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Defining Business as Usual in Preschool Interventions for Challenging Behavior

Eleanor Bold

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Abstract

Challenging behavior (CB) is a major barrier to service delivery in preschool classrooms. Persistent CB has been found to significantly impact children's academic and social success long-term, especially amongst children from historically minoritized populations and those with disabilities. Numerous evidence-based intervention strategies exist to prevent and reduce CB, yet preschool teachers continue to voice a desire to increase their capacity to do so in the classroom due to high rates of CB continuing to be observed. This dissertation seeks to address this research to practice gap by ascertaining the current baseline intervention practices utilized to manage CB in preschool classrooms and identify areas for improved teacher training and coaching.

Manuscript one presents a systematic literature review of reported preschool classroom interventions for CB. Due to the multitude of manualized interventions implemented in preschool classrooms in recent years, only studies evaluating practices outside of a manualized program were included. Six studies met criteria for review, indicating a gap in the literature related to what is currently being utilized in practice, and why those practices are chosen. Across studies, high rates of CB were reported, and teachers consistently endorsed a desire to increase their training and management of CB in their classrooms. Of note, function-based interventions, which have been identified as the strongest evidence-based intervention to reduce CB, were rarely mentioned across studies, and indicated as an area for future research.

Manuscript two presents a qualitative research study of preschool teachers' experiences managing CB in their classrooms through semi-structured interviews. All teachers were trained in the Pyramid Model, which includes specific training in implementing function-based interventions. Teachers consistently reported high rates of CB, particularly externalizing behaviors (e.g., temper tantrums, elopement, hitting) that introduced safety concerns into the classroom. Teachers described utilizing a wide variety of interventions, many of which were responsive in nature, and most often resulted in assigning an individual paraprofessional to the child in question. Teachers rarely reported completing function-based interventions, indicating confidence in completing them and the required time investment to do so as the major limiting factors. Recommendations to address these limitations are discussed.

Subject Categories

Child Psychology | Early Childhood Education | Education | Educational Psychology | Pre-Elementary, Early Childhood, Kindergarten Teacher Education | Psychology | School Psychology | Social and Behavioral Sciences | Teacher Education and Professional Development

Publication Statement

Defining Business as Usual in Preschool Interventions for Challenging Behavior

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A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Eleanor Bold

August 2023

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Co-Advisor: Phil Strain, PhD

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Title: Defining Business as Usual in Preschool Interventions for Challenging Behavior
Advisors: Gloria Miller, PhD, and Phil Strain, PhD
Degree Date: August 2023

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List of Abbreviations

CB – Challenging behavior

FBA – Function based assessment

FBI – Function based intervention

FBA/I – Function based assessment and intervention

EBP – Evidence-based practices

PM – Pyramid Model

PTR-YC – Prevent Teach Reinforce for Young Children

PTR-F – Prevent Teach Reinforce for Families

Introduction

Research has consistently demonstrated the high impact return of early childhood education and intervention (see Burchinal et al., 2011; Heckman, 2011). Though not yet a federally supported public education service, early childhood education, specifically preschool, has demonstrated immense benefits to children's long-term academic and social outcomes (Melhuish, 2011; Reynolds et al., 2002). As a result, preschool has been identified as a possible avenue to help close the achievement gap, a long-standing demonstration of the inequities experienced by children in the United States from non-White backgrounds (Morgan, 2019). In the wake of the Covid-19 pandemic and reckoning of systemic racism within the United States, the topic of educational equity is more salient ever as the field grapples with how to meet the needs of students in an increasingly complex world (Bailey et al., 2021).

In addition to helping close the achievement gap, research supports the economic return of investing in preschool in the form of multifold returns on investment (Heckman, 2011; Reynolds & Temple, 2008). As universal preschool programs gain traction and funding, it becomes important to consider additional positive outcomes that are possible outside of academics. Preschool is uniquely situated to provide early intervention for a myriad of student needs, including related services (i.e., occupational, physical, and speech-language therapy) as well as jump-starting children's social-emotional learning (Durlak et al., 2011). Most notably, social-emotional learning has gained an ever-increasing amount of attention since the mid-1990s due to its far-reaching impact on children's long-term development. Social-emotional learning encompasses explicit

teaching of skills that support personal growth, including emotional literacy, self-regulation, and interpersonal skills (Bridgeland et al., 2013). Research demonstrates social-emotional learning is not only critical to academic success, but it also provides a foundation for long-term social and interpersonal outcomes (Bierman & Motamedi, 2015).

As social-emotional learning emerged to become a powerful force within preschool education research, additional early intervention possibilities already in existence garnered attention for children with more significant needs, including those with disabilities (Strain & Bovey, 2011). Social-emotional learning is considered a universal intervention; that is, every child benefits from its teaching and every child is equally in need of this instruction (Bierman & Motamedi, 2015). Yet, for some children, additional instruction and intervention is necessary, whether due to emotional and behavioral difficulties, or developmental disabilities (Dunlap & Fox, 1996). In striving to make preschool education successful, the needs of all children must also be met, and is the impetus for this dissertation.

A common area of concern cited in preschool classrooms that requires additional intervention supports is persistent challenging behavior (Dunlap et al., 2006; Fox et al., 2003). Considerable research has demonstrated that persistent challenging behavior in early childhood education is not only disruptive to classroom learning and teacher retention, but it also leads to children being excluded from their general education classrooms (Dunlap et al., 2013; Luo et al., 2020; Zeng et al., 2021). Further, children who display persistent challenging behavior have been shown to be at increased risk of

developing more intense problems behaviors, and to experience subsequent academic and behavioral difficulties (Dunlap et al., 2018; Zeng et al., 2021). That is, without effective interventions, challenging behavior is highly disruptive and carries negative outcomes with it starting in early childhood and continuing into school age years (Dunlap et al., 2018).

Moreover, challenging behavior has been found to be displayed more commonly in populations already managing existing risk factors (Fox et al., 2002; Zeng et al., 2019). These include children from homes with environmental risk factors (e.g., limited access to healthy foods and healthcare services), children with a developmental delay, children living in poverty, and children experiencing family adversity or parenting difficulties (Zeng et al., 2019). Further, challenging behavior, as indicated by its name, is difficult to manage and contributes to a cycle of high family stress (Zeng et al., 2019). In an effort to mediate these challenges, teachers have been indicated as possible change agents for addressing challenging behavior through family-school collaboration. However, this expectation is hefty, and not all preschool teachers are trained in many of the skills areas required to do so (e.g., explicit training in social-emotional curricula, behavioral intervention, mental health consultation, etc.) (La Paro et al., 2018).

Therefore, an ideal avenue to address this need and support preschool teachers is higher collaboration with mental health consultants within preschool settings. Within many districts, this role is filled by school psychologists, who are specifically trained in mental health consultation, behavioral intervention, and family-school collaboration, as well as being part of student service or special education teams (Albritton et al., 2019).

These professionals offer an opportunity to provide wrap around support to children and their families, reducing challenging behaviors in the classroom, while also connecting families with resources in the community as needed (Albritton et al., 2019; Hendricker et al., 2022; Miller et al., 2021). Of note, there is currently a shortage of school psychologists across grade levels, including preschool that needs to be considered (Hendricker et al., 2022). Nevertheless, preschool teachers cannot be expected to reduce children's challenging behavior and improve social-emotional outcomes alone. The content knowledge exists within the existing student support teams, and through stronger collaboration, can be leveraged to better serve childhood and see these long-term social and academic goals realized.

Manuscript One

Preschool Interventions for Challenging Behavior: A Systematic Literature Review

Introduction

Challenging behavior (CB) in preschool classrooms is a persistent problem preschool teachers and related practitioners (e.g., speech-language pathologists, school psychologists, occupational therapists, etc.) face on a daily basis. CB is a term used to describe "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in prosocial interactions with peers and adults" (Smith & Fox, 2003, p. 6). CB presents in a variety of ways, from prolonged tantrums and overt physical and verbal aggression (e.g., hitting, cursing), which is most commonly ascribed as the most disruptive and problematic in preschool classrooms, to noncompliance and withdrawal (e.g., deficits in social skills) (Dunlap et al., 2013). CB is common, with 10 to 21% of preschool children understood to engage in these behaviors. Of note, CB has been observed to persist and worsen if not intervened upon, indicating a prime need for early intervention (Dunlap et al., 2013).

Unfortunately, research indicates that rates of CB are higher amongst children living in poverty, as well as amongst children with disabilities, making this an earnest equity concern (Powell et al., 2007; Snell et al., 2012; Zeng et al., 2019). Further, it has been well documented that teacher perceptions of CB can reflect racial bias, interpreting the behavior of children from minority backgrounds as more severe (Cartledge & Kourea, 2008). Indeed, preschool expulsion rates are higher than those observed in elementary and secondary education (Gilliam & Shahar, 2006). Even if children are not expelled, engaging in CB leads to negative interactions with peers and teachers, and will likely continue into elementary and secondary schooling if not intervened upon (Dunlap et al., 2013; Snell et al., 2012). Further, young children with CBs have been shown to be under-identified for special education services, increasing their risk for expulsion and school failure in their educational careers (Morgan et al., 2015).

Therefore, in light of these high rates of CB and the high stakes of negative long-term outcomes surrounding the children displaying them, many preschool-based interventions exist to manage CB (see Dunlap & Fox, 2011; Fox et al., 2002; Machalicek et al., 2007). However, many of these practices 1) require complex assessment and highly individualized behavior plans and 2) must be implemented to fidelity (i.e., consistently, by all teachers in the classroom) to be effective. That is, they require highly skilled and trained professionals to implement these expert-driven approaches, which are beyond many teachers' current training levels. To address these short-comings in training, experts typically recommend positive behavioral supports, assessment-based interventions, and coaching practitioners to fidelity of implementation (Dunlap et al.,

2006; OSEP, 2000). On an encouraging note, teachers who have received these kinds of supports report high social validity, that is, the supportive practices have been rated as acceptable and to the satisfaction of teachers (Dunlap et al., 2006).

When surveying preschool teachers and practitioners in a western state, Steed and colleagues (2021) reported a resounding call for support in preschool classrooms related to managing CB. Building practitioner capacity was noted as an area of need both by teachers in the classrooms as well as by administrators and related service providers (RSP). Administrators noted the lack of training provided to paraprofessionals, particularly in the area of supporting children with disabilities, and inconsistent preparedness across providers to collaboratively intervene. Nevertheless, teachers were still expected by administrators to "be prepared for anything that could come their way" (Steed et al., 2021).

Therefore, it is reasonable to ask why CB continues to be such a concern, in spite of evidenced-based intervention practices and practices to support practitioners in their implementation of such practices. This paper aims to start answering this question, pulling from behavioral research where it is believed that if you do not really understand the baseline of a problem and where it comes from, you cannot design the most effective and socially acceptable intervention. To do so, a literature review was conducted to ascertain the current level of knowledge associated with CB interventions in preschool classrooms, or, what "business as usual" looks like in preschool classrooms related to CB. Specifically, the literature review sought to answer these questions:

(1) What is the rate and/or type of CB experienced in the classroom?

(2) What do preschool teachers currently do in response to CB in the classroom?

(3) What is the perceived effectiveness of the utilized strategies?

(4) Why do preschool teachers choose certain strategies over others?

Method

Search Procedure

The review was conducted to ascertain the current status of research in this area. The author consulted with a university librarian to determine included search terms. The original set of search terms trialed were modeled from key terms utilized in previous literature reviews and tested through several research databases wherein the results pulled through each term were analyzed for relevance to the current study. Search terms were then systemically combined across repeated database searches and the final search terms were selected due to their eliciting the highest number of results returned within the reviewed databases. The official search was conducted in both ERIC (ProQuest) and PsychInfo databases during July 2021 to allow for a cross sectional review of educational and psychological and psychological literature as well as to provide reliability. The search was restricted to the last ten years to encompass the most recent research related to practice. Only peer-reviewed scholarly journal articles were included (a search option selected within both databases) to ensure validation of results ensured by the publication review process. The terms inserted into the search criteria in ERIC were (preschool OR "child care" OR "early childhood" OR "head start") AND ("challenging behavior" OR "problem behavior" OR "disruptive behavior") AND (intervention OR "behavior modification" OR "evidenced based practices" OR "classroom techniques"). The search

yielded 177 discrete items. The terms utilized in PsychInfo were the same with the addition of AND (classroom OR school) to restrict the setting to the targeted classroom practice, returning a total of 477 discrete studies. The combined 654 articles were exported to Zotero software for screening, 68 duplicates were removed, and the remaining 586 unique articles were reviewed. Figure 1 illustrates the outcome of study identification and screening.

A series of exclusionary factors were developed to narrow the focus to typical preschool classroom practice in relation to CB:

(1) Manualized intervention evaluations were ruled out as classrooms involved in such a project are by nature not "business as usual" due to the extra coaching, support, and observations that typically take place in such an evaluation but are rarely continued after the studied ends. This ruled out a large proportion of the reviewed article set.

(2) Studies focused on academics, such as literacy interventions, assessment evaluations such as completing authentic child assessments, or demographic based studies (i.e., how teacher identity interacts with bias) were excluded due to the absence of information related to CB (i.e., non-social-emotional focused studies).

(3) Non-classroom practice focused studies, including parent training, pre-service, or consultative focused studies were ruled out due to lack of focus on teacher classroom practices and resulting child impact. This category included literature reviews or summaries of available evidenced based practices for

implementation. This removed the largest portion of studies from the article set.

(4) Studies conducted outside the United States were excluded as the results will ultimately be generalized to United States classrooms.

(5) Studies conducted outside of preschool programs were excluded as the infrastructure, training requirements of practitioners, and focus of this research is on preschool, and will also be generalized to these classrooms.

Results were screened by title and abstract, and four studies met criteria for a full-text assessment of inclusion. Additionally, secondary searches within the reference list of the original four studies yielded two additional articles for inclusion, bringing the total number of studies reviewed to 588. The identified studies represented 10 years of early childhood education and included both quantitative and qualitative research methods. The studies included were published in Participatory Educational Research (n = 1), Infants & Young Children (n = 1), Psychology in the Schools (n = 1), Journal of Positive Behavior Interventions (n = 2), and Early Childhood Education Journal (n = 1). Each study was reviewed in chronological order due to the limited number of studies included. Participant demographics, student population, methodology, survey content (if applicable), definition of terms (e.g., CB and intervention strategies), and outcomes were all noted and included in the following review. Due to the variation amongst studies, some information was not able to be collected, and is noted as such. Table 1 provides a brief summary of the final studies included in the review.

