 (1.13)
I have necessary support from a behavioral specialist to design a BIP	23.6%	23.6%	32.6%	17.4%	2.8%	2.52 (1.12)
I have necessary support from a behavioral specialist to implement a BIP	24.3%	18.8%	36.1%	16.0%	4.9%	2.58 (1.16)
I have necessary support from other staff members to conduct an FBA ^a	18.8%	20.8%	43.1%	12.5%	4.2%	2.62 (1.06)
I have necessary support from other staff members to design a BIP ^a	22.2%	19.4%	40.3%	15.3%	2.1%	2.55 (1.07)
I have necessary support from other staff members to implement a BIP	17.4%	19.4%	45.1%	14.6%	3.5%	2.67 (1.04)
I have necessary administrative support to conduct an FBA ^a	23.6%	17.4%	39.6%	14.6%	4.2%	2.58 (1.13)
I have necessary administrative support to implement a BIP	18.1%	20.8%	38.9%	16.0%	6.3%	2.72 (1.13)
Conducting an FBA for a student with challenging behaviors is a high priority	15.3%	11.1%	43.8%	24.3%	5.6%	2.94 (1.09)
Implementing a BIP for a student with challenging behaviors is a high priority ^a	12.5%	9.7%	39.6%	29.9%	7.6%	3.10 (1.11)

^aData were not available for all respondents in categories indicated (range for $n = 142-143$).

Between 9.7% and 27.1% of teachers reported they *disagreed* with items in the ability domain, 3.5% to 29.9% reported they *agreed*, and 0% to 7.6% reported they *totally agreed*. Teachers reported they most agreed that conducting FBAs and implementing BIPs for students with serious challenging behaviors was a high priority within their current teaching position. Teachers least agreed they had adequate time or training to conduct FBAs and design BIPs within their teaching role.

Table 10 lists correlations and corresponding Cohen's *d* values for all predictor and outcome variables in the ability given resources available within current teaching position domain. Teachers who indicated they had any additional classroom support for addressing individual student needs reported they had more time, training, and support to conduct FBAs and implement BIPs (range for $d = -0.5$ to -0.7 , $p < .01$) than teachers who reported they did not have additional classroom supports. Teachers with a bachelor's degree reported they had more support from other staff members to implement BIPs ($d = 0.46$, $p < .01$) in comparison to teachers with a master's degree or higher level of education. Teachers who taught in a school with a SWPBS model in place reported they had more time to conduct FBAs and design BIPs ($d = -0.7$, $p < .01$), and FBAs and BIPs were a higher priority than for teachers who did not teach in a school with SWPBS ($d = -0.6$, $p < .01$). Teachers who taught in a school with SWPBS also reported they had more training to conduct FBAs and design BIPs ($d = -0.6$, $p < .01$).

Table 10
Differences in the Ability to Implement Domain

Survey item	Relationship to other factors				
	<i>Level of education</i>	<i>Years teaching</i>	<i>Any classroom support</i>	<i>SWPBS</i>	<i>FBA process</i>
I have necessary time to conduct an FBA and design a BIP ^{ab}	0.21	0.44*	-0.67**	-0.70**	0.11
I have necessary time to implement a BIP in my classroom ^b	0.42	0.28	-0.66**	-0.32	0.06
I have necessary training to conduct an FBA and design a BIP ^a	0.19	0.17	-0.73**	-0.59*	-0.51*
I have necessary training to implement a BIP in my classroom	0.11	0.02	-0.58*	-0.31	-0.42*
I have necessary support from a behavior specialist to conduct an FBA and design a BIP ^{ab}	0.19	-0.07	-0.57*	-0.05	-0.39
I have necessary support from a behavioral specialist to implement a BIP	0.31	0.00	-0.63**	-0.11	-0.29
I have necessary support from other staff members to conduct an FBA and design a BIP ^{ab}	0.36	0.12	-0.73**	-0.16	-0.23
I have necessary support from other staff members to implement a BIP ^a	0.46*	0.09	-0.52*	-0.23	-0.11
I have necessary administrative support to conduct an FBA and implement a BIP ^{ab}	0.25	0.04	-0.46*	-0.13	-0.15
Conducting an FBA and implementing a BIP is a high priority for me ^{ab}	0.26	0.26	-0.57**	-0.59**	-0.15

^a Aggregated variable

^b Data were not available for all respondents in categories indicated (range for $n = 142-143$).

All predictor variables were recorded as a Cohen's d effect size.

* Statistical tests were significant at $p < .01$

** Statistical tests were significant at $p < .00$

In an effort to examine whether teacher perceptions varied between teachers of differing grade levels or areas (i.e., related arts teachers), or teachers with or without additional supports for addressing individual student needs, I examined differences between means and percentages of responses for all items in this domain. I examined the response distribution for grade level taught (kindergarten, first, second, third, fourth, and related arts; see Table 11) and additional supports by individual support (i.e., co-teaching less than 1 hr per day, co-teaching 1 to 3 hr, co-teaching greater than 3 hr, interventionist support, other staff support, any classroom support, and no additional classroom support; see Table 12). No significant or noteworthy differences were observed between means for differing groups. Thereby I opted not to include analyses of grade level taught as a predictor variable, and retained *additional supports* as a dichotomous predictor variable (i.e., no supports, any supports) for this domain and all other domains.

