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A Review of the Class Pass Intervention: A Derivative of Bedtime Pass

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by

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DEDICATION

These past two years have been a definite whirlwind and I just wanted to dedicate this to my support system for the continued support given to me. You were all in my corner pouring inspiration and motivation into me reminding me to keep going and keep my head up. To my parents who continually sacrificed for me to ensure that I have the best, I thank you. To my siblings who helped keep my spirits up and supported me, I thank you. To my boyfriend who stepped up in every way and became the best thing I didn't know I needed, I thank you. To my friends who provided a listening ear, I thank you. To my classmates, T and KK who became my sisters and my biggest supporters, I thank you both. This experience would not have been the same without any one of you completing the puzzle that is my life. We did it!

ACKNOWLEDGMENTS

Due to the COVID-19 pandemic the thesis requirements for students graduating from the USF ABA program in 2021 has been modified and may include fewer participants, case studies or literature review.

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ABSTRACT

The purpose of this paper was to review and synthesize the literature on both the bedtime pass (BPP) and the class pass intervention (CPI), a school-based intervention derived from the bedtime pass. Specifically, the objective of this paper was to discuss variations in the implementation of the class pass and bedtime pass that may impact the effectiveness of this intervention. A total of 11 articles, seven articles on CPI and four articles on BPP, were identified for this review through a search on EBSCO database and Google Scholar search engine. The articles identified were summarized in regard to the participant's characteristics, functional behavior assessment, procedures employed, intervention variations, and outcomes. Results indicate BPP was effective in decreasing bedtime resistant behaviors such as crying and leaving the room, co-sleeping, and time to quiet after bedtime for all participants and that CPI was effective in decreasing disruptive behaviors and increasing academic engagement of 95% participants. Suggestions for future research and implementation of these procedures are provided.

CHAPTER ONE:

INTRODUCTION

Classroom management procedures are a collection of noninstructional classroom procedures implemented by teacher to promote pro-social behavior and to decrease disruptive and aggressive behaviors (Herman et al, 2020). Challenging and disruptive behaviors consist of intense behaviors that present physical, instructional, or social concerns to the teacher or others (Westling, 2010). Westling (2010) identified common examples of challenging behaviors such as defiance, noncompliance, destruction, disruption, illegal behavior, physical aggression, self - injury, social withdrawal, socially inappropriate behavior, stereotypy, and verbal aggression. Students with and without disabilities exhibit disruptive behaviors that impede the education process and decrease instructional time (Hopman et al., 2018). According to Westling, general education teachers report that 24% percent of students they teach exhibit challenging behaviors regardless if they have a disability identified or not. In addition, general education teachers report that 67%, 80%, and 100% of students with attention deficit hyperactivity disorder (ADHD), autism, or emotional disturbance/ behavior disorders (EBD) exhibit challenging behavior, respectively (Westling, 2010). As for teachers who teach special education, they report an average of 43% of all students engage in challenging behaviors whether or not they have a disability (Westling, 2010). Special education teachers report that 88%, 55%, and 79% of students with ADHD, autism, and EBD display challenging behaviors (Westling, 2010).

Disruptive behaviors not only affect the student engaging in them but also affects others in their environment as well. For instance, disruptive behavior can lead to increasing teacher stress (Hopman et al., 2018; Narhi et al., 2017), loss of instructional time, decrease in learning opportunities for the target child and peers, decrease in teacher's sense of effectiveness, and an increase in teacher's contemplation of quitting (Westling, 2010). The high incidence of disruptive behaviors, combined with their negative impact on teachers and students, highlight the importance of evidence-based interventions that support children with challenging behaviors in the school system.

School Wide Positive Behavior Interventions and Supports (SW-PBIS) is a three-tiered system created to prevent and decrease problem behavior in a school setting (Lee & Gage, 2020). The two primary goals of SW-PBIS are to decrease problem behaviors (e.g., noncompliance, off task, disruptive behaviors, etc.) and increase prosocial behaviors (e.g., on task behaviors, safety skills, social skills, etc.). SW-PBIS consist of set of guidelines to help school personnel decide which interventions to select to best support the student and intervene on their behavior (Anderson & Borgmeier, 2010). The purpose the three-tier system is to provide interventions that matches the student's needs (Positive Behavioral Interventions & Supports; PBIS, 2021). The first tier of SW-PBIS is called Tier I, and these primary supports are school-wide, or classroom wide supports to help prevent and manage disruptive behaviors (Lee & Gage, 2020). This primary tier focuses on providing support for all students before disruptive behaviors develop. Tier 1 emphasizes defining and teaching 3-5 expectations (i.e., rules; Anderson & Borgmeier, 2010), rewarding appropriate behavior, minimizing rewards for inappropriate behavior, establishing consistent consequences for problem behavior, and utilizing data-based decision making (Horner et al, 2014). One example of a Tier 1 support includes increasing academic

engagement in children exhibiting disruptive behaviors by delivering praise more often than reprimands (i.e., utilizing an appropriate praise to reprimand ratio) (Caldarella et al., 2019; Downs et al., 2019). Primary supports are typically effective for 80% of the student body (PBIS, 2021).