Figure 1

Overview of Search Results

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┌─────────────────────────────────────────┐
│ Articles identified through database      │
│ searching (no duplicates)                 │
│ (n = 586)                                 │
└─────────────────────────────────────────┘
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┌─────────────────────────────────────────┐
│ Additional records identified through     │
│ reference review                          │
│ (n = 2)                                   │
└─────────────────────────────────────────┘
                    │
┌─────────────────────────────────────────┐
│ Articles screened by title and abstract   │
│ (n = 588)                                 │
└─────────────────────────────────────────┘
          │                      │
┌──────────────────┐   ┌──────────────────┐
│ Excluded          │   │ Included for      │
│ (n = 582)         │   │ full-text         │
│                   │   │ assessment        │
│                   │   │ (n = 6)           │
└──────────────────┘   └──────────────────┘
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| Intervention evaluation (n = 216) | Non-SEB focused (n = 49) | Articles included in synthesis (n = 6) |

| Non-classroom practice based (n = 244) | Conducted outside U.S. (n = 42) |

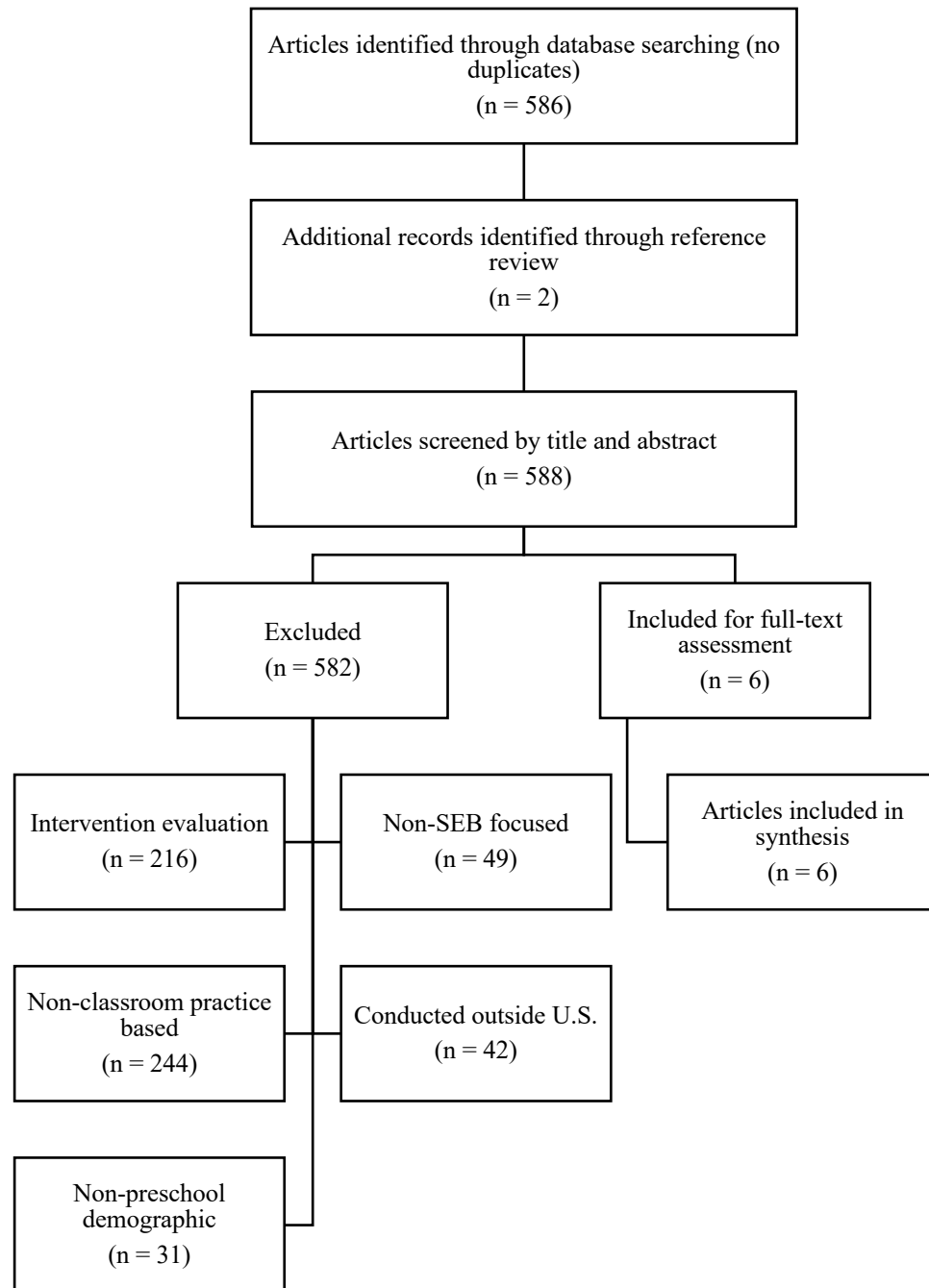| Non-preschool demographic (n = 31) |

Table 1

Summary of Included Studies

Author(s) and Year	Methodology	Participants	Intervention Strategy Reporting	Rationale for Strategy Choices Intentionally Examined
Zaghlawan & Ostrosky (2011)	Descriptive	8 Head Start teachers	Self-report survey measure (endorse options from a list)	No
Snell et al., (2012)	Survey	78 Head Start staff (38 teachers)	Self-report: open-ended questions and responses to conflict scenarios	No
Snell et al., (2012b)	Interview and observation	45 Head Start staff (21 teachers/teaching assistants)	Self-report and observation	No
Quesenberry et al., (2014)	Interview	9 preschool teachers	Semi-structured interview	No
Ritz et al., (2014)	Mixed methods	5 preschool teachers	Observation and semi-structured interview	Yes
Aksoy (2020)	Qualitative case study	10 preschool teachers	Semi-structured interview	No

Synthesis of Literature Reviewed

Zaghlawan & Ostrosky (2011) completed a descriptive study of eight Head Start classrooms during circle time. The researchers reported basing their analyses based on the same definition of CB included in the introduction of this paper from Smith and Fox (2003). The researchers reported the type of activities engaged in and the frequency of

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CB, which was coded using partial interval recording. No specific data related to the types of CB were reported. However, an average of 30% of intervals observed contained CB, varying widely across activities. The authors reported that singing was found to dominate circle time across all classrooms, followed by academics and reading, and only a minimal amount of weather checking and center preview. Of note, no activities focused entirely on social-emotional skill development. CB was most often displayed during "roll call" and less often during book reading, songs, and center preview (i.e., when the children were explicitly engaged).

Teachers completed a survey which measured their impression of how successful circle time was, including the presence of CBs, and the strategies they utilized to respond to any CB that day. Teachers reported using a total of 15 strategies to intervene on children's CB, including a mix of child- and adult-focused strategies. Child-focused strategies included: reminders and explanations of teacher's expectations, redirection, positive reinforcement, ignoring, environmental arrangements, providing choices, and removal from activity. Adult-focused strategies included proximity and adult intervention (e.g., talks to child). Most of the teachers believed that their circle times were successful with infrequent occurrences of CBs. Teachers reported using preventative strategies as well to avoid CBs, all of which are included in the list above. Generally, teachers reported having a routine and clear schedule, a plan for transitions, and limiting the length of circle time. In spite of all the reported strategies in use, it should be noted that the 30% level of time spent engaged in CB is well within the range exhibited by children typically identified for behavior support plans (Barton et al., 2014). Notably, absent were

any strategies that relied on determining the function of CB prior to intervention. In summary, CB was observed to occur at high rates (30% of intervals recorded), no specific type of CB was reported, teachers reported using a mix of intervention and prevention strategies to respond to CB, teachers perceived their intervention strategies to be effective, and the rationale for selected strategies was not reported.

In a survey study, Snell and colleagues (2012) studied responses to children's CB in Head Start programs in the Mid-Atlantic region. The researchers examined self-reported practices in an effort to design an intervention to meet the programs' needs. In all, 78 Head Start staff from five programs were surveyed; 38 described themselves as classroom teachers, 25 as assistant teachers, and 15 in supervisory or consulting positions. Participants were asked to respond to four questions concerning their practices for addressing children's CBs: 1) What are the top three challenging behaviors you face in your classroom? 2) What do you do to respond to challenging behavior? 3) What do you do to prevent challenging behavior? and 4) How do you involve family members when a child in your classroom consistently displays challenging behavior? The survey also included four conflict scenarios that required participants to provide a narrative explaining how they would handle the situation. No definition of CB was provided to orient participants, and the authors noted some behaviors listed by practitioners were not consistent with the field's definition of CB, in that they were "milder" behaviors than typically considered challenging. No data was collected to address why partitioners chose a particular strategy.

Results revealed that externalizing behaviors were the most common CBs: noncompliance and defiance, aggression or bullying, and disruptive and impulsive behaviors each garnered 50% or more of respondent's endorsement as a top three CB in the classroom. In regard to strategies employed, the majority reported focusing on prevention and redirection methods. Fewer than a quarter of participants reported following a behavior plan and incentive chart, utilizing social-emotional curriculum strategies, reviewing expectations, and modeling appropriate behavior. Notably, only 5% of the respondents cited determining the function of the CB as a strategy. However, practitioners noted a desire for additional training on classroom management and positive behavior support. In summary, externalizing behaviors were overwhelming cited as the most common CB experienced in the classroom, the rate of these behaviors was reported, teachers reported using prevention and redirection methods mostly in response to CB, the researchers did not consider the effectiveness of the endorsed intervention strategies, nor why teachers chose to utilize certain strategies over others.

Snell and colleagues (2012b) conducted a follow-up study of the previous survey study to further explore administrator and staff needs in regard to CB. In total 45 participants were interviewed, and 10 classrooms were observed using a validation observation instrument, the Teaching Pyramid Observation Tool for Preschool Classrooms (TPOT; Hemmeter et al., 2008). Of the 45 participants, 11 were identified as teachers and 10 were identified as teaching assistants. All teachers' classrooms were observed (one classroom had co-teachers). The interview protocol was developed for the study based on two existing interview protocols (Preschool-wide Evaluation Tool

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Administrator Interview Guide and Teaching Pyramid Observation Tool for Preschool Classrooms). Open-ended questions about the referral process for children with challenging behavior, strategies used to address these behaviors, and specific roles of specialists tasked with providing support to these children were added. Standard probes were provided for interviewers to clarify intent of a question or obtain additional information. Project staff reviewed the protocol and revised it during development. The final interview that was administered lasted from 45 to 90 minutes. Direct classroom observations were conducted using the Teaching Pyramid Observation Tool for Preschool Classrooms which is designed to measure the use of positive behavior support practices over a minimum of 2 hours of a typical school day.

Results were consistent with previous findings in that externalizing behaviors were identified more often than internalizing behaviors as CB faced in the classroom. Participants most frequently identified aggression (i.e., kicking, hitting, throwing furniture). Additionally, CB identified as presenting safety concerns (i.e., eloping) or interfering with learning (i.e., screaming, throwing self on floor) were also mentioned. Internalizing behavior (i.e., withdrawn, not playing with others) was only mentioned by one participant. The CB described by participants that resulted in a referral for intervention tended to meet the definition of CB used by the authors, "a repeated pattern of behavior that causes injury, damage to the environment, interferes with learning, or is socially isolating and is sustained over time" (Doss & Reichle, 1991). Further, participants from all programs endorsed teaching social skills using a manualized program and the Creative Curriculum to set up the classroom environment. The

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researchers noted that fidelity of implementation of these curricula varied considerably between interview report and observation.

In regard to CB intervention, the researchers found consequence responses to CB were more frequently employed than prevention practices. Consequence, or reactive strategies most often noted were removal of child from the activity, removal of child from the classroom, or removal of child from the school. None of these are evidence-based practices. Positive strategies most often mentioned included redirection, behavior charts, token economies, ignoring, and utilization of calming techniques. Most participants did not identify the function of a child's CB when discussing intervention or function-based assessments to guide intervention design. Classroom observations revealed that very basic classroom management practices were lacking (e.g., positive praise, teacher talk to children is primarily telling children what to do, giving directions, or reprimanding them, little focus on facilitating peer interactions).

In addition, interviews queried participants about available referral processes for persistent, serious problem behavior. All programs had teams to discuss such cases and primary support was provided by mental health specialists. The level and type of support varied across programs (i.e., primarily child directed versus teacher coaching). Again, the function of behavior was rarely mentioned or taken into consideration when designing interventions. Finally, barriers to addressing CB was explored, and five main barriers were identified: lack of training in strategies to use to address CB, differences between teacher beliefs and practices and those of specialists/outside agencies, lack of direct classroom assistance (i.e., staffing), inadequate family involvement and support, and a

lack of coordination and communication during the referral process and when providing services. In summary, externalizing behaviors (i.e., aggression) was most commonly endorsed as the type of CB experienced in the classroom, the rate of CB was not reported, teachers endorsed teaching social skills as a prevention method, but that consequence responses were most common, including high rates of exclusion, the effectiveness of strategies was not evaluated for outcomes on behavior, nor why teachers chose certain interventions or strategies over others.

Quesenberry and colleagues (2014) conducted an interview study of nine preschool teachers' perceptions of including children with CB in their classrooms. The researchers utilized a semi-structured interview created for the study to ask teachers about their experiences with young children with CB and the extent to which they perceive their programs to be capable of implementing practices consistent with the field's recommended positive behavioral support strategies. The sample questions provided were 1) How many children in your classroom have significant challenging behaviors? 2) How do you address challenging behaviors when they occur? What strategies do you use? and 3) Who, within or outside your classroom and/or program, is available to help you with children with challenging behaviors? Do you feel that the supports are useful or not useful? Why or why not?

Results demonstrated high rates of CB experienced in the classroom (i.e., 10-42% of the total class population across teachers) and that externalizing behaviors were most common. Teachers reported aggressive behaviors as the most problematic. Participants described using 16 different strategies to address CB, which fit into four categories: 1)

strategies focused on decreasing CB, 2) strategies focused on guiding positive behavior, 3) strategies focused on teaching new skills, and 4) strategies that are not directly used with children. Generally, participants reported using reactive as opposed to proactive measures to address CB, and rarely teaching appropriate replacement behaviors. Additionally, of the strategies endorsed by teachers, few were found to be implemented to fidelity. The researchers call for increased professional development around managing children's CB in the classroom through social and emotional supports. Again, mention of the function of CB was essentially absent. In summary, CB was found to be engaged by up to 42% of children in teachers' classrooms, externalizing behaviors were the most common and aggression indicated as the most problematic, teachers reported using a variety of strategies that were largely reactive in nature, the effectiveness of strategies was not evaluated, nor the rationale for chosen strategy use.

Ritz and colleagues (2014) conducted a mixed methods study of behavior management strategies using small sample, classroom observations and teacher interviews in five classrooms across two preschools located in a midwestern state. The researchers evaluated the methods that preschool teachers used to respond specifically to noncompliant behavior in the classroom, the frequency with which each strategy is used, and why teachers chose to use particular strategies (i.e., their rationale for responding as they did). Noncompliance was defined by the researchers as "'the failure to comply with a teacher request or instruction'" (Cipani, 1993; Ritz et al., 2014, p. 182).

Teachers reported using a variety of strategies to address noncompliance, many of which were preventative in nature. Teachers endorsed giving children a warning before

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transitions and giving children choices as preventative strategies, as well as guided compliance and proximity praise in the moment. Many additional strategies were considered preventative in nature as well, including positive reinforcement, reviewing of classroom rules, and strategically arranging the classroom (i.e., environmental supports). Generally, evidenced-based practices were practiced by teachers in the study, however, following noncompliance, children were only reinforced for then engaging in the desired appropriate behavior a quarter of the time. That is, once compliant, children did not receive praise (i.e., positive reinforcement) for engaging in the desired behavior. The teacher interviews discussed the rationales behind chosen strategies, which indicated that school policy or curriculum and teachers' personal experience as the most common reasons for the chosen behavior management strategies. No specific data was collected to determine the efficacy of the chosen strategies. Generally, the researchers concluded that teachers utilized strategies supported in the literature to manage CB. Yet again, no specific reporting of behavior function was mentioned. In summary, the only CB considered in this study was noncompliance, and the rate was not reported; teachers endorsed using preventative strategies most commonly, followed by guided compliance and proximity praise, though praise for compliance was rare; the efficacy of these strategies was not evaluated; teachers reported policy and experience to be the rationale for using these strategies.

Lastly, Aksoy (2020) conducted a qualitative case study to investigate the most frequent CBs preschool teachers face in their classrooms, as well as the strategies and discipline approaches teachers utilize in response. The author completed 45-minute semi-

structured one-to-one interviews with 10 lead preschool teachers. The two open-ended questions that guided the interview were: 1) What are the most frequent challenging behaviors faced by the preschool teachers in their classrooms? and 2) What are the strategies and discipline approaches used by the preschool teachers for the most frequent challenging behaviors in their classrooms? Data were aggregated through content analysis into themes. No specific definition of CB was provided to guide teachers' responses. CB was broken into four categories following data analysis: accommodation problems (e.g., interrupting others, not waiting a turn), self-control inadequacies (e.g., fighting, pushing), absence of prosocial behaviors (e.g., crying, not sharing), and inadequacies in assertiveness skills (e.g., remaining passive, hesitating to join in play).

The author found the CBs teachers most frequently experiences fell under the accommodation problem theme, followed by self-control inadequacies. Teachers reported utilizing strategies in response to CBs that varied based on the topography of the behavior in question. Strategies were coded into the following discipline approach categories based on the literature: behavior modification approach, control approach (reality therapy), social discipline (rational choices) approach, assertive discipline approach, instructional approach, and effective communication approach. The behavior modification approach is defined as CB emerging as a result of the relationship between the stimulus and behavior. The control approach focused on environmental impacts on behavior and unsatisfied needs, in that CBs arise in an effort to have those needs met. The social discipline approach is based in a need to be accepted by people and belonging to a group, the absence of which leads to CB. The assertive discipline approach is based in the practice

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of reminders of expectations. The instructional approach emphasizes preventing CB by keeping children actively engaged. Finally, the effective communication approach focuses on positive teacher-child relationships to eliminate punitive reactions to CB.