Table 11
Supports Available in Current Teaching Position by Grade Level

Support	<i>M (SD)</i>					
	<i>Kindergarten</i>	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>Related Arts</i>
I have necessary time for an FBA.	1.65 (0.78)	1.92 (0.86)	1.88 (1.13)	1.81 (0.94)	1.86 (1.21)	1.85 (0.93)
I have necessary training for an FBA.	1.74 (0.96)	1.85 (0.88)	1.84 (1.11)	2.08 (1.16)	1.73 (0.77)	1.65 (0.99)
I have necessary administrative support for an FBA.	2.74 (0.96)	2.52 (1.16)	2.52 (1.23)	2.85 (1.01)	2.50 (1.01)	2.35 (1.46)
I have necessary support from a behavioral specialist for an FBA.	2.87 (1.14)	2.69 (1.19)	2.54 (1.10)	2.65 (1.13)	2.43 (0.87)	2.70 (1.38)
I have necessary support from other staff members for an FBA.	2.70 (0.93)	2.81 (1.02)	2.38 (1.17)	2.54 (0.99)	2.73 (1.03)	2.65 (1.31)
Conducting an FBA is a high priority for me.	3.35 (0.88)	3.08 (1.02)	3.08 (0.95)	2.77 (1.37)	2.86 (0.99)	2.45 (1.11)
I have necessary time to design a BIP.	1.87 (1.01)	1.88 (0.77)	1.72 (0.84)	2.19 (1.06)	1.73 (0.88)	1.85 (0.93)
I have necessary training to design a BIP.	1.52 (0.79)	1.96 (0.96)	1.56 (0.77)	1.96 (1.08)	1.64 (0.79)	1.70 (0.86)
I have necessary support from a behavioral specialist for a BIP.	2.65 (1.15)	2.85 (1.26)	2.44 (1.08)	2.50 (1.03)	2.32 (0.99)	2.35 (1.23)
I have necessary support from other staff members for a BIP.	2.48 (0.99)	2.77 (1.14)	2.48 (1.05)	2.65 (1.06)	2.64 (1.05)	2.32 (1.16)
I have necessary time to implement a BIP.	2.17 (1.03)	2.32 (0.90)	2.32 (1.11)	2.35 (1.02)	2.05 (1.00)	2.80 (1.06)
I have necessary training to implement a BIP.	1.74 (0.96)	2.35 (1.02)	2.04 (1.11)	2.12 (0.95)	1.95 (1.00)	2.45 (1.11)
I have necessary behavior specialist support to implement a BIP.	2.61 (1.34)	2.77 (1.21)	2.52 (1.16)	2.58 (1.03)	2.27 (0.88)	2.85 (1.35)
I have necessary other-staff support to implement a BIP.	2.57 (1.04)	2.85 (1.08)	2.52 (1.05)	2.65 (1.02)	2.68 (1.04)	2.85 (1.09)
I have necessary administrative support to implement a BIP.	2.74 (1.21)	2.88 (1.14)	2.68 (1.22)	2.77 (0.91)	2.41 (1.11)	2.85 (1.27)
Implementing a BIP is a high priority for me.	3.39 (1.12)	3.46 (0.95)	2.88 (1.15)	2.85 (1.19)	3.05 (0.95)	3.10 (1.12)

5-pt scale (5 = totally agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = totally disagree).

Table 12

Supports Available in Current Teaching Situation by Individual Supports

Support	<i>M (SD)</i>						
	No Supports (<i>n</i> = 42)	Any Supports (<i>n</i> = 102)	Coteaching < 1 hr (<i>n</i> = 34)	Coteaching 1 to 3 hrs (<i>n</i> = 20)	Coteaching > 3 hrs (<i>n</i> = 5)	Intervention Assistance (<i>n</i> = 30)	Other Staff Assistance (<i>n</i> = 52)
I have necessary time for an FBA.	1.45 (0.83)	1.99 (0.98)	2.00 (0.87)	1.90 (1.02)	2.40 (1.14)	2.17 (1.15)	2.06 (1.06)
I have necessary training for an FBA.	1.38 (0.71)	2.01 (1.03)	1.97 (0.90)	1.80 (0.95)	3.00 (0.71)	2.3 (1.18)	2.04 (1.10)
I have necessary administrative support for an FBA.	2.26 (0.99)	2.71 (1.16)	2.82 (1.18)	2.50 (1.19)	3.00 (1.00)	3.13 (1.01)	2.85 (1.21)
I have necessary support from a behavioral specialist for an FBA.	2.22 (1.08)	2.81 (1.11)	2.76 (1.16)	2.50 (1.19)	3.22 (0.84)	3.27 (0.98)	2.94 (1.14)
I have necessary support from other staff members for an FBA.	2.14 (1.12)	2.82 (0.97)	2.85 (1.10)	2.60 (0.99)	2.80 (0.84)	3.27 (0.78)	3.11 (0.96)
Conducting an FBA is a high priority for me.	2.52 (1.17)	3.11 (1.01)	3.32 (0.91)	3.00 (1.26)	3.40 (0.89)	3.30 (0.70)	2.98 (1.11)
I have necessary time to design a BIP.	1.50 (0.83)	2.05 (0.93)	2.03 (0.83)	2.05 (1.05)	2.60 (0.89)	2.23 (1.01)	2.02 (0.94)
I have necessary training to design a BIP.	1.40 (0.77)	1.88 (0.93)	1.88 (0.95)	1.90 (1.02)	2.40 (0.89)	2.07 (0.91)	1.87 (0.95)
I have necessary support from a behavioral specialist for a BIP.	2.14 (1.12)	2.68 (1.08)	2.74 (1.08)	2.70 (1.13)	2.80 (0.84)	3.00 (0.91)	2.75 (1.14)
I have necessary support from other staff members for a BIP.	2.05 (0.99)	2.76 (1.03)	2.91 (1.07)	2.70 (1.26)	2.80 (0.84)	3.10 (0.82)	2.87 (1.07)
I have necessary time to implement a BIP.	1.86 (1.00)	2.52 (0.99)	2.52 (0.97)	2.55 (1.15)	2.60 (0.55)	2.53 (0.97)	2.61 (1.01)
I have necessary training to implement a BIP.	1.69 (1.07)	2.28 (0.98)	2.24 (0.99)	2.30 (1.08)	2.60 (0.55)	2.47 (0.91)	2.31 (1.04)
I have necessary behavior specialist support to implement a BIP.	2.07 (1.18)	2.79 (1.09)	2.97 (1.11)	2.55 (1.15)	3.00 (0.71)	3.23 (0.91)	2.83 (1.12)
I have necessary other-staff support to implement a BIP.	2.29 (1.11)	2.83 (0.97)	2.94 (1.07)	2.65 (1.09)	3.00 (0.71)	3.17 (0.75)	2.96 (0.97)
I have necessary administrative support to implement a BIP.	2.38 (1.23)	2.85 (1.06)	2.85 (1.13)	2.85 (1.23)	3.20 (1.11)	3.10 (0.92)	2.98 (1.08)
Implementing a BIP is a high priority for me.	2.69 (1.28)	3.28 (0.97)	3.41 (0.96)	3.16 (1.07)	3.60 (1.14)	3.50 (0.86)	3.27 (1.01)