For those students who Tier 1 supports are ineffective, Tier II or secondary supports are utilized (Anderson & Borgmeier, 2010). Secondary supports are typically utilized with 15% of the student population (PBIS, 2021). These are more structured interventions implemented with small groups of students who need additional help in order to meet expectations set by Tier I supports (Lee & Gage, 2020). The Good Behavior Game (Barrish, Saunders, & Wolf, 1969), Check and Connect (Anderson & Borgmeier, 2010), Check in-Check Out, (Anderson & Borgmeier, 2010; McDaniels & Bruhn, 2016), social skills groups (Lee & Gage, 2020), First Step to Success (Anderson & Borgmeier, 2010; Walker et al., 1998), and self-management (Lee & Gage, 2020, Smith et al., 1988) are all examples of secondary supports.

Although Tier II supports have been shown to be effective, some students require evidence-based and individualized interventions, designed based on the outcomes of functional assessments, are necessary for others (Anderson & Borgmeier, 2010). That is, they required Tier III supports. Tier III supports are implemented with 5% of the school's student population or less (PBIS, 2021). Tertiary supports are developed based on results of functional behavioral, academic, social, and medical assessments completed with each student (Horner et al., 2014). Examples of Tier III interventions include Functional Communication Training (FCT; Carr & Durand, 1985) and Prevent-Teach-Reinforce (PTR; Anderson & Scott, 2009). Given that these interventions are more extensive and may require time and expertise, it is important to first attempt Tier I and Tier II interventions.

Previous research shows success with implementing Tier II supports in decreasing disruptive behaviors exhibited by students with and without disabilities. The Class Pass Intervention (CPI) is a Tier 2 support intervention developed by Cook et al. (2014). The purpose of (CPI) is to decrease disruptive behaviors of typically developing students and increase academic engagement. CPI was derived from the Bedtime Pass Program (BPP), an intervention developed by Friman et al. (1999) to help children who struggled with their bedtime routines. In the study by Friman et al., the BPP was assessed with two typically developing male siblings who engaged in bedtime resistant behaviors during bedtime routines. This intervention involved noncontingently giving each participant a card which they could exchange, without penalty or repercussions, to exit their bedroom after bedtime (Friman et al., 1999) for brief periods of time. Following the break, the child had to surrender the pass until the following night. If problem behavior occurred after the pass was surrendered, the parents were instructed to ignore the behavior, provide no attention, and escort the child back to their room. The results indicated a decrease in problem behavior to zero during bedtime routines (Friman et al, 1999).

CPI, developed by Cook et al. (2014), employed many of the components of the BPP Friman et al. (1999). In the study by Cook et al., the target responses were disruptive behaviors (e.g., call outs without raising hand, talking to peer when not permitted, out of seat, making inappropriate noises that draw other peers off-task, playing with object, throwing object, etc.) and academic engagement (e.g., raising hand to ask a question, actively writing, reading, participating with others on an academic task, or working individually on an academic task). Similar to Friman et al. students received passes that they can exchange to access a break from academic tasks or instructions (Cook et al., 2014). In addition, students had the option to save the

passes and later exchange them for a preferred item or activity. The results of the study indicated CPI effectively decreased disruptive behaviors and increased academic engagement.

Given the outcomes of the studies completed by Friman et al. (1999) and Cook et al. (2014), and those of more recent studies evaluating the use of CPI (e.g., Collins et al., 2016; Narozanick & Blair, 2019), the objective of this paper was to review and synthesize published research on BPP and CPI to identify gaps in the literature as well as recommendations for practice. This paper discusses variations in the implementation of the class pass and bedtime pass that may impact the effectiveness of this intervention.