Teachers reported utilizing a variety of strategies in response to CB in the classroom, including varying the approach within CB categories (e.g., taking an instructional approach to interruption and a behavior modification approach to not waiting a turn, both of which fall under accommodation problems). Across all categories of CB, behavior modification strategies were most frequently reported (n = 15), followed by social discipline (n = 6), control (n = 5), and instructional (n = 2), assertive (n = 2), and effective communication (n = 2). The authors note a need to promote more functional strategies in the area of prevention for self-control difficulties, and generally concluded that further positive improvement is needed to support preschool teacher classroom management. What is particularly interesting about these results is that respondents base their practices on the types of CB rather than the function of CB. In summary, the most common CB was accommodation problems (i.e., interruptions, difficulty waiting for a turn), the rate was not reported, teachers endorsed using a wide breadth of strategies in response that were based on the CB itself, with the most common being behavior modification strategies; the effectiveness of strategies was not evaluated, nor the rationale for strategy choice despite inconsistency in strategy responses as they relate to type of CB.

Summary

A systematic literature review was conducted to answer four research questions: 1) What is the rate and/or type of CB experienced in the classroom? 2) What do preschool teachers currently do in response to CB in the classroom? 3) What is the perceived effectiveness of the utilized strategies? And 4) Why do preschool teachers choose certain strategies over others? Of 586 discrete results, six studies met the inclusion criteria in that they focused on typical practice in preschool classrooms rather than evaluating a specific intervention practice. The six studies will be reviewed next in direct relation to the research questions.

First, what is the rate and/or type of CB experienced in the classroom? Across all studies reviewed there was a consensus that teachers view externalizing behavior (e.g., hitting, kicking, biting, general aggression) as the most prevalent CB experienced in preschool classrooms, followed by noncompliance. In addition, externalizing behaviors that introduce safety concerns into the classroom (e.g., possible harm to other students) were consistently endorsed as the most concerning CB, regardless of rate of occurrence. However, despite this consensus regarding topography of CB, there was both great variability and discrepancy between teachers' perception of CB and the direct observational assessment of how prevalent CB is in preschool environments. For example, teachers in the Zaghlawan and Ostrosky (2011) study felt that their circle time was generally quite effect, yet the observational data showed that CB was occurring 30% of the time. Quesenberry et al. (2014) also reported an alarming occurrence of CB. Their report indicated that between 10 and 42% of all children in the 9 classrooms studied engaged in externalizing behaviors. Taken together, it appears safe to conclude that, at

least in the reported data, that externalizing behaviors are occurring at a level of significant clinical concern (Dunlap et al., 2022).

Second, what do preschool teachers currently do in response to CB in the classroom? Looking across the six studies in this review it is clear that there is a "kitchen sink" approach to business-as-usual management of CB in preschool classrooms. A wide range of both reactive and prevention strategies were reported to be employed, some evidence-based, and some not. Teachers reported frequent use of redirection (Snell et al., 2012; Zaghlawan & Ostrosky, 2011; Quesenberry et al., 2014), reminders or prompts (Aksoy 2020), exclusion (Snell et al., 2012b), and providing warnings and choices (Ritz et al., 2014). Strategies tended to be reported to be chosen "on the fly" and many prevention strategies ingrained into the classroom daily functioning. It is equally important to address what teachers did not report to do in response to CB. Across all studies respondents either never made any mention of the function of behavior when determining strategy, and when mentioned in one singular study, 5% of less of the sample made such a reference (Snell et al., 2012). Across all studies, there were no business-as-usual reports that teachers used any formal means for determining the function of behavior prior to intervening on CB.

Third, what is the perceived effectiveness of the utilized strategies? Remarkably, none of the studies reviewed made mention of the effectiveness of chosen strategies when intervening in CB in the classroom. While some indicated previous experience with a certain strategy or response had worked, no study distinctly evaluated whether or not teacher intervention mediated the identified CB. This outcome is curious when

considering the high rate of CB currently experienced in preschool classrooms, coupled with the stress and energy investment CB has been noted to require from teachers to manage. It stands to reason that effectiveness of strategy choice would be a useful indicator for continued use. One may presume that continued use of certain strategies would be based on previous success, but research has indicated this phenomenon to be an inconsistent indicator of actual reduction in CB (Kretlow & Helf, 2013).

Fourth and last, why do preschool teachers choose certain strategies over others? Only two of the six studies reviewed asked teachers' rationale behind strategy choice. Interestingly, when asked why a strategy is used, teachers generally refer to school policies or an established curricular approach (Ritz et al., 2014). In one study teachers reported varying strategy choice based on the topography of CB. However, in reality the type of CB and resulting strategy choice often coalesced across categories, illustrating a lack of consideration of function when making the choice, which was indicated as an area for future research and training (Aksoy, 2020). This outcome is both particularly concerning and prudent. Function-based behavioral interventions have been demonstrated consistently in the literature as the most effective intervention approach for decreasing persistent CB (Dunlap et al., 2018; Walker et al., 2018). Previous research has highlighted the difficulty of implementing function-based interventions in classrooms. Yet, with the high rates of exclusionary practices and CB currently experienced in preschool, studies continue to cite function-based interventions as the best strategy choice.

Therefore, the literature review summarized here indicates an insufficient understanding of what CB intervention looks like in typical preschool classrooms. Persistently high rates of CB, much of which was described by teachers are distressing and presenting safety concerns to children in their classrooms, demonstrate a persistent challenge that preschool teachers face on a daily basis. Further, strategy utilization continues to embody a "kitchen sink" approach that is largely reactive in nature, with little context for the type or level of CB in question, nor the effectiveness of their use. Most interestingly, the rationale for strategy choices illustrates a major area for concern regarding the use of evidence-based practices that are widely available to effectively reduce CB. Every study concluded with statements indicating a need to improve preschool teachers' management of CB in their classrooms, including incorporating the use of function-based interventions into their practice.

Discussion

Preschool classrooms are an essential element to promoting long-term academic success and emotional well-being. Attendance in high-quality preschool classrooms has been shown to support improve children's academic retention, performance (i.e., grades), and equally as important, social-emotional well-being and interpersonal relationships. Yet, preschool classrooms are not universally available to children in the United States and have the highest exclusionary rates for challenging behavior (CB). That is, more children are expelled from preschool classrooms than any other grade, including children with disabilities and those needing special education supports.

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CB by name implies that it is difficult to manage, and as such it has been implicated as a major factor contributing to preschool teachers' experiences of burnout. CB requires a significant amount of teachers' time, energy, and concern, all of which is done at the cost to other children in their classrooms, reducing their effectiveness as teachers. Fortunately, there are several evidence-based practices that have been shown to successfully reduce preschool children's CB. The recent wave of support for universal social-emotional curriculums over the past several decades shone a light on preventative practices and promised to increase teachers' capacity to manage CB in the classroom, starting with mitigating the rate of occurrence at the outset. Yet, these universal programs, while demonstrably effective at improving children's self-regulation and in turn social skills and academic performance, do not address higher levels of CB effectively on their own.

True CB, defined by the early childhood field 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 prosocial interactions with peers and adults" (Smith & Fox, 2003, p. 6) continues to be observed at high rates in preschool classrooms, and teachers, administrators, and researchers continue to ring an alarm of need to improve classroom responses, including those with universal, preventative, social-emotional programs. Of note, most of these practices are based in the foundational components of applied behavior analysis (e.g., providing choices, positive reinforcement, group contingencies) and have decades of research supporting their use in changing individuals' behavior. Similarly, the top tier of evidence-based practices for CB has been studied in

the field of applied behavior analysis and consistently demonstrated that function-based interventions are the most effective means to reduce children's CB.

Indeed, there is a legal mandate in public schools to utilize function-based interventions when managing CB due to the robust evidence base function-based interventions have produced in reducing CB with sustained results (IDEA, 2004). Function-based assessment and intervention involves identifying the child's CB's function, or motivation, and designing an intervention around that function. That is, children are taught positive, or socially acceptable, replacement behaviors that achieve the same function as the CB, yielding the CB no longer useful. As discussed above, several authors in the above review noted the lack of consideration of CB's function by teachers in managing CB in the classrooms, including this being an area for future work to address. As the most consistently supported and mandated form of intervention, it is curious how little consideration was reported for the function of children's CB in the studies reviewed above. The literature indicates that function-based interventions have been demonstrated previously as notoriously difficult to deliver in schools. Yet, CB continues to be a top concern as well. It is only natural, then, to ask why this highly researched and evidence-based strategy continues to exist with little successful implementation in the environment where it is so needed.

The literature reviewed here illustrated a variety of strategies tend to be utilized when managing CB in preschool classrooms, yet the rationale for the use of strategies was missing. It has been well-established that function-based interventions are rarely utilized, and even fewer are implemented to fidelity (e.g., Bambara et al., 2012; Pollack

et al., 2021; Strickland-Cohen et al., 2019; Walker et al., 2018). What has not been sufficiently studied, as the review here showed, is why preschool teachers intervene as they do when managing CB, and what the barriers are to function-based behavioral interventions. Evidence-based practices from research have a long history of presenting barriers to real-world implementation, and this is no different.

Of course, focusing research on the "why" of a problem can be difficult to answer with quantitative methods, and contributes to the lack of focus on the rationale and experiences of preschool teachers in the literature. In the past several decades of educational research, an increasing amount of emphasis has been placed on quantitatively driven evidence-based practices (Strain, 2018). In the process, manualized interventions have been produced, implemented, and evaluated in classrooms, and then left to their own devices. Indeed, sustainability research is a common obstacle that educational programs face. Teachers endure endless trainings, and as seen in the present review, their experience of these programs is not considered. Implementation science demonstrates the need to consider these individual experiences to best support sustainable programs, and those experience are best captured through a qualitative research study as this approach highlights the lived experiences of participants (Brock & Beaman-Diglia, 2018; Creswell & Poth, 2018; Kretlow & Helf, 2013).

Therefore, a qualitative research study of preschool teachers' experiences managing CB in their classrooms, including their rationale for intervening as they do, including consideration for the use of function-based interventions or not, is needed. By gaining a better appreciation of teacher's experiences with this highly successful, yet

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poorly utilized practice, it will be possible to guide more effective coaching and training of preschool teachers to manage CB using function-based interventions. To do so, it is necessary for the population of teachers interviewed to have been trained in function-based interventions, which is not always included in early childhood teacher education programs at a level that allows for implementation (Dunlap & Kern, 2018). Of the universal packaged social-emotional curricula available, only one to date, the Pyramid Model (PM; Fox et al., 2003; Hemmeter et al., 2006), includes a manualized function-based intervention to address serious and persistent CB. All PM teachers are trained in this manualized function-based intervention, and coaches provide on-going support across all service levels (universal, targeted, individual) (Hemmeter et al., 2022; Hemmeter et al., 2021a). By interviewing teachers from this population, there is assurance that all teachers are capable and trained to implement function-based interventions, and therefore can speak to the use or lack of use of this process, as well as their reasoning for doing so.

An important area for consideration in this process includes the milieu of preschool classrooms. This environment is highly collaborative, with higher levels of interdisciplinary practice and consultation across related service providers (e.g., occupational therapists, speech-language pathologists, early childhood special education teachers, and school psychologists or mental health specialists). In one of the above reviewed studies, teachers cited making referrals to a mental health specialist to support CB intervention development (Snell et al., 2012b). This presents an opportunity for built-in consultation as school psychologists are uniquely trained in function-based assessment

and intervention and existing members of preschool teams. Of note, many school psychologists serve multiple preschool classrooms or schools, and this logistical challenge will need to be considered should such a consultation model be aspired to. Nevertheless, in discussing this problem, the overall lack of use of function-based interventions in preschool classrooms combined with the limited mention of school psychologists or mental health professionals participating in these situations presents a promising possibility in activating both practices simultaneously.

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*Indicates articles included in review

Manuscript Two

Examining Preschool Teachers' Current Use and Knowledge of Evidence-Based

Practices for Challenging Behavior

Introduction

Challenging behavior (CB) is a persistent problem in preschool classrooms. CB is a term used to describe "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in prosocial interactions with peers and adults" (Smith & Fox, 2003, p. 6). CB can present in a variety of ways, from prolonged tantrums and overt physical and verbal aggression to noncompliance and withdrawal (Smith & Fox, 2003). CB in classrooms is particularly of concern for researchers in early childhood education due to the ability of one child's CB to disrupt an entire preschool classroom's daily routine and learning (Dunlap & Fox, 2011). CB is by definition difficult to manage, and often requires much of teachers' time and energy (Dunlap & Fox, 2011).

Distressingly, CB has been understood to occur in 10 to 21% of preschool children (Dunlap et al., 2013). Moreover, there is evidence to suggest children from

minority and lower socioeconomic status backgrounds as well as children with special needs are perceived by teachers to demonstrate higher rates of CB and are in turn often met with harsher and more negative consequences (Dunlap & Fox, 2011). Each of these populations hold intersectional minority identities, which are known risk factors for educational failure, compounding the negative effects of children's minority status (Allen & Steed, 2016; Cosier & Pearson, 2016). Further, research has shown that CB will continue, and negatively impact a child's social and academic success long-term if not addressed in early childhood (Dunlap & Fox, 2011). Indeed, this is an urgent equity concern practitioners and researchers alike must aim to ameliorate (Allen & Steed, 2016; Cosier & Pearson, 2016).

In the Individuals with Disabilities Education Improvement Act (IDEIA, 2004), federal law emphasizes the need for educators to utilize intervention procedures with strong scientific support. That is, interventions must demonstrate reliable and valid effects before they are widely adopted. The evidence-based criteria include evaluation of the quality of research design in addition to intervention outcomes and applicability to the target population. These practices have become widely referred to as evidence-based practices, hereafter referred to as EBPs. In particular, EBPs have been highlighted for their use with young children with developmental disabilities, including autism spectrum disorder. As this focus increased, there was a subsequent rise in preschool classroom based EBPs due to the accessibility to young children with developmental disabilities and opportunities for early intervention.

Accordingly, there is a wide array of EBPs specific to supporting children's social, emotional, and behavioral development in preschool classrooms, broadly referred to as positive behavioral supports (see Bradshaw et al., 2010; Osher et al., 2010). These practices include universal social-emotional learning curricula (i.e., every child is the classroom is taught a toolbox of skills), which encompass emotional literacy, problem solving, and prosocial behavior objectives, as well as classroom management programs that emphasize proactive teacher efforts to support and increase the likelihood that children follow instructions, access the curriculum, and demonstrate prosocial behaviors (see Frey et al., 2000; Hemmeter et al., 2016; Webster-Stratton, 2001).

The most widely adopted, extensively studied, and comprehensive positive behavioral program at a preschool level is the Pyramid Model (PM; Fox et al., 2003; Hemmeter et al., 2006; Hemmeter et al., 2021). The PM has been implemented and evaluated for over 20 years. It has been found to be associated with positive child outcomes, including increased social skills and decreased CB when implemented to fidelity, with secondary gains in academic achievement and long-term educational success (Hemmeter et al., 2016; Hemmeter et al., 2021). It is currently being implemented in 35 states and is the early childhood component to the federal Office of Special Education Programs' (OSEP) Positive Behavioral Interventions and Supports (PBIS). The PM encompasses a universal tiered framework of EBPs for preschool classrooms. The PM tiers are:

1) Tier one is the universal teaching of social-emotional skills and positive classroom management. This includes explicit teaching of emotions, calm

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down strategies, and independent problem solving with peers. Additionally, teachers structure classrooms around verbal and visual supports and reminders to preschoolers of what they should be doing, and what the expectations are for each activity. These practices actively prevent CB by providing children with the skills to participate, make choices, and ask for help (Fox et al., 2003; Hemmeter et al., 2006).

2) Tier two focuses on bolstered social-emotional supports for targeted cases. These children may need more explicit teaching of problem-solving skills, an individualized visual schedule to support their transitions in the classroom, or small group coaching to use problem solving strategies (Fox et al., 2003; Hemmeter et al., 2006).

3) Tier three of the PM is function-based assessment (FBA) and function-based intervention (FBI), hereafter referred to as FBA/I, for persistent CB (Fox et al., 2003; Hemmeter et al., 2006). FBA/I will be reviewed in detail next.