5-pt scale (5 = totally agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = totally disagree).

What Supports do Teachers Most Need to Effectively Conduct FBAs and Implement BIPs?

Table 13 summarizes overall teacher ratings for the most needed supports domain, including percentage of respondents indicating each response and means and standard deviations for all survey items. The distribution was skewed in the direction of *very important* with means for all items in the supports needed domain ranging between 4.3 and 4.4 (1 = *not at all important*, 3 = *neutral*, 5 = *very important*), and standard deviations ranging between 0.8 and 0.9. The most frequently reported response category was *very important* for all items (range: 52.8% to 61.8%). Between 21.5% and 27.1% of teachers reported supports listed in survey items were *important*, 13.9% to 18.8% reported they were *neutral*, 0% to 1.0% reported supports listed were *not important*, and 0.7% reported supports listed were *not at all important*. Teachers reported all supports were *very important*, with administrative support reported to be the most important.

Table 13
Descriptive Statistics for the Most Needed Supports Domain

Survey item	Percentage selecting					<i>M (SD)</i>
	Not at all important	Not important	Neutral	Important	Very important	
Administrative support ^a	0.7%	1.4%	13.9%	21.5%	61.8%	4.43 (0.85)
More time for conducting FBA/ BIP procedures	0.7%	0.7%	16.7%	26.4%	55.6%	4.35 (0.83)
More training on the FBA and BIP process	0.7%	0.0%	17.4%	24.3%	57.6%	4.38 (0.82)
Assistance with analyzing FBA data	0.7%	0.7%	18.8%	25.7%	54.2%	4.32 (0.85)
Assistance with identifying BIP strategies based upon FBA results	0.7%	0.0%	17.4%	26.4%	55.6%	4.36 (0.82)
Consultation from a behavior specialist for BIP implementation ^a	0.7%	0.7%	16.7%	27.1%	54.2%	4.34 (0.83)
Interventionist assistance for BIP implementation ^a	0.7%	1.4%	18.8%	25.0%	52.8%	4.30 (0.87)

^aData were not available for all respondents in categories indicated (range for *n* = 142-143).

Table 14 lists correlations and corresponding Cohen's d values for all predictor and outcome variables in the most needed supports domain. Teachers who had any additional classroom support available were more likely to report higher ratings for availability of necessary time, training, and support for participating in FBA and BIP tasks within their current teaching position ($p < .01$; range for d : = - 0.46 to - 0.73).

Table 14
Differences in the Most Needed Supports Domain

Survey item	Relationship to other factors				
	<i>Level of education</i>	<i>Years teaching</i>	<i>Any classroom support</i>	<i>SWPBS</i>	<i>Experience with FBA process</i>
Administrative support ^a	0.05	-0.11	0.07	-0.22	0.17
More time	-0.09	-0.26	0.17	0.01	0.11
More training	0.15	0.14	0.41	-0.08	0.44*
Assistance with analyzing FBA data and identifying BIP strategies ^a	-0.09	0.06	0.26	-0.05	0.06
Consultative or direct interventionist assistance for BIP implementation ^{ab}	-0.21	0.06	0.27	-0.22	-0.15

^a Aggregated variable

^b Data were not available for all respondents in categories indicated (range for $n = 142-143$).

All predictor variables were recorded as a Cohen's d effect size.

* Statistical tests were significant at $p < .01$

One open-ended survey item was included at the end of the survey, in which I asked teachers to describe in their own words the supports they most needed given their current teaching situation. Fifty-four teachers responded to this item, and teacher comments were coded into the following nine areas of need: interventionist support, behavior specialist support, administrator support, parental involvement, time, training, effective and feasible procedures, punitive policies, and separate settings for students with serious challenging behaviors. Of these, 19 teachers indicated they needed more interventionist support, 20 needed more behavior specialist support, six needed more administrative support, three needed more parental involvement, 14 needed more time, 14 needed more training, five needed more effective and feasible procedures, six called for more punitive policies for acting-out students, and six teachers reported they needed separate settings or fewer students with behavior needs per classroom to conduct FBAs and implement BIPs. In addition, six teacher comments focused on the detrimental impacts for peers in classrooms with acting-out students, including four teachers who indicated students with serious challenging student behaviors should not be included in the general education classroom at all. Overall, survey results confirmed serious challenging behaviors pose a major concern that needs to be addressed in this school district and likely many American general education classrooms today.