CHAPTER TWO:

METHOD

Overall Search

To identify articles for this literature review, a search was completed in January 2021 using ERIC (EBSCO) and Google Scholar. The searches were conducted by searching within the "keywords" and "titles" for the terms "Class Pass Intervention", "Class Pass", "Bedtime Pass", and "Bedtime Pass Program". Then the title and abstract of the articles identified were reviewed to determine whether the article was appropriate for inclusion. Articles were excluded if they were not peer reviewed or did not experimentally assess the effects of BPP or CPI (e.g., article consisted of an implementation guide or news articles). In an attempt to identify more articles, backward and forward reference searches were completed. The backward search consisted of reviewing the reference section of the articles identified and looking for articles whose title included "class pass intervention", "CPI", "class pass", "bedtime pass", "bedtime pass program", "bedtime pass intervention". Then the forward search involved using the "cited by" function within Google Scholar and reviewing the articles (i.e., titles, abstract, and discussion section) that cited the articles previously identified for this review by looking for articles that used use the terms "class pass intervention", "CPI", "class pass", "bedtime pass", "bedtime pass program", or "bedtime pass intervention". A total of seven articles were found for CPI and four articles were found assessing BPP.

Descriptive Synthesis

Data were extracted from all articles according to the following categories: (a) participant characteristics (i.e., sex, age, grade level, race or ethnicity, diagnosis or classification, and classroom placement), (b) functional behavior assessment (i.e., indirect assessment, descriptive assessment, and functional analysis), (c) procedures employed (i.e., primary and secondary dependent variable, recording method of the dependent variable(s), duration of the observation period, follow-up conducted, and fading), (d) intervention variations (i.e., inclusion of positive, negative, or choice component(s), instructional procedures, preference assessment, and the duration of implementation), and (e) outcomes (i.e., FBA results, treatment effects on the primary and secondary dependent variable, maintenance during fading, generalization effects and type of generalization, and average social validity).

Participant Characteristics

To attain participant information, data were extracted from the participant's segment of the method section of each article on each participant's sex (i.e., male, female, not report), age in years, grade level, race or ethnicity, diagnosis or classification, and classroom placement. Grade level refers to the degree of the educational program studied by the student. Race or ethnicity was coded as White (i.e., the authors reported Caucasian or White), African American (i.e., the authors reported African American or Black), Latinx (i.e., the authors reported Latina, Latino, or Hispanic), or NR (i.e., the authors did not report a race or ethnicity for the participant). The diagnosis or classification were extracted as reported by the authors and included specific learning disability, autism, attention deficit hyperactivity disorder, emotional disturbed, gifted, speech language delay, language impairment, oppositional defiant disorder, anxiety, or typically developing. Classroom placement refers to the specific setting the participant received academic

instructions and was coded as general education, special education, emotional/behavior disorders, or mixed (i.e., the participant received academic instruction in two or more settings throughout the day). For all of these categories, "NR" (not reported) was recorded if the article did not include the specific information.

Functional Behavior Assessment

To gather data on the function of the participant's disruptive behavior, information was gathered from the dependent measures segment of the method section of the articles reviewed on the inclusion of indirect assessments, descriptive assessments, and/or functional analysis to identify the functional reinforcer for disruptive behavior. Assessments were categorized as indirect when they included teacher only survey or interview, student only survey or interview, both (teacher and student survey or interview) and descriptive when direct observation of the participant was conducted but the environment was not manipulated. Assessments were categorized as functional analysis when the student was observed and antecedent and consequences were systematically manipulated. Indirect assessments were coded as "teacher only", "student only", or "both". Descriptive assessments and functional analysis were coded as "Yes" (i.e., conducted), "No" (i.e., not conducted), "NR" (i.e., not reported whether or not it was conducted).

Procedures Employed

Data were extracted from the method section of each article on the dependent variables, their respective recording methods, the length of the observation period, and the inclusion of follow-up or fading procedures.

Dependent Variables. Primary and secondary dependent variables were coded as such based on the order the variables were described in the method section of the literature.

Dependent variables included disruptive behavior, academic engagement, or both. Disruptive behavior was defined individually for each participant, but the class of disruptive behaviors refers to behaviors that do not relate to the academic task and interfered with teacher-led instruction or the learning of others. In general, academic engagement refers to the participant paying attention to the task at hand and actively participating and engaging with the academic task.

Recording Methods. Recording methods refers to the type of measurement system used to document the occurrence of each of the target behaviors and included partial interval recording, whole interval recording, momentary time sampling, a behavior rating scale, continuous frequency, and continuous duration.

Length of Observational Period. The length of the observational period refers to the duration, in minutes, of each intervention session of the intervention evaluation phase of the study (i.e., when the effects of BPP or CPI were evaluated). Observational period was also coded as "Not specified" or NS (i.e., the article did not include specific duration of the observational period).