The PM is the only packaged intervention program at a preschool level that embeds FBA/I into the program to address serious and persistent CB. The process of FBA/I involves individualized assessment of a child's CB to identify the function, or motivation, behind the behavior through systematic observation and consultation with a child's family and other caregivers. The team then teaches the child a positive replacement behavior that achieves the same function as the CB. For example, a child engages in aggressive behavior in the form of pushing when a peer physically touches him. As a result of the child pushing, the peer physically moves away from the child.

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Over several days of observation, it is documented that the child only engages in these behaviors after a peer makes physical contact with him (i.e., contact is the antecedent), and each time, after the child engages in aggressive behaviors (i.e., pushing is the behavior) the peer moves away (i.e., steps or walks away such that there are several feet between the child and the peer; moving away is the consequence). Through these observations, it can be reasonably concluded that the function of the child's behavior is escape from peer physical contact. Therefore, an intervention can be created to teach the child to verbally or visually ask their peer to move away when they come too close. By teaching a replacement behavior, the child learns a new way to achieve the same consequence (i.e., the peer moves away from them) without needing to engage in the aggressive behaviors, thereby reducing their engagement in the CB.

Indeed, FBA/I has been widely studied and consistently demonstrates the most effective outcomes in successfully reducing persistent CB (Walker et al., 2018; Wood et al., 2011). The evidence for FBA/I is strong enough that these procedures are mandated by IDEA and the Office of Special Education Programs (OSEP) when addressing CB in classrooms (IDEA, 2003; OSEP, 2000). Grounded in the theory of applied behavior analysis (ABA), FBA/I is based on the idea that all behavior has a function, and only behaviors that are reinforced continue to be expressed. That is, the behavior's functional outcomes maintain the behavior (Wilder et al., 2007; Pelham et al., 2005). However, to be effective, these interventions must be implemented to fidelity, the use of FBA/I to fidelity in schools is lackluster. Research has shown the implementation of FBA/I to address CB in schools to be inconsistent, and rarely done to fidelity (see Pollack et al.,

2021; Walker et al., 2018). In turn, CB continues to be a prevalent concern amongst preschool teachers, with frequent calls for greater training in behavior management, despite the existence of these EBPs to support children's social, emotional, and behavioral development in the classroom (Fox et al., 2021).

This research to practice gap is troubling, and yet little is understood about teachers' experiences managing CB in their classrooms on a daily basis. A systematic review yielded only six studies focused on teachers' experiences managing CB in the classroom independent of a manualized intervention evaluation, during which teachers receive higher levels of coaching and support that are not sustained, and therefore do not reflect typical practice. Results from the review indicated that 1) CB continues to be observed at high rates, particularly externalizing behaviors (e.g., pushing, hitting), 2) teachers respond to CB in a highly variable fashion that is largely reactive in nature, 3) no studies considered the effectiveness of chosen strategies on the targeted CB, and 4) only two of the six studies asked why teachers choose certain strategies over others, with those teachers reporting that school policy and curriculum guided their decision-making. All studies reviewed concluded that teachers would benefit from increased professional development centered on behavior management due to the high levels of CB experienced in the preschool classrooms studied. Further, in those calls for training, half referenced the need to evaluate the function of children's behavior when intervening. Indeed, only one study reported teachers mentioning the function of a child's behavior when responding to CB, and that report was less than 5% of the participants in the study.

Significance of Current Study

It stands to reason that the low utilization of FBA/I in preschool classrooms may be a contributing factor to the difficulty in reducing rates of CB in preschool classrooms, and teachers' struggles with managing behavior on a daily basis. However, it is not yet understood why this research to practice gap exists. Therefore, it is vital to explore current preschool teachers' experiences with implementing FBA/I in their classrooms to better understand the barriers to implementation and areas for improved training and coaching. Due to the in-depth nature of this question, with a focus on teachers' rationale for strategy choice and implementation, a qualitative approach will be employed for its utility in studying individuals' experiences with a topic that cannot be adequately studied through quantitative measures (Creswell & Poth, 2018).

Rationale for the Current Study

Accordingly, to identify the barriers to effective FBA/I in preschool classrooms, more information is needed about teachers' experiences implementing these practices. First, information is needed about the type and level of CB that teachers are facing on a daily basis, including whether it is internalizing or externalizing behavior, and the level of severity of the behavior. Included in this topic is whether or not the CB teachers reference meets the field's definition of "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in prosocial interactions with peers and adults" which is a precursor to the need for FBA/I (Smith & Fox, 2003, p. 6). Further, teacher perceptions of these behaviors were an area of interest; that is, whether they perceive the behavior to merit FBA/I in tandem with whether or not it met the above definition.

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Second, information is needed about teachers' responses to CB, including how they felt about the behaviors before responding, if they had attempted preventative strategies, and what interventions they chose to employ (i.e., FBA/I). A compliment to this topic is the rationale behind those intervention decisions. Information about what factors guided or influenced teachers to choose certain strategies over others, including why they did or did not choose to utilize FBA/I. Finally, the perceived effectiveness of chosen intervention strategies on the targeted CB is an area rarely considered in the literature and is a highly important component to intervention the current study sought to evaluate. Therefore, to gather this information, a semi-structured in-depth interview conducted with current preschool teachers was developed to understand their experiences managing CB in their classrooms and their use or lack of use of function-based classroom approaches to intervene (see Appendix C for interview protocol).

Target Population

To effectively study teacher experiences implementing FBA/I for CB in preschool classrooms, some training in FBA/I is a prerequisite for respondents. Therefore, the target population of teachers for this study were those trained in the implementation of the Pyramid Model (PM; Fox et al., 2003; Hemmeter et al., 2006; Hemmeter et al., 2021). As reviewed above, the PM is a comprehensive, packaged intervention program at the preschool level that trains teachers in FBA/I for tier three persistent CB. Therefore, these teachers have the necessary training history to report on their use and non-use of FBA/I for persistent CB. Further, if those trained specially in FBA/I outside of teacher preparation programs (i.e., while in practice) are struggling to utilize these practices, the

suitability and compatibility of FBA/I with existing training and supports in the field may be brought into question.

Within the population of PM teachers, a Midwest state was chosen as the target sample for the present study for several reasons. First, in the chosen state, the PM is a state-funded initiative being implemented at the district level in several hundred public education preschool classrooms. The state has been involved in implementing program-wide PM for over a decade, and the state department of education collects comprehensive data related to on-going training, coaching, and implementation fidelity measured using the Teaching Pyramid Observation Tool (TPOT) which was designed to measure implementation fidelity to PM practices. The state currently includes high-fidelity classrooms (i.e., >80% on the TPOT) as well as classrooms with brand-new PM trainees (i.e., <50% on the TPOT). Teachers are trained and coached simultaneously from the first year in implementing the PM, with ongoing coaching as needed to reach fidelity. Further, additional behavior coaches are available on a case-by-case basis to support tier three interventions (i.e., FBA/I) for persistent CB. Finally, the. Therefore, this population presents the opportunity to recruit from a controlled sample in regard to supports for FBA/I implementation and training across participants, with a complimentary broad range of implementation experience.

Research Questions

The purpose of this study was to gain in-depth understanding of preschool teachers' experiences with, and perceptions of, the FBA/I approach when intervening in CB in daily practice. A phenomenological research method

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utilizing in-depth interviews was selected to achieve this outcome. The study aimed to answer the following research questions:

(1) How do preschool classroom teachers who are trained in the PM describe challenging behavior in their classrooms?

    a. Do they reflect current ideas about what constitutes challenging behavior?

    b. Do descriptions vary with levels of PM fidelity?

(2) How do preschool teachers discuss implementation of function-based intervention strategies promoted within the PM framework?

    a. Are they reflective of current ideas about effective implementation of function-based intervention?

    b. Do the practices vary with levels of PM fidelity?

Method

A qualitative research approach was chosen for its utility in exploratory research (Creswell & Poth, 2016). Qualitative research locates the observer in the world to make the world visible (Creswell & Poth, 2016). By studying topics within their natural settings, qualitative research helps to make sense of, or interpret, phenomena relative to the meaning(s) people make of them (Creswell & Poth, 2016; Leech & Onwuegbuzie, 2007). As outlined above, there has been limited research to date about preschool teachers' experiences managing CB in preschool classrooms. While much is understood about rates of CB and typically reported strategies, no study has yet asked why preschool teachers respond as they do in managing CB. Therefore, this study was designed to study the reasoning behind teacher's choices of intervention strategies. Qualitative research is

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best suited to document the challenges encountered in practice to answer the why and how questions related to managing CB in the classroom (Leech & Onwuegbuzie, 2007).

The phenomenological research approach within qualitative research has its foundations in philosophy (Creswell & Poth, 2016). German philosopher Edmond Husserl aimed to establish phenomenology as an approach to study lived experiences of human being at the conscious level of understanding (Husserl, 1913, 1962). Through this process, phenomenology can educate, define, and broaden our view of the world (Qutoshi, 2018). Since its beginning, phenomenology has evolved such that a single definition is hard to find, yet all agree that consciousness is central to the core philosophical underpinning of the world (Qutoshi, 2018). Taking this a step further, "phenomenology is the study of a phenomenon perceived by human beings at a deeper level of understanding in a specific situation with a detailed description and interpretation of lived experiences" (Qutoshi, 2018, p. 217-218). Through phenomenological research, we can understand a phenomenon in a manner that brings transformation through understanding of practices at a personal level. It is for this characteristic that this methodology was chosen for the present study (Qutoshi, 2018).

An essential component of phenomenological research involves bracketing. Bracketing is when the researcher brackets themselves in or out of the study by discussing personal experiences with the phenomenon (Moustakas, 1994). For the present study, the researcher explicitly wrote about their own experiences managing challenging behavior in preschool classrooms as well as in other settings. The researcher also wrote about experiences implementing function-based behavioral interventions. Through this

process the researcher is meant to be able to focus on the experiences of the participants of the study, rather than her own experiences. Of course, it is understood within the phenomenological method that it is impossible to fully remove oneself from the topic of study. The process of disclosure allows the reader to account for the researcher's experiences and determine whether or not there is undue bias for themselves (Creswell & Poth, 2016). This process may otherwise be described as phenomenological reflection.

As a methodology, phenomenology utilizes intensive interviews as its main form of data collection, with a heterogenous group of 3 to 15 individuals who have all experienced the phenomenon under study (Creswell & Poth, 2016). In the interview process, the researcher is responsible for "creating a climate in which the research participant will feel comfortable and will respond honestly and comprehensively" about their experience (Moustakas, 1994). Questions are designed to evoke rich details about the experience, such as asking what feelings were generated by a particular experience (Moustakas, 1994). This procedure takes place alongside meaning making. That is, the purpose is to "identify the phenomena that is perceived" by the participants in order to understand the perceptions and interpretations of the phenomena from their point of view (Qutoshi, 2018, p. 219). To allow for these simultaneous procedures, the interview serves as a guide, not a script, and is able to flex as needed in order to truly understand the participant's experience with the phenomenon. The first goal is to describe the reality, not explain it, and ultimately lead into interpretations of the description. Then, a summary, discussion and recommendations based on the findings are a natural product. The analytical process is described in the data analysis section below.

Participant Recruitment

A Midwest state was chosen for the present study because of its successful, standardized state-wide PM implementation over the past decade. In addition, this state has some of the strongest pre-service training in early childhood education at the undergraduate and graduate level. At the time of data collection, the state had several hundred active PM classrooms. Due to the standardized implementation process, all recruited teachers received the same training regardless of the year in which they were initially trained. Additionally, all teachers received scaffolded coaching as needed in pursuit of reaching fidelity of implementation. This process also enabled teachers to provide PM classroom fidelity scores, which are an observation-based measure of implementation of PM practices and used to inform coaching. Of note to the present study, coaching was delivered to study participants through a mix of in-person and virtual methods due to the Covid-19 pandemic over the several years preceding the study.

The PM Director in this state was the community gatekeeper for the present study. This individual obtained approval from the state director to have state teachers participate in the study to inform the ongoing state-wide PM initiative after Institutional Review Board (IRB) approval was secured from the researcher's university. Once approved, the PM Director disseminated the consent form outlining risks, benefits, and confidentiality for participation (see Appendix A for consent form) and recruitment flier with eligibility criteria (see Appendix B for distributed flier) to teachers on the program's listserv. The eligibility criteria were 1) teachers must be lead general _or_ special education PM preschool classroom teachers, 2) teachers must be fully trained in the PM (i.e., tiers 1-3

completed), 3) teachers must have experienced CB in their classrooms, 4) teacher must speak conversational English. Teachers were not included if, 1) they were in the process of completing PM training, 2) they taught in self-contained special education classrooms, or 3) they were not employed by a state district. The study was presented to potential participants as part of the state's on-going PM initiative and instructed those wishing to participate to contact the researcher directly. Interviews were scheduled on a first-come, first-serve basis. All participants received $200 as compensation for their time.

Procedure

The study was conducted online via Zoom to reduce the travel costs and to follow public health orders considering the ongoing Covid-19 pandemic. Additionally, this method of interview allowed for greater flexibility in scheduling as well as the option to record interviews for transcription in a reliable manner. The researcher utilized their university affiliated Zoom account because the subscription includes the highest security settings. A meeting password was provided to participants for added caution, ensuring only those with the password could join the meeting. Participants were sent consent forms prior to initiation of the interview and provided vocal consent to the procedures (including recording of the interview) prior to beginning the interview and recording. This consent process was approved by the IRB due to the virtual nature of the study, wherein participation implies consent. Upon completion of each interview, the recording was saved in a password protected folder on the researcher's personal laptop computer. The recording was immediately transcribed through an online platform (Otter.ai) where the researcher had a subscription to ensure privacy of data. All transcriptions were de-

identified and stored in a locked file in a locked folder on a secure university managed network (i.e., OneDrive). Once transcribed, recordings were deleted from the researcher's computer.

Interview

The interview protocol was created for this study. The interview was based on a thorough literature review of current practices in early childhood related to CB, reviewed above. Since no existing protocols were found that focused on the current practices, knowledge, or use of functional behavior assessment and interventions independent of a particular intervention, a new interview protocol was developed. The protocol was designed to answer the research questions not sufficiently answered by the literature review, including teachers' experiences managing CB in their classrooms, teachers' rationales for utilizing certain strategies over others (including FBA/I), the barriers to the use of FBA/I, and the perceived effectiveness of their chosen strategies.

Each interview began with the following script read by the researcher:

Thank you so much for taking the time to speak with me today. This project is a component of your state's program-wide Pyramid Model implementation. The purpose of this project is to better understand Pyramid Model teachers' experiences managing challenging behavior in their classrooms. The goal is to utilize the information to inform future coaching of teachers across the state to best support teachers in managing and reducing persistent challenging behavior. You will be asked to discuss a scenario of challenging behavior that you have experienced in your classroom, and to reflect on how you intervened, what guided that decision, and what you might have done differently. All

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information will be de-identified and no answers will be provided to state or district level personnel. You have the option to opt out at any time. You will be compensated for your time. A gift card will be emailed to you immediately following this interview.

Section 1: Classroom demographic questions were asked first in order to coherently discuss the background of the participants and to inform any interpretations that vary across classroom variables. Additionally, the demographic questions were designed in order to inform generalization of the findings to other similar classrooms. The demographic questions and the rational for their inclusion are presented next.

(1) What is your name, title, and the school/district where you currently work?

   a. To confirm the participant's identity, ascertain the participant met eligibility criteria of being a lead classroom teacher, as well as to account for the percentage of participants working as general or special educators, as the training and classroom environment may differ.

(2) What is your age, race, and gender?

   a. To speak coherently about the sample, it is necessary to demonstrate a diversity of participants that meets the overall preschool teacher population.

(3) How many years have you worked in your current role, and what is your education background?

   a. To speak coherently about the sample, it is necessary to consider teachers' experiences in the field and background training to inform interpretation and the impact of these factors on reported experiences.

(4) What is the current number of students in your classroom on an Individualized Education Program (IEP)? What is the makeup of those students (what disability categories)?

  a. As rates of CB are found to be higher amongst children with disabilities, this information will inform classroom dynamics and interpretation if CB is experienced at a higher level in classrooms with higher needs. It is also important to understand the disability categories as children with developmental disabilities compared to speech/language delays introduce different risk factors for CB with the former being higher than the latter due to functional impact.