CHAPTER IV

DISCUSSION

Challenging behaviors that students without identified disabilities bring to the general education classroom pose a significant and valid concern for teachers and educational agencies. Access to effective and practical behavior management strategies is vital. FBAs and BIPs are well supported by empirical evidence and recommended by professional education organizations for students with early-stage behavior challenges, with or without disabilities (e.g., Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, National Association of School Psychologists, National Association of State Directors of Education, National Institute of Education Sciences, National Institute of Health; Division for Early Childhood, 2007; Gage et al., 2012; Goh & Bambara, 2012). While FBAs and BIPs are mandated as a reactive strategy in certain situations for students with disabilities, experts agree this is a minimum standard. Best practice application calls for expanding use of FBAs and BIPs as a preventative and prescriptive process *before* problem behaviors intensify to more severe levels and require increasingly intensive intervention efforts (vonRavensburg & Blakely, 2014).

Yet, legitimate challenges must be addressed surrounding feasibility and social validity of FBAs and BIPs within the constraints and limited resources available in the general education setting. Scott and colleagues (2004) called attention to very real and potentially insurmountable barriers to conducting FBAs and implementing BIPs in general education settings due to the methodological rigor of procedures within a context known for limited resources available for

supporting individual student needs. They called for exploration into more feasible and socially valid procedures without compromising empirical efficacy. To this end, we surveyed general education teachers in a large, urban school district about their perceptions of FBAs and BIPs for use with elementary-aged, general education students, and the supports they most needed for effective implementation.

Overall, teachers were neutral to not confident about knowledge and confidence with conducting and implementing FBAs and BIPs. Teachers reported the most knowledge and confidence about participating in various FBA tasks (i.e., direct observation of student behavior, completing behavior rating scales or questionnaires, collecting behavioral data, and manipulating classroom conditions), and the least confidence about designing customized BIPs based upon FBA results and implementing BIPs. This response pattern indicates teachers do not know how to or feel confident about selecting the best intervention methods, or implementing highly individualized, multi-component BIPs. As predicted, teachers who reported they had any prior training or experience with FBAs indicated they were more knowledgeable and confident with FBA and BIP procedures than teachers without prior training or experience.

Also consistent with our hypothesis, more than half of teachers agreed FBAs and BIPs were appropriate and useful for elementary-aged, general education students. Teachers most agreed FBAs were appropriate, but were neutral to slightly agreeable that BIPs were appropriate and useful. Comparatively, teachers were the most neutral to disagreeable that BIPs were more appropriate and useful than interventions not designed based on FBA results, with *neutral* being the most common response for this survey item. Despite the increased probability for success affiliated with FBAs and BIPs, this indicates general education teachers may lack confidence that BIPs will be effective for remediating challenging student behaviors. Further, teachers may be

more willing and able to implement less intensive or single-component behavioral interventions with their students than invest the significantly greater time and effort required for conducting FBAs and implementing more intensive and complex BIPs.

Given a perfect teaching situation with ample time and resources to individualize for varying student needs, teachers were generally neutral to agreeable they would be willing to participate in necessary FBA and BIP tasks. Teachers reported slightly higher levels of willingness to conduct FBA tasks as part of a team, collect ongoing behavioral data, and implement a BIP in their classroom; and lower levels of willingness to independently conduct FBA tasks or wait to intervene until an FBA was completed. This pattern of results again indicates general education teachers may be more willing to implement lower intensity behavioral interventions that do not require rigorous assessment and design procedures or a waiting period before intervention can occur.

In contrast, given the realities of their current teaching position, teachers generally disagreed adequate time and training were available to conduct FBAs and implement BIPs, and were neutral to disagreeable that sufficient supports were available. Given a list of potential resources or supports, teachers reported they most lacked sufficient time and training, and to a lesser degree lacked adequate supports for participating in FBA and BIP procedures. Teachers reported they had slightly more access to support from administrators or other staff members for implementing BIPs, and less access to support from a behavior specialist to design BIPs. Despite inadequate resources, teachers were most neutral to agreeable that conducting FBAs and implementing BIPs for students with challenging behaviors were high priority tasks given their current teaching role.

Not surprisingly, teachers who reported they had one or more classroom supports (e.g., co-teaching, interventionist, or other staff assistance) available to individualize for student needs reported they had more time, training, and supports for FBAs and BIPs than teachers who reported they lacked additional supports. Interestingly, teachers with less education reported they had more support from other staff members to implement BIPs. A potential explanation for this finding may be that teachers with less education were more likely to be first-year teachers with access to new teacher mentoring which facilitated access to more supports available for implementing BIPs.

Another interesting finding was seen in differential perceptions between teachers who taught in schools with or without SWPBS according to survey items about availability of necessary time and training to conduct FBAs and design BIPs in their current teaching role. Schools with SWPBS may be more likely to provide teachers with training on targeted behavioral supports at each tier, including FBAs and BIPs at the tertiary tier, and time for application of targeted supports. Teachers who taught in schools with SWPBS in place reported more favorable perceptions about availability of necessary time and training, as compared to teachers from non-SWPBS schools who totally disagreed necessary time and training were available for conducting FBAs and designing BIPs. Teachers from schools with SWPBS also reported FBAs and BIPs were a higher priority as compared to teachers from schools without SWPBS. These findings suggest SWPBS may potentially act as a moderating contextual factor for enhancing social validity and feasibility of FBAs and BIPs. Yet, despite more favorable perceptions, teachers from SWPBS schools still generally disagreed necessary time and training were available, indicating the presence of SWPBS alone is likely insufficient to adequately bolster feasibility and promote effective application of FBAs and BIPs.