Follow Up. Inclusion of follow-up refers to whether or not the researchers assessed the maintenance of treatment effects after the intervention was discontinued and was coded as "Yes" (i.e., article included follow up for all participants), "No" (i.e., article did not include follow up for any participants), or "Partial" (i.e., only a portion of the intervention component was still implemented).

Fading. Fading refers to whether the article thinned the schedule of reinforcement by decreasing the number of passes available and was coded as "Yes" (i.e., fading of passes

occurred for the participant), "No" (i.e., passes were not faded for the participant", or "N/A" (i.e., fading was not reported).

Intervention Variations

To identify procedural variations, data were extracted from the procedures segment of the methods section of the articles on which components (i.e., positive reinforcement, negative reinforcement, choice) were included within the CPI and BPP intervention, the type of instructional procedure used for teacher and student training, whether and the format, if applicable, of preference assessments conducted with each participant, and on the duration of the implementation.

Component Variations. Positive reinforcement refers to whether or not the participant could save passes and exchange these for preferred stimuli at the end of the session. Negative reinforcement refers to whether or not passes could be used to access immediate removal or escape of a stimulus (e.g., demand). The choice component referred to whether or not the participant had the option to decide when to utilize the pass to access escape or save the pass to access other reinforcers (if applicable). All of these components were coded as "Yes" (i.e., included) or "No" (i.e., not included).

Instructional Procedures. Instructional procedures refer to the method of instruction utilized to teach the teacher, student, or parent to implement or the steps of BPP and CPI procedures. These included the Tell- Show- Do Method, Behavioral Skills Training (BST), and role plays. Tell-Show-Do method included instruction, modeling, and practicing segments (Cook et al, 2014). Tell or instruction component involved explicitly teaching steps of implementation of the intervention. Show or modeling component involved the researcher demonstrating the intervention being implemented. The "Do" or role play component consisted

of the implementer practicing the steps to implement the intervention. BST was the combination of instruction, modeling, roleplaying, and feedback (Miltenberger et al., 2004). The additional feedback component included giving specific commentary to the implementor (e.g., teacher) which consists of praise statements and constructive comments if necessary.

Preference Assessment. A preference assessment consists of a procedure used to identify potential reinforcers for an individual (Leaf et al., 2020) and can include indirect (e.g., interviews) and direct methods (e.g., presenting choice amongst stimuli and recording selection). Articles were coded as "Yes" when any type of preference assessment was utilized to identify and rank preferred stimuli (e.g., food, toys, people), "No" when no preference assessments were conducted, and "NR" if the authors did not specify how preferred stimuli were selected. In cases where a preference assessment was conducted, the type of assessment (i.e., direct or indirect) was recorded.

Duration of Implementation. Duration of implementation refers to the length of time the intervention was in effect for each participant and the total number of sessions was extracted from the article.

Outcomes

Information was extracted about the outcomes of the study including results of FBA, treatment effects on the primary and secondary dependent variable, maintenance during fading, generalization effects and type of generalization, and results of the student and teacher social validity, when applicable.

FBA Results. Given that no study included a functional analysis, the FBA results refers to the hypothesized social functions of problem behavior identified in the study because

antecedent and consequence events were not systematically assessed. This was coded as either attention, tangibles, escape, or multiple (attention and escape).

Treatment Effects. Treatment effect refers to whether the intervention resulted in any changes on the primary or secondary dependent variable(s). This was coded as "therapeutic", "non-therapeutic", "mixed", or "none" based on a visual inspection of each participant's graph and comparing baseline and intervention data levels and the author's description of the results. Therapeutic was defined as the intervention resulting in an increase in the academic engagement and a decrease in disruptive behavior. Non-therapeutic was defined as the intervention resulting in a decrease in the academic engagement and an increase in disruptive behavior. Mixed was defined as a therapeutic effect on only one of the dependent variables. None was defined as the intervention resulting in neither an increase nor decrease in academic engagement or disruptive behavior. For studies evaluating the BPP, therapeutic was defined as a decrease in bedtime resistant behaviors (e.g., co sleeping, crying, and leaving the room) and increase appropriate bedtime behaviors (e.g., independent sleep and bedtime passes kept). Non-therapeutic was defined as an increase in bedtime resistant behaviors and decrease in appropriate bedtime behaviors. Mixed was defined as a therapeutic effect on one of the dependent variables but not both. None was defined as the intervention resulting in neither an increase nor decrease in the dependent variable(s).

Maintenance During Fading. Maintenance during fading refers to whether the effects of the intervention were sustained during the schedule thinning phase and was coded for each individual participant across all variables as "Yes" (i.e., effects persisted for the dependent variable), No (i.e., effects did not persist for the dependent variable), or N/A (i.e., maintenance effects were not assessed).