(5) What other adults are in your classroom daily? Weekly? (Paraprofessional, one-to-one aide, RSP).

  a. This information will help inform supports currently accessible to teachers in their experiences and whether that support helps facilitate function-based intervention or is a barrier to effective use.

(6) What was your last TPOT score?

  a. To protect participant anonymity with the state department administration and participation in the study, it was decided to have teachers self-report fidelity scores for PM implementation. These scores will be utilized in the analyses to answer the research questions of whether or not practice varies with level of fidelity of PM implementation.

Section 2: The interview was designed to follow a reconstruction approach in four stages (see Appendix C for a visual representation). In stage 1, all participants were asked to describe some of the CBs they typically experience in their classrooms. Initial responses to this question directed the next stage of the interview. If one of the CBs initially described fit the definition of CB, "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in prosocial interactions with peers and adults" they proceeded with stage 2a where the participant was guided to reconstruct an experience with that CB, including the context around the CB, the participant's emotional experience with the event, and how they responded to the event (Smith & Fox, 2003, p. 6). Reponses that did not meet the definition proceeded to stage 2b wherein a reconstruction of the event, including context, response, and emotional reaction, still occurred, but the interviewer paid close attention to the participant's classification of the CB to see if they recognized that it did not meet the definition of persistent challenging behavior requiring individualized function-based intervention.

In stage 3a (when CB met the field's definition), the interviewer referenced the training that the participant received through the PM in function-based intervention and prompted a discussion of the decision to use or not to use a function-based approach in the reconstructed scenario. Participants were asked to reflect on critical aspects that influenced their decision-making and what they might have done differently. Questions were designed to address what about the function-based intervention was helpful or if they did not use a function-based approach to assess why. Other questions were designed

to encourage reflection about the effectiveness of the function-based approach and if other factors would have been helpful in intervening in this scenario. Questions also focused on ideas about a) the origins of the CB (i.e., why this behavior or event happened in the first place) and b) the outcomes associated with the approach taken (i.e., why the results of their intervention occurred). Overall, this stage was designed to foster greater self-reflection about the scenario, their decision-making, and what might have been done differently. In stage 4a participants were thanked for their time and the interview was concluded.

Alternately, during stage 3b (path for initial CB not meeting the field's definition) participant's training in function-based intervention was still assessed. However, the probes were subsequently directed towards whether or not the participant considered using function-based approaches for a CB scenario and if not, to questions that could help determine if this decision was because the CB did not warrant that level of intervention.

In stage 4b, participants were prompted to think of an incident that would require the use of function-based intervention. If an incident meeting the definition was provided, the interview proceeded to stage 2a to reconstruct and subsequently stage 3a to reflect on the scenario. If no incident meeting the field's definition was provided, participants were thanked for their time and the interview was concluded.

Piloting

Following interview development, an expert panel reviewed the protocol and provided feedback that was incorporated around clarity of questions and content area foci. The expert panel included an early childhood special education teacher preparation

professor, a researcher in early childhood special education, and a preschool inclusion coach. The interview was then piloted with three preschool teachers recruited in a separate state that were part of an independent project in order to answer the following questions. Volunteers received $50 gift cards as compensation for their time.

All three teachers provided feedback after completing the interview guided by these questions:

1) Were the questions clear? Did the flow and reconstruction process make sense?

2) What could be changed to increase understanding, comfort, or address an overlooked area?

3) Did the volunteers feel evaluated during the interview rather than understood?

All three teachers reported that the questions were clear, and the progression of the interview was smooth and easy to follow. No teacher reported feeling evaluated during the interview and highlighted that the researcher reflecting their responses back to them was helpful and made them confident they were understood. One teacher noted that during the interview she internally had to remind herself of the interview being confidential, before sharing about a collaborator, and recommended highlighting that all responses would be de-identified and shared collectively for future participants. No other feedback nor suggested changes were made. The researcher reviewed the introductory script to underscore confidentiality and how results would be communicated, and continued reflection of responses throughout the course of the interviews.

Procedures for Administration

Teachers who elected to participate indicated their interest by emailing the principal investigator. A convenient time to meet via Zoom was determined by teachers, and Saturdays and Sundays were offered as a time to meet. A Zoom link was provided to participants via email with a password for entry and interviews conducted at the chosen time. Consent, privacy, and risks to participation were reviewed and verbal consent obtained before the interview began. Participants had the option to opt out at any time. Interviews took on average 70 minutes to complete. Participants received a $200 electronic gift card via email immediately following completion of the interview as a thank you for participating and as compensation for their time.

A total of 10 participants were interviewed. Following each interview, the recording was transcribed using Otter.ai, a transcription software commonly utilized in qualitative research. Transcribed interviews were then examined by the researcher in phases which will be reviewed next. The researcher consulted with the project's methodologist throughout the data analysis process.

Data Analysis

Data analysis was completed using two analytical techniques: constant comparison analysis and classical content analysis. Constant comparison analysis utilizes inductive coding to identify units of meaning from the data (rather than deductive coding where codes are determined ahead of time) and organized into codes, which are then aggregated into categories, and ultimately, themes (Corbin & Strauss, 2014; Leech & Onwuegbuzie, 2007). The follow steps guided the constant comparison analysis (Corbin & Strauss, 2014):

1) The full interview was read by the researcher

2) The researcher chunked the data into smaller, meaningful parts or phrases

3) Each chunk was labeled with a descriptive code

4) Each new chunk of data was compared with previous codes, allowing for similar chunks to the attributed to the same code

In classical content analysis, the codes generated from constant comparison analysis are counted rather than sorted into themes (Berelson, 1952; Leech & Onwuegbuzie, 2007). By giving a frequency count to each code, inference into the importance of codes to the interviewee can be made. For example, answering, "what is the most common type of behavior mentioned by participants" could be answered using classical content analysis (Leech & Onwuegbuzie, 2007). The frequency counts also provide inference into the identified themes by comparing the distribution of codes across participants within each theme. Code counts were also utilized to design an illustration of the results by weighting each code within respective themes in relation to the frequency they were mentioned by participants.

Analyses were completed in an ongoing iterative process. After the first interview was conducted, the author coded the transcript using constant comparison analysis (Corbin & Strauss, 2014). A second coder followed the same process with 42% of the identified units of meaning from the first interview's data to provide interobserver agreement (IOA). Due to the small amount of data, Kappa could not be calculated, and the percent agreement was calculated to be 97.79% across 272 codes. All disagreements were discussed between the researcher and IOA coder, and the researcher checked her

own biases for influence over codes. A notebook was utilized throughout the analytical process to monitor for bias and bracket out the researcher's personal experiences with the phenomenon under study (Moustakas, 1994). No new codes were added during this process, but two data pieces were reallocated to different codes, and one data piece was determined to fall under both codes selected independently by the researcher and IOA coder. The final set of codes were reviewed with the project's methodologist and carried forward into the remaining interviews. Each interview transcript was coded before the next occurred in order to add to the original set of codes with each subsequent interview and carried forward.

The researcher consulted with the project's methodologist after the seventh interview. Coding and emerging themes were reviewed. The data demonstrated that few new codes were being generated at that point in data collection, and the few being added were thematically similar to existing ones. The lack of new meaningful codes indicated little new information was being gathered, and therefore continued data collection would not meaningfully impact the results and overall thematic outcomes of the study (Corbin & Strauss, 2014). It was decided that after the tenth interview (three participants remained who had indicated interest in participating) data collection would conclude. Following the tenth interview, the final set of codes ($n = 111$) were reviewed and grouped by similarity (Leech & Onwuegbuzie, 2007). These groups were given descriptive categorical labels ($n = 13$), and themes identified and documented. The researcher utilized quotes from participants to illustrate the meanings and essences of the experience

common across participants grouped by themes (Creswell & Poth, 2016; Moustakas, 1994). The textual description is included in the results selection below.

The final set of codes ($n = 111$) were then counted using classical content analysis to provide inference into themes. Once counted, the author organized the codes by frequency and calculated the dataset's quartiles to identify the top 25% of codes using the quartile function in Excel. These top codes were used to illustrate the most common experiences across participants. Additionally, the classical content analysis was utilized to construct a textual description of each theme, with each code weighted by its frequency count across interviews. A total of ten preschool teachers participated in the present study, determined based upon saturation in responding, and all ten teachers' interview transcript was included in analyses. All ten teachers were fully trained in the PM at the time of the interviews, which were conducted from February 27 to April 4, 2022, via Zoom.

Results

Participant Demographics

Across teachers, seven identified their current role as general education preschool classroom teachers and three identified as special education preschool teachers. Most teachers had some experience or training in special education. The majority of teachers reported having 6-10 years of teaching experience, two reported 0-5 years of teaching experience, one reported 11-20 years of teaching experience, and one reported over 30 years of teaching experience. Four teachers reported holding a master's degree in an education-related field, three were in the process of completing a master's degree in an

education-related field, and three held bachelor's degrees in education. Nine participants were white, and one participant was Hispanic. All participants identified as female. The ages of participants varied from 23 to 57 years old, and the majority (n=7) were between 30 and 39 years old. The average caseload across teachers was 5 children with an Individualized Educational Program (IEP) within classes that all served from 7 to 11 typically developing children. Most children qualified for special education services (i.e., an IEP) under the category of developmental delay, followed by speech and language delay, autism spectrum disorder, emotional behavior disorder, and other health impairment.

Constant Comparison Analysis

Four themes emerged from the data following code aggregation into categories and arranged by themes. The final themes were: 1) despite high levels of CB in preschool classrooms, teachers have a strong desire to provide positive experiences for children in their classrooms, and engage in effortful prevention methods, often based on the PM, 2) persistent CB is often met with exclusionary practices due to safety concerns that restrict the engagement of children with CB, 3) teachers have a limited capacity for managing CB in their classrooms, and 4) teachers rarely complete a formal functional-behavioral assessment process in response to CB. Each theme will be reviewed individually next, with quotations from participants to illustrate. Each theme will be described with foundational quotes from the interviewees.

Theme 1

Despite high levels of CB in preschool classrooms, teachers have a strong desire to provide positive experiences for children in their classrooms, and engage in effortful prevention methods, often based on the PM. Across interviews, when asked to describe CB in their classrooms this year, teachers immediately listed externalizing behaviors, including throwing, screaming, kicking, non-compliance, and elopement (Teachers 1-10). Aggression, or physical behaviors, were consistently mentioned as the most challenging of the CB in their classrooms, and several described the CB experienced this year to be noticeably more difficult than in previous years (e.g., Teacher 3, 4, 6). For example, Teacher 3 said, "this year has been a little bit more challenging than in previous years…and it's not just one student, we've been having it with multiple…I've gotten smacked across the face with a broomstick, hit, kicked, slapped, pretty much daily." Several spoke to transitions being particularly difficult times of the day that results in CB, particularly when directing children to transition from a preferred to a non-preferred activity, often leading to destructive behaviors that disrupt the full classroom (e.g., Teacher 1, 2, 4, 6, 9). Of note, many teachers described the CB as emerging after the first few weeks of school, and to ebb and flow in intensity throughout the year, often leading to a decrease in intervention attention that then must be reinstated (Teacher 5). Overall, CB was reported to be an ongoing concern across the year. For example, Teacher 2 explained, "we just haven't found anything that consistently works."

Despite the high level of CB experienced by this population of teachers, each made a point to highlight positive aspects of children when discussing their experience managing CB in their classrooms. Teacher 8 shared that, "we really want to long term

teach the kids how to be able to deal with these emotions on their own and problem solve and give them that independence." Teachers reported that they appreciate the PM mindset that "behavior is communication…it doesn't mean they're a bad kid when there's lots of behaviors, they're really trying to tell us something, and we've got to figure it out" (Teacher 8). In this approach, a focus on teaching positive social skills was evident, along with partnering with families to ensure that skills were being practiced across environments. Teacher 6 shared, "as crazy as this group is, we're a family… they all love coming to school still…it's really amazing." Teacher 7 made a point to highlight the progress she's seen in several children as they gained social skills and learned self-regulation techniques.

Additionally, several teachers shared concern for the kindergarten transition for children with persistent CBs and wanting to ensure they have the support and skills necessary to successfully make that transition. Part of this effort included mastering social skills to facilitate an "overall positive school experience" to carry forward and recognizing the importance of preschool as children's first school experience (Teacher 7). Teachers consistently highlighted the value of adult-child relationships, and prioritizing engaging with all children, and investing in those relationships, which enable them to maintain a positive outlook. For example, Teacher 4 said, "I just want to say too, even with the challenges, this class is very enjoyable, because the kids have amazing personalities. And I don't think I could do this every day, if I didn't see those amazing little shimmers of greatness shine through."

Finally, teachers regularly shared individualized efforts they had made to try and prevent children's CB once it began. Teachers frequently cited providing children with scheduled breaks (Teacher 1, 7, 10), using positive opposites or reteaching to reinforce desired behaviors (e.g., walking feet instead of no running) (Teacher 3), and setting up individual visual schedules to support children's transitions throughout the day, including sometimes rearranging a child's schedule to support their behavior (Teacher 1, 10). Teachers also described environmental supports such as setting up a calm down area in the classroom, providing children with chairs during circle time, and providing consistency across the school day (Teacher 5, 7, 1). Several teachers described coaching children through calm down strategies when dysregulated, using "techniques like the big belly breaths, getting a drink of water" (Teacher 3) and providing children with a visual card outlining the steps for deep breaths and modeling the technique with them (Teacher 9). One teacher shared that they reviewed a lot of problem-solving situations through stories and the PM Tucker Turtle puppet to teach these strategies during circle time (Teacher 1) and another described creating an individual token board for a child to earn points towards a desired activity by engaging in positive behaviors (Teacher 6). Lastly, teachers highlighted efforts to building positive relationships with children who engaged in persistent CB, making efforts to connect with them first thing in the morning, and ensure they have a positive adult relationship at school (Teacher 2, 6).

Theme 2

Persistent CB is often met with exclusionary practices due to safety concerns that restrict the engagement of children with CB. A troubling theme across interviews was

that children's CB introduces significant concerns for child and adult safety alike, and the severity of behaviors was perceived to have increased since the Covid-19 pandemic. For example, Teacher 2 shared, **"**It's dangerous to be around [a specific child] when he's upset ... he's broken a lot of toys in my room, smashed them on the floor, kicked the wall, he punched the wall one time." Teacher 6 described having to do room clears to keep other children in the classroom safe, "We had to evacuate the whole class when it got really bad. That usually happens like once a week now before it was at least once a day." In addition to disruption of learning, and the classroom, several teachers spoke to being harmed themselves and needing to place themselves between a child's CB and the other children in the classroom (Teacher 3, Teacher 1).

Due to these safety concerns, teachers often spoke of seeking a special education evaluation in order to receive the highest level of support for a particular student, most often, an individually assigned paraprofessional. Teacher 3 described, "if [they] qualify they would have a 1:1 paraprofessional, for the safety of them and the other children." Teacher 6 described a common situation across teachers of requesting additional support staff in order to have an adult assigned to a child with particularly difficult CB, "maybe an hour of the day just to give us a break…so we could play with other kids." Teacher 2 shared, "[Getting a 1:1 para] was so nice for me because it was very distracting, trying to use all my skills to support him, but good to try to keep him with us [with the 1:1 support]." When special education wasn't able to provide an assigned paraprofessional, several teachers shared that a general paraprofessional assigned to the classroom would ultimately spend almost all of their time with the child with the most persistent CB. Yet,

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teachers reported that across cases this year, behaviors had rarely improved, and therefore an increase in classroom staff and a 1:1 paraprofessional assignment was not successful in reducing children's CB in the classrooms.

Further, even with 1:1 support, Teacher 5 shared, "if we can get [a particular child] into the classroom for maybe an hour a day, we're lucky" due to time spent outside of the classroom regulating or engaging in other activities that the child preferred (e.g., special education room, gym), which ultimately reinforced the child's CB. In one case, a teacher spoke of needing to have a child with persistent CB transferred to a self-contained special education classroom following their special education evaluation. Teacher 10 described, "the level of support we needed to give [them] to be successful, along with the safety aspect of it…and knowing that he could be successful in a smaller setting to learn those [social] skills… in a more focused setting."