Finally, when asked what supports they most needed to effectively conduct FBAs and implement BIPs, teachers overwhelmingly reported *all* supports were very important and needed. No significant differences were observed between varying response levels of importance attributed to individual supports, such as more time, training, assistance, or consultative or administrator support. Teachers reported all listed additional supports were most needed. Not surprisingly, teachers who reported they lacked training or experience with FBAs and BIPs reported they needed more FBA and BIP training as compared to teachers who had any previous training or experience. No other significant differences were detected between means and percentages for varying teacher or school predictor variables.

Implications for Practice

Survey results are consistent with previous findings regarding the prevalence of challenging behaviors in general education settings, and the very real significance of this concern for general educators. The vast majority of teachers representing the school district from which the sample was drawn for this study reported the maximum response option available for prevalence of student behavioral challenges, with more than 80% (i.e., 117 of 144) of teachers reporting they taught three or more students with serious challenging behaviors during the last year. Nineteen teachers reported they taught two students with challenging behaviors, and merely eight of 144 participating teachers reported they taught zero or one student with serious challenging behaviors during the last year.

FBAs and BIPs are an effective strategy for responding to this concern. While effective behavioral interventions are vital in general education settings, educational agencies and experts should proceed with caution when recommending or mandating FBAs and BIPs to general

educators in the absence of an adequately intensive web of supports. FBAs and BIPs are highly resource-intensive strategies. Similarly robust supports are also needed for the teachers or practitioners responsible for conducting or participating in necessary FBA and BIP tasks.

Unrealistic or unreasonable recommendations given constraints inherent in the general education context may have an unintended but detrimental effect of adding to already high levels of teacher burnout due to existing pressures of increasingly heavy job demands, lack of adequate resources and supports, and high stakes testing (Jennings & Greenberg, 2009; Oberle & Shonert-Reichl, 2016). Teachers who feel overworked and lack necessary time and resources are more likely to use reactive and punitive classroom management strategies, and less likely to use supportive strategies or create a positive learning environment for their students (Collie, Shapka, & Perry, 2012). Accordingly, general education teachers who lack sufficient time and resources may be less likely to participate in necessary FBA and BIP tasks with an adequate level of fidelity than teachers with ample resources available. In contrast, the positive outcomes of effective and feasible behavioral interventions may alleviate these same pressures as student behaviors improve.

FBA and BIP tasks may need to be adjusted for general educators with sensitivity to feasibility, or reserved for behavior analysts or specialists who have adequate expertise and time allotted for FBAs and BIPs and do not carry the job duties of a general education teacher. When making recommendations to practitioners, careful consideration of feasibility is not only a practical concern but also a professional responsibility for behavior analysts according to the Behavior Analyst Certification Board (BACB) task list (BACB, 2012). Specifically, the domain for Client-Centered Responsibilities advises BCBA's to select intervention strategies based on supporting environments, environmental and resource constraints, and social validity of

recommended interventions. Results of this study underscore the need to carefully consider these factors and work to overcome real and legitimate barriers to successful application of FBAs and BIPs in general education settings.

Experts and specialists should carefully consider whether sufficient time, training, and direct and consultative supports are available to teachers asked to participate in FBA and BIP procedures. Districts and schools should have procedures and staff in place to respond to and support general education students with the most intensive behavioral needs, and ensure general education teachers have readily available access to necessary supports for effectively conducting FBAs and implementing BIPs. School districts may also consider using abbreviated or truncated versions of FBAs in general education settings, or training a small team of staff on basic FBA procedures at each school. Sufficient supports may help ensure students have access to adequately intensive BIPs that are implemented with an acceptable level of fidelity and have a high probability for success.

Limitations and Future Research

A limitation of this study was there was no comparison between general education teacher perceptions to those of practitioners in other job roles who may also be responsible for participating in FBA and BIP procedures, such as special education teachers, behavior analysts or specialists, or administrators. Future survey research may be conducted to also include more targeted questions about varying perceptions of specific FBA and BIP components, such as methods for selecting the most appropriate FBA measures (e.g., descriptive or experimental) or BIP components (e.g., antecedent or consequence-based interventions).

Another limitation of this study was related to the inherently fixed nature of using a Likert-type scale for measurement. *Neutral* was a common response on survey items (particularly in the knowledge and confidence domain), indicating participants may have used this option as an escape response when they did not understand or want to answer a particular item or were not fully attentive to the survey. On the other hand, a neutral response pattern may be indicative of a decisively neutral attitude or general complacency about student behavior, proactive and positive behavioral interventions, or the demanding job responsibilities of a general education teacher.

Few differences were observed for teacher perceptions of FBAs and BIPs between varying school or teacher predictor characteristics (i.e., teacher education, experience, or previous experience with FBAs and BIPs, and presence or absence of SWPBS or additional classroom supports). Thus, a final limitation of this survey was the response pattern of results was insufficient to adequately distinguish the most advantageous elements of school contexts, teacher characteristics, or challenging behaviors most likely to result in successful application and effective outcomes for FBAs and BIPs. Similarly, results were insufficient to establish what particular supports were most needed by teachers—except that all supports were most needed, and consultative support or training appeared to be insufficient.

Conclusions were unable to be drawn about the level of helpfulness or necessary frequency or intensity required for various supports, such as amount of planning time needed, length or type of training, or intensity level of additional supports (e.g., coaching or consultative support, implementation assistance from an interventionist, or administrator or other staff support). To prevent this limitation, future survey research may require respondents to rank order the supports they most need to effectively conduct FBAs and implements BIPs (in contrast to the

Likert-type scale used in this study). Future intervention research may compare social validity, treatment integrity, and intervention outcomes for FBAs and BIPs implemented with varying levels of available support. Ultimately researchers and practitioners should work toward common goals of identifying the most feasible methods and providing adequate resources to build practitioner capacity to effectively use FBAs and BIPs in general education settings.

Conclusion

As a whole, results confirmed teachers in this sample were in need of effective and feasible behavioral interventions to manage prevailing student behaviors. Teachers generally viewed FBAs and BIPs to be appropriate and useful, and reported they would be willing to participate in FBA and BIP procedures given adequate time and resources. Yet, teachers expressed insufficient knowledge, confidence, time, and resources within their current teaching position, which deterred their ability to conduct FBAs and implement BIPs for students with serious challenging behaviors. The most consistently elevated and agreed-upon response across teachers in this sample was that any and all additional supports were very important and needed to effectively conduct FBAs and implement BIPs. Overall, survey results underscore the need to refine methodological features of FBAs and BIPs to enhance social validity and feasibility, and promote an optimal balance between effectiveness and efficiency to make this effective technology more accessible for already-encumbered school practitioners.

Appendix A

Survey Instrument

Thank you for agreeing to participate in this study. In this survey you will be asked about your experiences and perceptions related to the use of functional behavior assessments (FBA) and individualized behavior intervention plans (BIP) for general education students with sustained patterns of serious challenging behaviors. Specifically we are interested in whether you view FBAs and BIPs to be appropriate and useful, are willing to participate in necessary tasks, and feel sufficient time and resources are available to conduct related procedures. You will encounter the following terms in the survey. Please refer to the definitions provided for these terms as you complete the survey:

FBA refers to an assessment process used to identify predictable associations between the challenging behaviors of an individual student and the environment in which they occur. The focus of an FBA is to understand problem behaviors based on function (or motivation) in order to design an individualized BIP with a high probability for success. FBA procedures typically include direct observations and data collection on student behavior and varying combinations of other components such as behavior rating scales; teacher, parent, or student interviews; records reviews; or changes to the classroom environment or teacher responses to challenging behavior. FBA procedures often require between 15 and 20 hours of staff time for a complete assessment.

BIP refers to a set of highly customized intervention strategies designed for an individual student based on the results of an FBA. The focus of a BIP is generally on teaching and

reinforcing socially appropriate behaviors and decreasing challenging behaviors. Effective BIP implementation typically requires significant teacher time and effort dedicated to one student.

Serious challenging behavior refers to ongoing patterns of problem behavior that persist despite previous intervention efforts. Examples of serious challenging behaviors include: chronic noncompliance with teacher directions or school rules, failure to complete more than half of assigned work, frequent impulsive behaviors (e.g., out of seat/ area, leaving classroom or assigned area), disruptive behaviors (e.g., yelling, making noises, excessive calling out or talking during instructional activities), or aggression (e.g., verbal threats, cursing, property destruction, hitting, pushing, kicking, or spitting).

This survey will take approximately 10 to 15 minutes to complete. Your participation in this study is completely voluntary and you may withdraw your participation by stopping the survey at any time. Please answer all questions honestly and candidly. All individual responses are completely anonymous and will not be shared with school or district administrators.

PART I. The following questions are about yourself, your school, and your previous training or experience with functional behavioral assessments (FBA) and behavior intervention plans (BIP). Please refer to the definitions provided (by clicking definitions icon?) as needed while you answer these questions.

Are you a general education teacher? *(If no, participant will be defaulted out of survey by system)*

Yes No

Indicate the highest level of education you have completed (in the area of teaching/education):

- Alternative teacher preparation program outside of a college or university
- Bachelor's degree
- Master's degree
- Hours beyond a master's degree
- Educational Specialist (e.g., Ed.S.)
- Doctorate (e.g., Ed.D. or Ph.D.)

Indicate the type of teaching certification or license you currently hold (mark all that apply).

- Alternative or Interim Licensure
- Full Teacher Licensure (e.g., apprentice, out of state, practitioner, or professional)
- No current licensure for a certified teaching position
- Other

Indicate any endorsements you hold (mark all that apply):

- Early Development/ Learning (PreK-K)
- Early Childhood Education (PreK-3)
- Elementary Education (K-6)
- Any general education academic endorsement (PreK-12, K-12, 7-12, or 9-12)
- Special Education (Early Childhood PreK-3, or K-12; modified or comprehensive)
- Any occupational endorsement
- Other

How many years have you been teaching/ working in your profession (indicate '1' if you are a first-year teacher)? _____

Indicate the role that best describes your current teaching position:

- General education teacher of academic content areas (e.g., English/language arts, math, social studies, or science)
 Related Arts teacher (e.g., physical education, music, art, technology, librarian)
 Instructional or other type of coach
 Other

What grade(s) do you currently teach? (mark all that apply)

- Pre-K Kindergarten First
 Second Third Fourth

Approximately how many students do you teach in your classroom at one time (if you teach more than one group of students, indicate the number in your largest class)?

- Less than 15 15-20 20-25 More than 25

During the last 3 years, how many students with serious challenging behaviors have you had in your classroom?

- None One Two Three or more

Which of the following describes your school?

- Urban Suburban

To the best of your ability, approximately what percentage of students whom you teach comes from a family who may have economic need?