Theme 3

Teachers report that they have a limited capacity for managing CB in their classrooms. A resounding sentiment amongst teachers highlighted the difficulty managing CB in regard to time, energy, emotional capacity, and staffing shortages. Teacher 8 described the difficultly of managing CB as, "Overwhelming. And with para shortages and feeling like you're pulled this way and that way and trying to support all of the children [in the classroom], and not knowing how [to support those with CB], it's tiring. And it's frustrating, because you want to help those kids…it just kind of leaves you up at night, thinking about it." Teacher 1 shared that "kids [this year] are crazier than they have ever been before, time is taken up and you are just thrown into it." This sentiment

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was shared across teachers, as children in their classrooms this year are experiencing the setting (i.e., being with 15 other children their age) for the first time in their lives. While CB has been something teachers reported having faced throughout their careers, the level of behaviors this year was reported to be higher than they were used to. Teacher 2 shared, "We're trying different strategies (i.e., movement breaks, weighted vests), but we just haven't found anything that consistently works" in regard to reducing the most challenging of behaviors in their classroom.

In regard to time, Teacher 6 described "[one child's CB] has taken up all of my time…I feel like I haven't taught these kids anything this year." Several other teachers shared this sentiment. For example, Teacher 4 shared, "I really feel for the kids who are the 'good kids' in the class, who are begging for the adults and the adults have to spend so much time and energy on those that need it for safety concerns that we're not able to give those other ones as much attention as they deserve to have as well. And so that tears at me too." Teacher 3 also spoke to this feeling, saying "I don't feel like I know the other students as much because I've had to give my time, a lot of time and energy to the student [with CB]."

Finally, teachers reported the emotional exhaustion in relation to managing the most challenging behaviors in their classrooms. Teacher 4 described, "it's exhausting, and it's depleting and defeating. A lot of days I wonder why I thought I was adequate to do this. Or why I thought I could do this." Several referenced themselves or other team members actively seeking other jobs during this school year specifically because of the difficult CB cases they've been faced with. Teacher 3 shared, "It's been super stressful,

this is the most stressed out I've ever been." Many reported CB as a factor in having difficulty maintaining paraprofessionals in their classrooms, and as described above, rotating responsibility for children with the most CB in order to give others a break. Yet, Teacher 1 shared an optimistic view, saying "it's overwhelming, very overwhelming [to manage CB], but I think we have a really good school and everyone's willing to try [to help]." Collaboration was consistently mentioned across interviews, both formally and informally, in pursuit of supporting children with the most CB.

Theme 4

Teachers rarely complete a formal functional-behavioral assessment process in response to CB. Teachers reported a wide variety of experiences with FBA/I in their management of CB in their classrooms. Teacher 1 shared that as a classroom teacher, "they don't let us do [FBAs at our school], only the school psych does it. And they are only at our school one day a week" and therefore one hasn't been able to be completed. Alternately, Teacher 8 shared that they started the PTR-YC process with a few children in their classrooms, but because they've "been short staffed, we weren't able to fully complete it." Teacher 9 reported that the child with the most CB in their classroom "has a 1:1 paraprofessional already, they're at the top level of support …so it isn't valuable to do it." Additionally, "because they already came in with an IEP…that included an FBA from when he started." Commonly, as part of the drive towards a special education evaluation, an FBA/I was deferred to that process, and not completed by the classroom staff (e.g., Teacher 3

Many teachers cited the complexity of, and experience with, the FBA/I process as major barriers. Teacher 8 described, "I would love if we could just, say, we have this kiddo, and we want to do PTR-YC (the PM FBA/I program) and it's just smooth, here's our steps. It's not anyone's fault…maybe it's because we're in the beginning stages of it too, and still trying to figure out how to make it run smoothly. It would be just wonderful if we all felt confident going through this process. And everyone knew what to do." Similarly, Teacher 4 shared, "The part that we are spinning the wheels on right now is the data documentation… I don't know if I'm the one who's supposed to initiate that next step, or if it's supposed to be like, coming from my superiors, or my coaches." Teacher 4 explained the case in question is their first PTR-YC experience, and "I am not even sure what my next step is supposed to be." Teacher 5 shared that refreshers for the PTR-YC would be helpful, particularly with the high rates of staff turnover they have been experiencing, and to help teachers be more familiar with the process. For example, Teacher 7 said, "it's the tier three stuff that's a little more intense that I'm still trying to learn and kind of wrap my brain around [in comparison to tier one and two PM content]." They elaborated that "the [PTR-YC] training was very overwhelming. And I think we needed more time to digest what they were telling us. So, we haven't used the official PTR-YC interventions yet."

Time was also a consistent barrier reported to utilizing the full FBA/I process. Teacher 6 shared that in hindsight, "I would have spent more time looking through the tier three PTR-YC stuff and trying to figure out a plan for [a child] sooner... [it's been] constant putting out fires [in the classroom], and there was never an ability to really sit

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down and plan for any intervention, because every day during the day, you're managing the behavior." Teacher 5 reported that the PTR-YC program, "was all valuable, but it took a lot of time. And as a program once we did one or two, there became a reluctance." Several schools began utilizing components of the process as an outline, but not completing the full program to fidelity (Teacher 5, 8). Teacher 8 described, "after we did the [PTR-YC] training, it's kind of been a slow process in our district to figure out what that would look like for us, who's going to lead it, how we're going to schedule it… we kind of adapted it a little bit… we got to the second meeting…and then it stopped after that."

On an encouraging note, Teacher 4 shared that while the FBA/I process isn't always going to be the "magic wand" teachers want, the family collaboration during the PTR-YC process helped catalyze a lot of improvement for one of their students, providing consistency across environments that was not there previously due to the child's family not fulling understanding the level of difficulty at school. Consistently, teachers reported that when utilized, "the PTR process really helped, it gave us some additional ideas," and "it shows us what we can change, what do we need to reteach, where do we go with it" (Teacher 5). However, they did lament that a "pared down" version would be more accessible for implementation on their team (Teacher 5).

Classical Content Analysis

Following constant comparison analyses, classical content analysis was completed wherein all codes were aggregated into total frequency counts across

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participants. A total of 111 codes were reviewed. The top 25% of codes, determined

through calculating the quartiles of the dataset using the quartile function in Excel, were:

Table 2

Interview Code Counts

Code	Count
Adult time/energy investment	20
Safety concerns (to self or others)	18
Aggression (physical behaviors)	14
Removal from classroom	13
Data collection (informal)	12
Family collaboration	12
Not listening/Non-compliance	11
Other children missing out (on teachers' time, attention, learning)	11
Sensory needs	11
Self-regulation	10
1:1 support (paraprofessional)	10
Outside Factors (e.g., trauma, home circumstances)	10
Team approach (e.g., collaborative, weekly meetings)	10
Sped route taken/under consideration	10
Elopement	9
Harming Others (physical or verbal)	8
Increase in CB frequency/severity this school year	8
A lot of individualized efforts (e.g., scheduled breaks, visual schedules)	8
Kicking/hitting	7
Overwhelming (exhausting)	7
Logistic barriers to FBA (e.g., time to collaborate, family scheduling)	7
Don't know what to do (exhausted all knowledge)	7
Informal FBA process (e.g., parts of PTR)	7
Throwing	6
Screaming/biting	6
Student best interest (want to teach them skills)	6

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The top 25% of codes across participants demonstrates the consistency of codes across participants, as they directly align with the themes derived from constant comparison analyses. Theme 1: despite high levels of CB in preschool classrooms, teachers have a strong desire to provide positive experiences for children in their classrooms, and engage in effortful prevention methods, often based on the PM, is supported by aggression (#3), familial collaboration (#6), sensory needs (#9), and self-regulation (#10). Theme 2: persistent CB is often met with exclusionary practices due to safety concerns that restrict the engagement of children with CB, is supported by codes safety concerns (#2), aggression (#3), and removal from the classroom (#4). Theme 3: teachers report that they have a limited capacity for managing CB in their classrooms, was derived due to the consistency across providers in reporting this experience and reinforced by adult time and energy investment (#1) as the highest frequency code. Finally, theme 4: teachers rarely complete a formal functional-behavioral assessment process in response to CB, is illustrated through the code informal data collection (#5).

The below figures illustrate more closely the relation between frequency of code counts within the four major themes identified, with size of each code within the figure directly relating to its frequency count within the data (i.e., larger codes were more frequent and subsequently smaller codes were less frequent, with the smallest indicating single occurrence codes):

Figure 2

Theme 1 Code Values

Theme 1, despite high levels of CB in preschool classrooms, teachers have a strong desire to provide positive experiences for children in their classrooms, and engage in effortful prevention methods, often based on the PM, is illustrated in Figure 2. The top five codes within this theme, aggression, familial collaboration, non-compliance, self-regulation, and elopement, illustrate the type of CB present in classrooms, and the consistency of these behavior across classrooms due to the high frequency of reference across interviews. Familial collaboration was reliability referenced across interviews as an avenue for intervention, which aligns with best practices in the field, and indicates the desire for children to have positive experiences at school. Further, teachers described

many individualized efforts based on the PM, including visual schedules and schedule changes, as well as coaching children through self-regulation techniques and identifying a calm down area in the classroom. Many teachers also described greeting particular children in the morning in such a manner that they connected, and continually invested in their relationship to cultivate a positive adult relationship for the child in the classroom. Alternately, peer helpers and setting expectations were only referenced in one interview and offer insight into limited use of some evidenced-based practices to prevent CB in preschool classrooms compared to others.

Figure 3

Theme 2 Code Counts
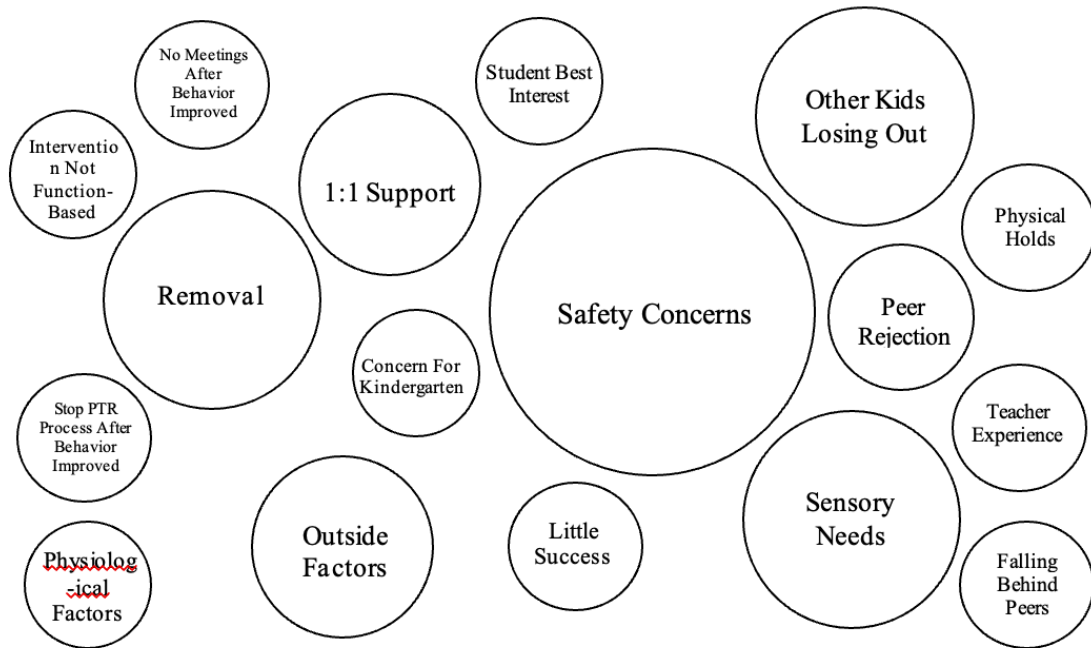
Theme 2, persistent CB is often met with exclusionary practices due to safety

concerns that restrict the engagement of children with CB, is illustrated in Figure 3.

Overwhelmingly, safety concerns in classrooms were reported to drive decision making,

and to present the most overt challenges to managing CB in teachers' classrooms. As a

result, many children experienced some form of removal from the classroom, and

secondary effects included reduced learning, instruction, and positive experiences by

other children in the classroom, and many children with CB were assigned a 1:1

paraprofessional, which is perceived in the field as an exclusionary model, and not

evidence based. Further, many teachers referenced sensory needs in children with CB,

and consulting with occupational therapists to support these needs. Finally, many

teachers referenced outside factors as contributing to children's CB, including poor sleep, difficulties at home, or trauma experiences. Alternately, the low frequency codes within this theme reference a handful of cases wherein a child's behavior improvement, and intervention was stopped. One teacher spoke of desiring to be trained to implement physical holds with children due to the severity of CB experienced, and one teacher explained that their decision making around intervening in CB was based on their previous experiences. Finally, children with CB falling behind their peers was only mentioned once, which is surprising given the high level of removal from the classroom, and possibly should be considered as an inherent result across cases, but curious to have only come up directly once across interviews.

Figure 4

Theme 3 Code Counts
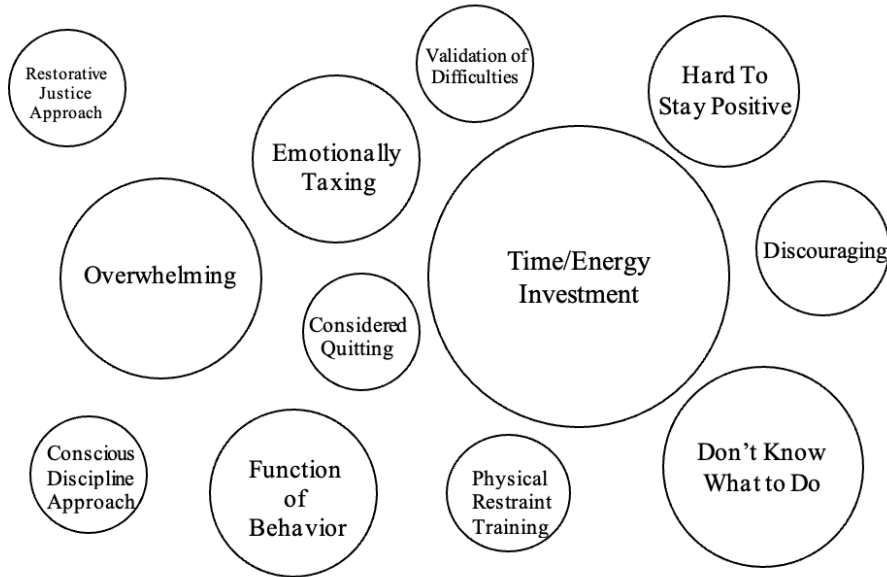
Theme 3, teachers report that they have a limited capacity for managing CB in their classrooms, is illustrated in Figure 4. The explicit code adult time and energy investment, which resulted in the creation of theme 3, was the highest frequency code across all generated from the present study's interviews. Every teacher interviewed spoke of this phenomenon, often more than once. Related, is the code overwhelming and don't know what to do. Teachers reported CB to not only take much of their time and energy, but that the experience is depleting, and despite the investment, they were struggling to cultivate success, and out of ideas. Alternately, single frequency codes reflect individual experiences that resulted from the time and energy investment experience, including specific approaches taken and personal decisions that resulted from managing CB.