- 25% 50% 75% 100%

List any additional classroom supports you have to assist in the implementation of individualized strategies for students with behavioral needs? (List all that apply)

- Cooperative teaching from a special education teacher (less than 1 hour/ day)
 Cooperative teaching from a special education teacher (1-3 hours/ day)
 Cooperative teaching from a special education teacher (> 3 hours/ day)
 Interventionist support in classroom
 Other staff (school counselor, dean, student teacher, etc.) support in classroom

Does your school have a school-wide model of positive behavior interventions and supports in place? (If no, skip to next question)

- Yes No

Indicate the following components related to positive behavior interventions and supports that your school has in place (*mark all that apply*):

- Commonly defined school-wide rules and expectations
- A systematic plan for teaching school-wide rules and expectations to all students
- Reinforcement system for reinforcing students who display positive behaviors
- Multiple tiers of behavioral intervention support (e.g., primary, secondary, tertiary)

During the last 3 years, have you attended a formal training (through MNPS and the behavior support team) on conducting FBAs and BIPs? (*if no, system will skip to next question*)

- Yes No

(If yes) How many full days of FBA and BIP training did you attend?

- 1 day 2 days More than 2 days

Indicate any additional training you have received during the last 3 years that was specifically related to conducting FBAs and BIPs (*mark all that apply*).

- Individualized feedback or training on the FBA/BIP process from a behavior specialist
- Follow-up consultation after receiving formal FBA/BIP training (e.g., for an individual case)
- College/ University training
- Attending a conference(s)
- Books, training materials, or professional literature
- Other

Have you ever conducted or participated in the FBA process for a student with challenging behaviors? (*if no, system will skip to next section*)

- Yes No

(If yes) Indicate the following information about the student(s) for whom you participated in the FBA process (*mark all that apply*):

- General education student(s) Special education student(s)

(If yes) Indicate which FBA or BIP procedures you have used:

- Direct observation of student behavior with data collection
- Behavior rating scales or questionnaires related to student behavior
- FBA interviews (e.g., teacher/ staff, student, parent)
- Records reviews
- Systematic manipulations of classroom conditions (e.g., modified academic tasks, teacher responses to problem behaviors)
- Designing BIPs that are directly related to FBA results
- Implementing BIPs
- Collecting behavioral data (e.g., intensity, frequency, duration, time sampling, permanent product)
- Monitoring BIP outcomes using behavioral data (e.g., comparison of baseline and intervention conditions)

Part II: The following questions are related to your perceptions about FBAs and BIPs. Please refer to the definitions provided (by clicking definitions icon?) as needed while you answer these questions.

Please answer the following questions about whether you feel *knowledgeable and confident* about the following strategies related to conducting and implementing FBAs and BIPs.

Direct observation of student behavior with data collection	0 Not at all	1	2 Neutral	3	4 Very
Behavior rating scales or questionnaires related to student behavior	0 Not at all	1	2 Neutral	3	4 Very
FBA interviews (e.g., teacher/ staff, student, parent)	0 Not at all	1	2 Neutral	3	4 Very
Records reviews	0 Not at all	1	2 Neutral	3	4 Very
Systematic manipulations of classroom conditions (e.g., modified tasks or your responses to problem behavior)	0 Not at all	1	2 Neutral	3	4 Very
Designing BIPs that are directly related to FBA results	0 Not at all	1	2 Neutral	3	4 Very
Implementing BIPs	0 Not at all	1	2 Neutral	3	4 Very
Collecting behavioral data (e.g., intensity, frequency, duration, time sampling, permanent product)	0 Not at all	1	2 Neutral	3	4 Very
Monitoring BIP outcomes using behavioral data (e.g., comparison of baseline and intervention conditions)	0 Not at all	1	2 Neutral	3	4 Very

Please answer the following questions related to your perceptions about whether FBAs and BIPs are *appropriate* (i.e., a suitable strategy) and *useful* (i.e., likely to be effective) for general education students with serious challenging behaviors.

An FBA would be appropriate for a general education student with serious challenging behavior.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
An FBA would be useful in this situation.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
A BIP would be appropriate in this situation.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
A BIP would be useful in this situation.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
A BIP would be more appropriate and useful than a behavioral intervention that did not take FBA results into account.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree

Please answer the following questions related to your perceptions about whether you would be *willing* to implement the procedures necessary for conducting FBAs and implementing BIPS. Consider your level of willingness *given an optimum teaching situation in which ample time and resources were available to individualize for varying student needs.*

Given ample time and resources, I would be willing to independently conduct the tasks necessary for an FBA for a general education student with serious challenging behavior.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given ample time and resources, I would be willing to participate as part of a team to conduct the tasks necessary for an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given ample time and resources, I would be willing to collect ongoing behavioral data (e.g., frequency, duration, intensity) as part of the FBA process.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given ample time and resources, I would be willing to wait to intervene until an FBA was completed (e.g., 2-4 weeks) to implement a BIP with a student with serious challenging behaviors in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given ample time and resources, I would consider temporarily manipulating the conditions in my classroom (e.g., modifying academic tasks or my responses to problem behavior) for the purposes of an FBA even if it might temporarily result in an increase in problem behaviors	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given ample time and resources, I would be willing to implement a BIP in my classroom for a general education student with serious challenging behavior.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree

Please answer the following questions related to your perceptions about whether you have sufficient time and resources available within your current teaching position to implement the procedures necessary for conducting FBAs and implementing BIPS.

Within my current teaching position, I have the necessary time to conduct an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary training to conduct an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary administrative support to conduct an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary consultative support from a behavioral specialist to conduct an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary support from other staff members (e.g., teachers, staff, behavior team) to conduct an FBA.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given other responsibilities and initiatives in my teaching position, conducting an FBA for a student with serious challenging behaviors is a high priority for me.	0 Totally Disagree	1	2 Neutral	3	4 Totally
Within my current teaching position, I have the necessary time to design a BIP that is directly related to FBA results.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary training to design a BIP.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary support from a behavioral specialist to design a BIP.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary support from other staff members (e.g., teachers, staff, behavior team) to design a BIP.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary time to implement a BIP in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary training to implement a BIP in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary support from a behavioral specialist to implement a BIP in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary support from other staff members (e.g., teachers, staff, behavior team) to implement a BIP in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Within my current teaching position, I have the necessary administrative support to implement a BIP in my classroom.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree
Given other responsibilities and initiatives in my teaching position, implementing a BIP for a student with serious challenging behaviors is a high priority for me.	0 Totally Disagree	1	2 Neutral	3	4 Totally Agree

Consider the supports you feel you most need in order to effectively conduct and implement an FBA and BIP in your classroom for a student with serious challenging behaviors. Please indicate the level of importance for each of the following types of support.

Administrative support	0 Not important	1	2 Neutral	3 Very important	4
More time for conducting FBA/ BIP procedures	0 Not important	1	2 Neutral	3 Very important	4
More training on the FBA and BIP process	0 Not important	1	2 Neutral	3 Very important	4
Assistance with analyzing FBA data	0 Not important	1	2 Neutral	3 Very important	4
Assistance with identifying BIP strategies based upon FBA results	0 Not important	1	2 Neutral	3 Very important	4
Consultative feedback and support for BIP implementation from a behavior specialist	0 Not important	1	2 Neutral	3 Very important	4
Direct implementation assistance from an interventionist for BIP implementation	0 Not important	1	2 Neutral	3 Very important	4
In your own words, describe what additional resources you most need to effectively conduct and implement FBAs and BIPs.					

You have completed this survey. Thank you for investing your time! If you have any questions or concerns, please contact me at mary.crnobori@mnp.org

Appendix B

Email Request to Principals to Conduct Research at School Sites

Greetings (principal name),

I am contacting you to request your permission to allow a research survey to be distributed to the general education teachers in your school. This MNPS-approved study is designed to drive behavior support services within MNPS (and to meet requirements for my doctoral dissertation at Vanderbilt University). Two elementary schools were randomly identified for potential participation per cluster within MNPS, and your school was among those selected.

The purpose of this survey is to explore teacher experiences and perceptions related to the use of functional behavior assessments (FBAs) and individualized behavior intervention plans (BIPs) for general education students with sustained patterns of serious challenging behaviors. Specifically we are interested in whether general education teachers view FBAs and BIPs to be appropriate and useful, are willing to participate in necessary tasks, and feel sufficient time and resources are available to conduct related procedures. *Teacher participation is completely voluntary and anonymous*, and this survey will take approximately 15 minutes for teachers to complete.

If you agree to allow general education teachers in your building to participate in this survey, you may choose your preference of the following 3 data collection methods:

- 1) Email dissemination with a link to complete the survey electronically
- 2) Paper and pencil during grade-level planning periods, with a member of the research team facilitating data collection

3) Paper and pencil in a regularly scheduled faculty meeting

Please respond to this email and let me know if you consent for your teachers to be surveyed, or if you decide to decline participation. Thank you in advance for your consideration.

Appendix C

Email Request for Teacher Participation

Greetings Teachers,

The Department of Support Services and Behavior Support Team are conducting a survey to help guide the way behavioral assistance is provided to general education teachers in MNPS. This is your opportunity to voice the supports you most need to address the behavioral challenges some general education students bring to the classroom! Specifically, you will be asked about your experiences and perceptions related to the use of functional behavior assessments (FBA) and individualized behavior intervention plans (BIP) for general education students with sustained patterns of serious challenging behaviors.

It is estimated that this survey will take you about 10-15 minutes to complete. Your participation in this survey is completely voluntary and you may withdraw your participation by stopping the survey at any time. All individual responses are completely anonymous and will not be shared with school or district administrators.

If you are not a general education teacher, you do not need to complete this survey. If you are a general education teacher and you choose to participate, the survey can be accessed by clicking on the link below. Thank you in advance for your consideration and participation!

General Education Teacher Perceptions of FBAs and BIPs

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Functional Behavioral Assessment-based Interventions. Intervention Description. 1. An assessment is conducted to identify the purpose or function of a student's problem behavior. This assessment process involves collecting information about the environmental conditions that precede the problem behavior and the subsequent rewards that reinforce the behavior. The information that is gathered is then used to identify and implement individualized interventions aimed at reducing problem behaviors and increasing positive behaviors. Function-based planning for young children at risk for emotional and behavioral disorders. Education and Treatment of Children, 33(4), 537-559. Studies that do not meet WWC pilot single-case design standards. Functional Behavior Assessment and Behavior Intervention Plans. Featured programs. Sponsored listings. The BIP targets one to three of a student's undesirable behaviors with interventions that are linked to the functions of the behavior; each intervention specifically addresses a measurable, clearly-stated targeted behavior. A BIP can include prevention strategies, which stop the behavior before it begins, as well as replacement behaviors, which achieve the same function as the disruptive behavior without causing disruption. The environment is considered, and the FBA/BIP team may determine that a change in a student's schedule or in the arrangement of his or her classroom is called for.