Figure 5

Theme 4 Count Counts
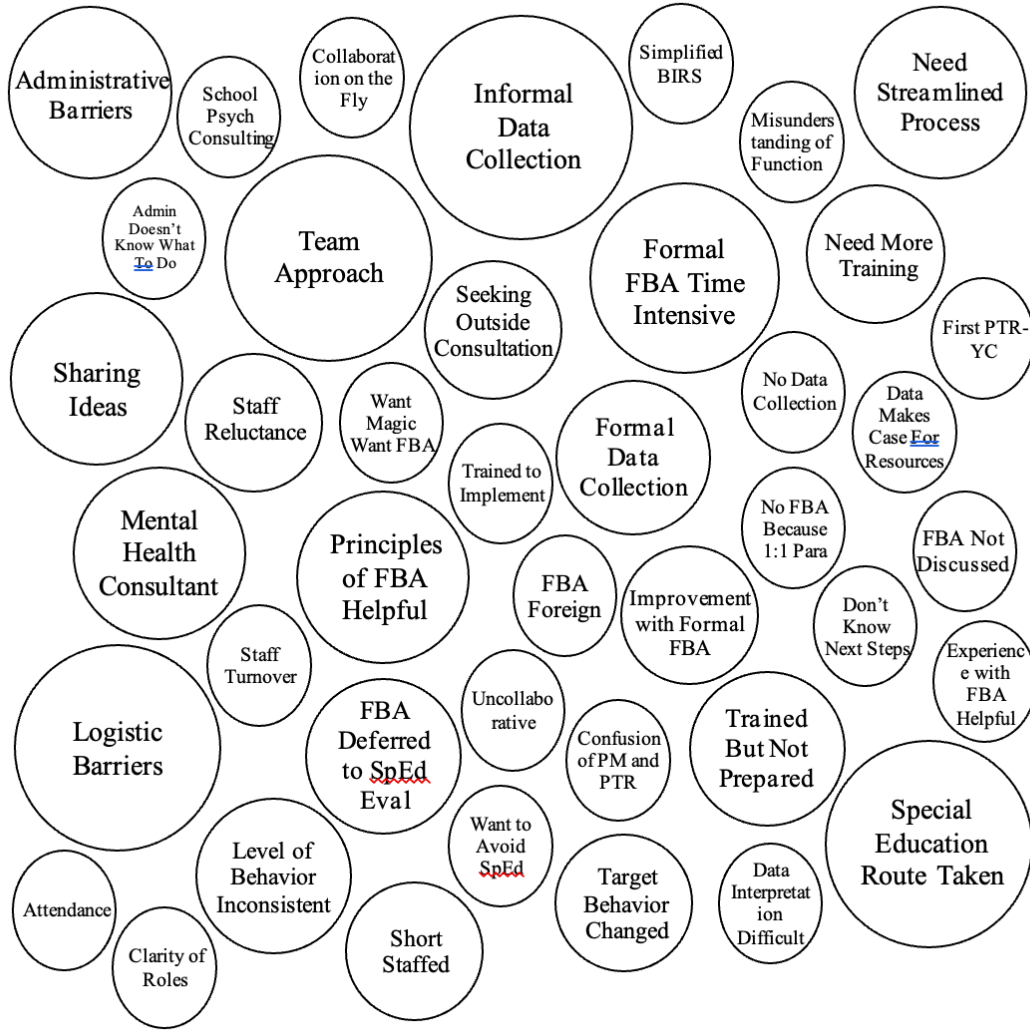
Finally, theme 4, revealed that teachers rarely complete a formal functional-behavioral assessment process in response to CB, is illustrated in Figure 5. Across interviews, when describing intervention processes for CB, teachers spoke of informal data collection methods, most commonly, an incident reporting template that described

the time and location of CB, as well as the possible context (antecedent) and response (consequence). While based on function-based assessment principles, the systems described did not discuss directed review of these reports to determine a function nor inform interventions (i.e., analyses of data were rarely completed) and these data were not consistently collected. Second, teachers reported electing to pursue a special education evaluation, which is a team approach, and involved working with other classroom personnel, special education teachers, and a mental health consultant or PM coach to complete the evaluation. Of note, during these evaluation processes, an FBA/I is often conducted, but is done so by personnel other than the classroom teacher (e.g., school psychologist, counselor) and does not often follow a manualized process. Next, and in direct relation to theme 4, teachers consistently reported logistical barriers to completing a formal FBA/I process, and that it is too time intensive to realistically implement. Alternately, the single frequency codes within this theme reflect personal experiences (e.g., child attendance, collaboration style, and personal desires to keep children from special education referrals), and individual challenges to implementing FBA/I, including poor understanding of the theory behind the practice, district policy, and staff turnover disrupting the intervention team.

Discussion

To begin, this is a study that was conducted in the midst of the Covid-19 pandemic, which heavily disrupted typical educational practices as classrooms, including preschool classrooms, pivoted to virtual learning, then to hybrid, and then to remarkably small (e.g., 5 children) in-person classrooms. At the time the teachers included in this

study were interviewed, full-size classrooms had resumed, but mask-wearing, virtual coaching, and the emotional toll of the pandemic were possible factors influencing the experience of this group of teachers. However, upon review of the resulting themes, the core ideas are ones that have been discussed repeatedly in the literature (see Ritz et al., 2014; Snell et al., 2012; Clipa & Boghean, 2015). That is, they are not surprising outcomes, and continue to be present in the midst of the current pandemic, the impact of which is still unfolding.

The present study sought to answer two research questions:

1) How do preschool classroom teachers who are trained in the Pyramid Model describe challenging behavior in their classrooms?

2) How do these teachers discuss implementation of function-based intervention strategies promoted within the Pyramid Model framework?

Within these questions, the researcher sought to also consider whether the answers to these questions reflected current ideas about what constitutes challenging behavior and effective implementation of function-based intervention. Additionally, the researcher sought to evaluate whether these practices varied with levels of classroom fidelity of the implementation of the PM (e.g., positive classroom management, setting expectations, offering choices, environmental control, etc.) as measured using the program's evaluation tool, the Teaching Pyramid Observation Tool (TPOT), which is used to systematically evaluate all classrooms and inform coaching until teachers reach fidelity (80%). Fidelity of these practices is an important indicator of classroom's level of effective prevention methods aimed at mediating CB. The PM is based on research

showing that with strong tier 1, or prevention methods, in preschool classrooms, lower incidences of CB are seen (Fox et al., 2010; Hemmeter et al., 2016).

Therefore, during data collection, TPOT scores were obtained from all teachers, who have access to their most recent scores within the district's database. However, due to the disruption of the Covid-19 pandemic on educational practices, many teachers reported that scores were from the previous school year or prior to the pandemic, as some observations have not yet taken place this current school year, due to delays in implementation and evaluation. Additionally, those who had scores from the previous school year shared that their classrooms at the time were decidedly different, and often included a fraction of the number of students compared to this year. Alternately, some seasoned teachers had not been observed since prior to the Covid-19 pandemic as they had already reached fidelity. Nevertheless, results were compared across the available fidelity scores regardless of year for due diligence. No significant differences were observed across themes or code counts; this is, teacher descriptions of CB and use of FBA/I did not vary based on the level of prevention. It is very possible the reported fidelity scores were an invalid representation of teachers' current PM practices in their classrooms considering the tumultuous past few years, and therefore was deemed an unreliable comparison point of practices. Yet, this should be an area for future research to evaluate. Again, as reviewed above, goal of the use of prevention strategies is to reduce the instances and level of CB in preschool classrooms. In doing so, these strategies should secondarily improve teachers' efficacy when intervening in CB due to the existing foundational practices supporting children's learning of positive, replacement behaviors.

In regard to the first research question, teachers in the present study consistently reported that CB is a continuing concern in their classrooms. Most commonly, aggressive behaviors were described as being the most concerning and disruptive to teachers' classrooms. These behaviors included hitting, screaming, kicking, throwing items, or destroying classroom materials, including knocking over tables. Additionally, teachers reported difficulties with emotion regulation and poor social skills that impacted children's engagement with peers in the classroom. When discussing externalizing behaviors, teachers consistently shared safety concerns as a result of these behaviors, in regard to both peers and adults in the classroom. Further, these concerns drove much of their decision to intervene. In relation to the present study's research question, these descriptions of CB were consistent with the field's definition of what constitutes CB, "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in prosocial interactions with peers and adults" (Smith & Fox, 2003, p. 6). The behaviors described were consistently disruptive to the functioning of the classrooms, interfered in the target child's learning and engagement in the classroom, and occurred repeatedly at high rates. Indeed, many teachers reported that the level and intensity of CB they are experiencing this year was significantly greater than in previous years. Several described that the children displaying the most CB had never been in childcare, or any setting with children their age, until this school year due to the Covid-19 pandemic. Additionally, these descriptions were consistent with the current literature regarding the types of CB most commonly reported

in preschool classrooms, as well as those that are most concerning to teachers (Ritz et al., 2014; Snell et al., 2012).

In regard to the second research question, teachers reported highly variable use of the function-based intervention strategies that are promoted within the PM. No teachers reported following the manualized FBA/I process that is integrated into the PM through to completion. Several discussed engaging the process for the first few steps, but then stopped when either 1) the targeted CB reduced, 2) it was unclear who led the next step (e.g., data analysis), or 3) the team couldn't find time to meet. Many teachers described using the principles of the FBA/I process, including collecting incident data in relation to the antecedent, consequence, and location of the behavior, but this data was rarely referenced when choosing intervention strategies. Furthermore, the function of children's CB was almost never discussed, nor teaching children a positive alternate or replacement behavior. Indeed, much of teachers' reported strategies were reactive in nature, recording the CB as it occurred, and interventions largely being decided in the moment, or deferred to a 1:1 paraprofessional assignment to manage the behavior. Of note, teachers consistently reported collaborating with children's families throughout the year regarding children's CB. Two teachers reported opting out of the manualized FBA/I process due to familial circumstances of the children engaging in CB. Overall, teachers shared a desire for a streamlined FBA/I process that was less time consuming and with increased clarity of team member roles for data analysis and intervention planning. In regard to the relationship between these practices and the field's idea of effective FBA/I implementation, the experiences reported in the present study are not aligned with current

ideas about what constitutes effective implementation. While there is a strong data collection effort across teachers, the lack of determining a function of CB to base intervention, teaching of replacement behaviors, and generalization of those new skills across environments are missing.

The classical content analysis of codes generated in the course of the present study provide valuable insight into how teachers discuss CB in their classrooms. On the higher end of code frequency, ideas reflect what is known in the extant literature about what makes CB such a concern for preschool teachers (i.e., time investment, safety concerns) (Ritz et al., 2014; Snell et al., 2012). The present study's findings are consistent with previously research showing high rates of aggressive behaviors as most concerning and leading to removal from general education classrooms (Dunlap & Fox, 2011). Further, the impact on other children's learning (i.e., disrupting the classroom and interfering with learning) was frequently mentioned as well as a desire to improve children's self-regulation when intervening in CB. Of the most frequently cited codes, what is not always highlighted in the extant literature, is the high level of familial collaboration that was reported by teachers in the present study. Teachers consistently reported consulting with families as well as other team members when intervening in children's CB, which is a highly recommended practice and area of strength not always considered previously when discussing CB management (Hemmeter et al., 2016). On the lower end of the code frequency individual experiences were reflected. These included individual choices (e.g., theoretical approach to managing CB), individual barriers (e.g., no experience completing a formal FBA/I), and logistical or administrative barriers

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unique to a teacher's school (e.g., administrators not knowing how to help, staff turnover). These nuanced outcomes provide valuable insight into the multitude of barriers to effective CB management, as well as indicate areas that can be addressed more easily than others (e.g., increased training across staff).

When considering training across staff, the results of the present study indicated a significant concern regarding the amount of responsibility being placed on paraprofessionals in managing CB. Many teachers reported pursuing a special education evaluation in response to CB in order to have an individual aide assigned to the child in question. Of note, special education does not equate to a 1:1 aide, and indeed is viewed as an exclusionary, and non-evidence-based practice (Fox et al., 2021; Stormont et al., 2005). However, due to the safety concerns of children's CB, this path was frequently sought and viewed as a solution to children's CB, though rates of CB were not reported to have significantly decreased. Rather, an adult in the room was always available to intervene, thus leading the assignment to be viewed as a solution. This decision is understandable for teachers concerned with the learning of other children in the classroom but continues to fail to effectively reduce CB. Further, the responsibility for managing CB being placed on paraprofessionals is concerning given the limited training these team members receive, including lack of formal PM training. Teachers reported coaching paraprofessionals on how to manage the CB, but also noted that the individuals filling these roles often changed due to staff shortages and high rates of turnover that are known to occur within this role (Giangreco, 2010). Therefore, it stands to reason that with such responsibility being placed on these individuals, a commensurate level of

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training should be provided to enable them to effectively fulfill this role in addition to teacher coaching.

In conclusion, CB is a continuing concern for preschool teachers and families of children with preschool-age children. As the field recognizes the importance of early intervention and early social-emotional success on lifelong outcomes, it is essential to bolster preschool teachers' as well as other service providers' capacity to manage CB in the classroom. Function-based assessment and intervention is the gold-standard of CB intervention, backed by decades of evidence in the literature. Therefore, this study provides much needed information on the experiences of current practitioners surrounding the use of function-based assessment and interventions in preschool classrooms, and barriers to the effective implementation of these practices. The results from this study can be used to inform future intervention training, coaching, and implementation to better support teachers and their students in their classrooms. Of course, no study is without limitations, and those related to the present study will be reviewed next.

Limitations

First, this phenomenological research study used semi-structured teacher interviews for the data collection method. Therefore, a small convenience sample (i.e., teachers elected to participate) was utilized. Within qualitative research, a small sample size is expected, and the engagement of participants is an important consideration to make. The interviewed teachers represented a wide range of experience, educational background, district geography (i.e., urban versus rural), and demographically

represented the field's current characteristics (i.e., majority white female). However, the small sample size does present limits to generalizability, particularly given the variable nature of district and state policies as they related to early childhood preschool education.

Second, there is a limitation regarding the lack of a validity check of teachers' reported practices when managing challenging behavior. Ideally, observation of classroom practices would occur alongside interviews to allow for comparison of reported and actual practices, as well as to provide context around the CB's discussed and opportunities for querying specific responses. Due to travel costs and Covid-19 restrictions, these observations could not occur. Self-report of practices has been shown to be reliable and is frequently used in educational research due to the potential disruptive nature and cost of classroom observations (Quesenberry et al., 2014; Ritz et al., 2014; Snell et al., 2012).

Third, an inherent limitation of qualitative research is the individual biases of the researcher, which must be controlled for. This researcher used a strategy called bracketing in order to control for their own biases. Bracketing involves writing about one's own experiences during data collection and analysis in order to bracket them out of the process and focus on the experiences of the study participants. While not possible to fully remove oneself or their experiences, this strategy is supported in the field as best practice (Creswell & Poth, 2016). The researcher elected not to explicitly write out their own biases in disclosure in the results in order to focus the outcomes on the study participants' experiences, and the integration of constant comparison and classical content analysis serve as a validity check of study outcomes.

Finally, the zeitgeist of the present day is a limitation. As discussed above, the Covid-19 pandemic dramatically impacted daily life, including public education, in the United States. Conducting the present study in the first school year since the start of the pandemic that was fully in-person and included full classrooms introduces variability not seen in previous research. As teachers noted in interviews, children's CB was perceived to be elevated this year, and teachers often spoke about exhaustion in regard to managing the continually changing policies in response to the pandemic, as well as their own training being impacted, including virtual trainings and coachings related to the PM. In short, preschool education at the time of the present study was not typical compared to previous years. However, this outlook is the new normal, and the impact of the pandemic will not dissolve, but rather presents a reality that must be contended with (Linnavalli & Kalland, 2021). Additionally, teacher burnout nor difficulty managing CB in preschool classrooms are new phenomenon. These topics have been discussed at length in the literature, and if anything, have only been exacerbated by the pandemic (Crawford et al., 2021). Therefore, the timing of the present study is indeed important, if not directly reflecting a continuation of the previous research. Instead, it presents current teachers' experiences and concerns as the world moves forward from the Covid-19 pandemic and provides important insight into potential ways to address the concerns raised by teachers in this study. These recommendations for practice will be discussed next.

Recommendations

Implementation research, the study of if and how educational interventions are accomplishing their goals, has studied at length factors that impede or improve these

interventions (Century & Cassata, 2016). Implementation research has historically focused on evaluating fidelity of implementation of an intervention, and has more recently evolved to consider context, conditions, and suitability as well as recognizing that individuals and organizations (i.e., systems) must also change in the process (Century & Cassata, 2016). Individual change within implementation science is recognized as a significant factor. Change is personal, uncomfortable, and directly impacted by one's experiences. Research has shown that meeting individuals whether they are at and allowing individuals opportunities to make sense of new ideas within the context of previous experiences can help the change efforts (Century & Cassata, 2016). Alternately, organizations are understood to be ever-evolving, complex systems that must first be understood before they can be changed. Change may be enacted from bottom-up (i.e., teach the individual "end user") or top-down (i.e., policy based) approaches, though there is much overlap across these methods. Additionally, a third approach involves influencing individual values, termed a cultural perspective (Century & Cassata, 2016). Of note, organizational change in education is understood to be stubborn in the face of change, and a continual challenge for implementation researchers.

The present study illuminated several areas for consideration that align with individual change within implementation science. Teachers spoke often of a need for more support in implementing the PM FBA/I program. Several directly recommended refresher trainings to strengthen their confidence and experience with the PM program, and others indirectly referenced a lack of confidence with the program. In addition to meeting teachers where they are at with the program, embedding a live case study into

subsequent refresher trainings (i.e., teachers complete an FBA/I for a current child) may enable them to connect the new process with their existing experiences, thus facilitating individual change. The program already incorporates case study examples into training, but a live experience guided across refresher trainings, ideally one refresher training per step of the program, would offer a stronger experience, and as a result, improve teacher self-efficacy.

An organizational-level need indicated by the present study that is also addressed through refresher trainings is staff turnover. Several teachers spoke to an evolving student services team, including paraprofessionals assigned directly to a child with CB, including individuals not yet trained in the PM. Of note, these team members were not lead classroom teachers responsible for implementing the full PM, but generally support staff (e.g., paraprofessionals, special education teachers, mental health consultants, etc.). By offering refresher trainings, new team members could gain a stronger understanding of the FBA/I process, improving the team's capacity for following the program from a bottom-up implementation approach. Further, these trainings could include topics such as the basics of behavioral intervention, strengthening the full classroom team's understanding of the foundational components these programs are based on.

Alternately, a top-down organizational level recommendation illustrated by the present study is the need to train administrators and school psychologists in the PM FBA/I program. Several teachers reported that the administrators in their buildings didn't know how to intervene in a child's CB. Further, while several were reported to have been involved in intervention planning, none were described as having knowledge in the

process to help guide the team through each step, nor to delegate roles. Considering that administrators are inherently involved in any CB intervention given possible safety concerns and the additional attention and time these cases require, training administrators in this program would provide a built-in support system for teachers navigating this process. A step further would be to systematically involve school psychologists in these trainings. As related service providers, school psychologists are often part of student service teams, including special education evaluations. Unfortunately, at the preschool level, school psychologists are often itinerant, meaning they are assigned to multiple schools and therefore their location varies by the day. However, school psychologists are uniquely trained in function-based interventions. This foundational knowledge of these principles positions them as ideal coaches for classroom teams who would easily be able to apply the PM program.

Finally, an organizational level recommendation inferred by the results of the present study is utilization of resources when collaborating with families. Teachers reported a high level of familial collaboration when managing CB in their classrooms, in particular, the value of having consistency across home and school settings. Several teachers noted that families were hesitant to commit to meeting with the intervention team due to the time commitment it requires. A possibility to increase the value of these meetings and therefore families' willingness to participate would be to integrate them to simultaneously support the family's behavior management at home. Teachers often spoke of providing ideas and strategies to families while collaborating. The PM's FBA/I program, Prevent-Teach-Reinforce, has a family model, Prevent-Teach-Reinforce for

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Families (PTR-F). The program mirrors that of the classroom model, with parents as the intervention agents. By integrating the two, teachers could continue to support families and facilitate consistency across settings, while also encouraging even stronger familial collaboration. The value of familial collaboration was clear in the present study, as was a desire to share resources and support families to a greater degree. This type of integrated model would make the most of the available resources and support the whole child, improving generalization of skills, and strengthening adult capacity.

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Conclusion

A desire to support the inclusion of all children, regardless of ability, race, or behavior in the general education classroom was the catalyst for these manuscripts. In an ever evolving and increasingly complicated world, this author believes education is one of the most valuable resources to bolster children's development and lifelong outcomes. Unfortunately, children's behavior is often cause for exclusion from preschool education, which provides important foundational skills across academic, social, and developmental skills. Exacerbating this problem, preschool teachers self-report high levels of challenging behavior in preschool classrooms, and little success at managing them. This reality contributes to preschool teacher burnout, and poor outcomes for all children involved, including bystander peers, who receive reduced attention and learning opportunities from teachers who have to dedicate their time to managing challenging behavior.

Manuscript one provided a systematic review of the literature on challenging behavior interventions currently utilized by preschool teachers in their classrooms. Studies were limited to those conducted outside of a manualized intervention implementation in order to ascertain preschool teachers' typical practice. The reported type and level of challenging behavior, intervention strategies employed, and outcomes of chosen intervention strategies were summarized and analyzed. Six studies met criteria for review. The results identified a gap in the literature related to this topic, including a dearth of information about the rationale behind intervention selection and perceived outcome of the intervention. That is, no study asked teachers whether their intervention

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succeeded in reducing children's challenging behavior, only one study asked teachers why they chose certain strategies, and all studies reported high rates of challenging behavior occurred across classrooms. A fraction of teachers across studies reported utilizing function-based intervention strategies, and the majority of studies cited this as an area for future research to consider.

Manuscript two sought to answer this call and contribute an improved understanding of the rationale behind teachers' intervention choices when managing challenging behavior in preschool classrooms. Through semi-structured teacher interviews, this study demonstrated that teachers trained in functional-behavior assessment and intervention strategies rarely utilize them in practice. Overall, teachers reported a desire to provide positive experiences for children in their classrooms and implementing individualized interventions in response to challenging behavior. However, those strategies were often reactive in nature, and at times reinforced children's challenging behavior by providing an option to leave non-preferred activities in the classrooms. Further, high rates of challenging behavior were reported to occur, and several teachers indicated the behavior they are experiencing this year to be more intense than prior to the Covid-19 pandemic.

Due to the limited use of function-based interventions, teachers reported high levels of exclusionary practices to manage challenging behavior, most often seeking special education services in the hope of securing a 1:1 paraprofessional aide to manage children's behavior. Teachers reported that challenging behaviors require an immense amount of their time and energy throughout the day, which poorly impacts other children

in the classroom due to the reduced attention and learning opportunities they receive. In summary, teachers reported that challenging behavior is a major concern in their preschool classrooms, and that the intervention strategies they utilize do not generally succeed in reducing the behaviors. When asked why they did not use a function-based approach, teacher reported time constraints, limited experience with the process, and team-wide reluctance and poor self-efficacy to implement the program they were trained to complete.

Taken together, these manuscripts echo the existing literature in that challenging behavior is a major concern in preschool classrooms, and that the evidence-based interventions known to ameliorate this concern are rarely used. However, they also contribute new knowledge related to why this research to practice gap exists. All teachers interviewed in manuscript two were trained to implement a manualized function-based intervention program as part of the Pyramid Model training. Despite this knowledge and training, teachers reported low utilization of this process, and cited varying factors that contributed to this outcome. What was consistent across discussions was a desire to utilize the program, and acknowledgement that the principles of function-based intervention are helpful, but the commitment of implementing the full program was not viewed as feasible. While concerning, these outcomes illuminate areas for improved coaching and training to address these concerns.

First, stronger training models in function-based interventions were implicated. Teachers often described the program training overwhelming and shared that they had not yet completed the process in real time. Refresher trainings that include a live

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implementation with support would support teachers in making this jump from knowledge to practice. Additionally, preschool teachers operate on multidisciplinary teams that include special education teachers, occupational therapists, speech-language pathologists, paraprofessionals, and school psychologists. Several of these providers work with identified students on a regular basis, and therefore are responsible for implementing components of behavioral intervention. It would be prudent to include more team members in the function-based intervention trainings to allow for a greater number of adult providers to support the intervention's success. Further, school psychologists are trained in function-based interventions as part of the graduate curriculum. As the team members with a background in these processes, it would be ideal to train these providers as team leaders. Stronger collaboration at this level would place a greater emphasis on children's social and emotional development and tap into existing team member expertise without needing to outsource for consultation. Additionally, school psychologists are trained in family-school collaboration, and could facilitate stronger efforts in this area, including providing consultation to families implementing behavioral interventions in the home.

The author would like to express gratitude to the teachers who lent their experiences, ideas, and time to this study. In an era when teachers are continually asked to give more and more, it is the author's hope that this study can support efforts to broaden some responsibilities across student service teams and continue to support teachers' unwavering goal of providing positive school experiences to all children.

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IRBNet #: 1844361-1

Version Date: 1/30/22

CONSENT FORM FOR INTERVIEW PARTICIPANTS

Study title: Examining preschool teachers' experiences using evidence-based practices

for challenging behavior

IRBNet #: 1844361-1

Principal Investigator: Eleanor Bold, MA

Faculty Sponsor: Phil Strain, PhD

Study Site: Virtual (via Zoom)

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You are being asked to participate in a research study. Your participation in this research study is voluntary and you do not have to participate. This document contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before making your decision whether to participate.

The purpose of this form is to provide you with information that may affect your decision as to whether you may want to participate in this research study. The person performing the research will describe the study to you and answer all your questions. Please read the information below and ask any questions you might have before deciding whether or not to give your permission to take part. If you decide to be involved in this study, this form will be used to record your permission.

Purpose

If you participate in this research study, you will be invited to complete a virtual interview with the principal investigator. The interview will be conducted over Zoom. You will be asked questions about your experiences managing challenging behavior in your classroom. The results will be de-identified and utilized to inform coaching practices and professional development related to the state-wide Pyramid Model implementation.

This study will take place between January and May of 2022. It will require about 1-2 hours of your time to complete the interview. During this time, you may refuse to answer any question in the interview.

Risks or Discomforts

There is an inherent risk in breach of confidentiality when participating in a research study. There will be a transcript made of the interviews, and these transcripts will be checked by both the primary and secondary researcher in order to confirm coding was done correctly.

Potential stress and/or discomforts of participation may include emotional distress in discussing challenging situations in your classrooms.

Benefits

The benefits which may reasonably be expected to result from this study include the provision of feedback to the Minnesota Department of Education's state-wide Pyramid Model implementation. However, we cannot and do not guarantee or promise

that you will receive any benefits from this study. Your decision whether or not to participate in this study will not affect your employment.

The benefits that this might have for society at large include the improvement of practitioner's ability to address challenging behavior in the classroom and the secondary child outcomes.

All participants will receive $200 in the form of a large retailer gift card (e.g., Amazon, Target, or Walmart) in exchange for their time and participation. The gift card will be emailed to participants at the end of their respective interview. Participants who choose to terminate participation before the end of the interview will still be compensated.

Financial Interest

There is no conflict of interest.

Confidentiality of Information

The data collected throughout the process of this study will be confidential. The link between your identifiers and the research data will be destroyed after the records retention period required by state and/or federal law. The primary researcher, dissertation committee, and secondary coder from the University of Denver will have access to the raw data.

Limits to confidentiality

Please be mindful to respond in private and through a secured Internet connection for your privacy. Your confidentiality will be maintained to the degree permitted by the

technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

All information will be kept on a password protected computer. Once demographic data is collected, identifiable research data will be encrypted, and password protected document on the researcher's computer. Your name will not be used in any report.

With your permission, I would like to audiotape and record the interview so that I can make an accurate transcript. Once I have made the transcript, I will erase the recordings. Your name will not be in the transcript or my notes. Your name will not be collected or linked to your answers.

Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so, and your data will be reported in a way that will not identify you. Information collected about you will not be used or shared for future research studies.

Data Sharing

De-identified data from this study may be shared with the research community at large to advance education, science, and health. We will remove or code any personal information (e.g., your name, workplace location) that could identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information or samples we share. Despite these measures, we cannot guarantee anonymity of your personal data.

Consent to video / audio recording / photography solely for purposes of this research:

This study involves video/audio recording, and/or photography. If you do not agree to be recorded, you cannot take part in the study.

Questions

For questions, concerns, or complaints about the study you may the Principal Investigator, Eleanor "Ellie" Bold, MA, ellie.bold@du.edu, 720-588-0085, or her faculty sponsor, Dr. Phil Strain, at phillip.strain@du.edu.

If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the University of Denver (DU) Institutional Review Board to speak to someone independent of the research team at (303) 871-2121, or email at IRBAdmin@du.edu.

Please take all the time you need to read through this document and decide whether you would like to participate in this research study.

If you decide to participate, your completion of the research procedures indicates your consent. Please keep this form for your records.

Volunteers Needed for Research Study* on Challenging Behavior

Have you experienced challenging behavior in your classroom? You may be eligible for a one-time, 60-minute virtual interview about your experiences.

You May Qualify If You:

- Are currently a <u>lead</u> preschool classroom teacher or special education teacher in Minnesota
- Are trained in the Pyramid Model
- Have experienced persistent challenging behavior in your classroom
- Are proficient in the English language

Participation Involves:

- Discussing your experiences managing challenging behavior in your classroom with the Principal Investigator via zoom for 60 minutes
- Consent to video recording of the interview for transcription purposes

Participants will be compensated for their time in the form of a $200 virtual gift card. Up to 20 participants will be interviewed.

FOR MORE INFORMATION, OR TO VOLUNTEER TO PARTICIPATE

Please contact Ellie Bold at ellie.bold@du.edu

*This study has been approved by the MNCoE Pyramid Model State Implementation Team, Minnesota Department of Education, and the University of Denver Institutional Review Board for Human Subject Research

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Appendix C: Interview Protocol

Date: Location:

Start time: End time:

Interviewee: Interviewer:

Session Number:

Introduction Script:

"*Thank you so much for taking the time to speak with me today. This project is a component of your state's program-wide Pyramid Model implementation. The purpose of this project is to better understand Pyramid Model teachers' experiences managing challenging behavior in their classrooms. The goal is to utilize the information to inform future coaching of teachers across the state to best support teachers in managing and reducing persistent challenging behavior. You will be asked to discuss a scenario of challenging behavior that you've experienced in your classroom, and to reflect on how you intervened, what guided that decision, and what you might have done differently. All information will be de-identified and no answers will be provided to state or district level personnel. You have the option to opt out at any time. You will be compensated for your time. A gift card will be emailed to you immediately following this interview.*"

Section 1: Demographics

1. Confirm name and title

2. Age, race, gender

3. Years of experience and education background

4. What is the current number of students in your classroom on an Individualized

    Education Program (IEP)?

    a. What is the makeup of those students (what disability categories)?

5. What other adults are in your classroom daily? Weekly? (Paraprofessional,

    one-to-one aide, RSP).

6. What was your last TPOT score?

Section 2: Interview Framework

Stage 1: "Describe to me in general some of the challenging behaviors (CB) that you are currently experiencing in your classroom."

Stage 2a (reconstruction)

One or more scenario(s) mentioned meet(s) CB definition

Could you reconstruct a specific event when [the CB] occurred?
- When did you notice it?
- How did you deal with it?
- Do you remember how you felt in that moment?

Probe for more detail as necessary to get full description of context and response

Stage 2b (reconstruction)

No scenarios mentioned meet CB definition

Could you reconstruct a specific event when the [CB] occurred?
- When did you notice it?
- How did you deal with it?
- Do you remember how you felt in that moment?

Probe for more detail as necessary to get full description of context and response

Stage 3a (reflection)

My understanding is that you've had some training in function-based interventions through your Pyramid Model training, and it sounds like you [utilized function-based intervention, utilized part of function-based intervention process, or didn't use function-based intervention], how did the process go?
- What about FBI was helpful, difficult, not helpful?
- Did you consider using FBI for the CB scenario (if say no to identify rationale behind not using it when it was appropriate)?
- Is there anything else you think could've been helpful to you, that you wish you had tried?
- Did you do [strategy] because of your training?
- Why did you utilize [strategy]?
- Thinking back now, what would you have done differently if you could?
- What other trainings or strategies have been useful to you when dealing with CB?

Stage 3b (reflection)

My understanding is that you've had some training in function-based interventions through your Pyramid Model training, did you consider using a function-based intervention for this scenario?

Note if description and reasoning for how it was dealt with reflects acknowledgement of level of behavior i.e., that it doesn't warrant a FBA/I

Stage 4b

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            ↓                                        ↓
┌─────────────────────────┐        ┌─────────────────────────────────┐
│        Stage 4a         │        │            Stage 4b             │
├─────────────────────────┤        ├─────────────────────────────────┤
│     End of interview    │        │ Given that we've talked about   │
└─────────────────────────┘        │ this function-based intervention│
                                   │ process, can you think of an    │
                                   │ incident for which you did use  │
                                   │ the intervention or response    │
                                   │ would have been enhanced        │
                                   │ -  Is there another incident to │
                                   │    walk through? Proceed with   │
                                   │    left side script             │
                                   └─────────────────────────────────┘
```

Proceed to Stage 2a to discuss incident that meets CB definition and proceed through Stages 2a and 3a

End of interview if an additional scenario meeting the CB definition cannot be identified.