Generalization Effects. Generalization effects refers to whether the treatment effects attained during the intervention phase were observed with a novel person, in a novel environment, or across novel stimulus without direct training. Articles were coded as "Yes" (i.e., generalization occurred without training), or "No" (i.e., generalization did not occur, or "N/A" (i.e., generalization effects were not assessed). In addition, the type of generalization refers to the specific category of novel stimuli in effect during generalization assessments and included settings, people, or stimuli.

Social Validity. Social validity refers to whether an acceptability rating of the intervention was collected for participants (e.g., parents, student, and teachers) (Collins et al., 2014). These were coded as "Yes" (i.e., social validity measure was included) or "No" (i.e., social validity measure was not included). In addition, for the studies that reported a social validity measured, the average score provided by the respondents (i.e., students, teachers, parents, and others) were extracted and converted to a percentage of the maximum positive score. For example, if the researcher reported a student's rating score as 5.1 out of 6 points, it was converted to 85%. Thus, a higher percentage indicates stronger social validity.

The results of the descriptive synthesis are presented in Table 1, 2 and 3. Both tables include information about the studies separated into the following categories: (a) participant characteristics (i.e., sex, age, grade level, race or ethnicity, diagnosis or classification, and classroom placement), (b) functional behavior assessment (i.e., indirect, descriptive, and functional analysis), (c) procedures employed (i.e., primary and secondary dependent variable, recording method of the dependent variable(s), duration of the observational period, follow-up conducted, and fading), (d) intervention variations (i.e., inclusion of positive, negative, or choice component(s), instructional procedures, preference assessment, and the duration of implementation), and (e) outcomes (i.e., FBA results, treatment effects on the primary and secondary dependent variable, maintenance during fading, generalization effects and type of generalization, and social validity).

Participant Characteristics

Sex, Age, Grade Level, and Race/Ethnicity

A total of 21 participants were included in the studies evaluating the CPI. All the studies reported the gender of the participants. Approximately 86% of the participants were male ($n=18$) and 14% of the participants were female ($n=3$). Some studies did not report the age of their participants (Collins et al, 2016; Cook et al., 2014). Of the articles that reported an age for their participants, the average age of the participants was 8 years old (range, 6 to 10 years old). All studies reported the grade level of their participants. The average grade level was 4th grade. Some

studies did not report the race or ethnicity of their participants (Harris, 2020; Zuniga & Cividini-Motta, 2020). Approximately 33% of the participants were African American ($n=7$), approximately 29% of the participants were White ($n=6$), 19% of the participants were Latinx ($n=4$), and 19% of participant's race/ethnicity were unknown ($n=4$). The majority of the participants were males ($n=18$) and African American ($n=7$). CPI was effective for 94% of the male participants, and 100% of the female participants.

A total of 27 of participants were included in the studies evaluating the BPP. All studies reported the gender of all participants. Approximately 56% of the participants were male ($n=15$) and 44% were females ($n=12$). A single study did not report the specific age of each participant (Moore et al., 2007). Of the studies that reported age, the average participant was approximately 5 years old (range, 3 to 10 years old). One study reported the range of their participants as 3-6 years old but did not report the average age (Moore et al., 2007). One study did not report the race or ethnicity of each individual participant (Friman et al., 1999) and one study provided an estimation of the participant group (Moore et al., 2007). Approximately 70% of the participant's race were White ($n=19$) and 30% of the participant's race or ethnicity was unknown ($n=8$). Grade level was not reported in any of the studies. BPP was effective for 100% of males and 100% of females.

Diagnosis and Classification

Participants with a variety of diagnoses and classifications were included across all studies one the CPI. Seven of the participants included in these studies were typically developing and three had a comorbidity of two or more diagnoses classifications. Other diagnosis and classifications included were specific learning disability ($n=3$; Collins et al., 2016; Cook et al., 2014), gifted ($n=1$; Andreu, 2016), attention deficit hyperactivity disorder (ADHD; $n=5$,

Andreu, 2016; Harris, 2020; Narozanick & Blair, 2019; Zuniga & Cividini-Motta, 2021), speech language delay (*n*= 1; Narozanick & Blair, 2019), autism spectrum disorder (ASD; *n*=2, Narozanick & Blair, 2019), language impairment (*n*=1; Narozanick & Blair, 2019), emotional disturbance (*n*=2; Harris, 2020), anxiety (*n*=1; Harris, 2020), oppositional defiant disorder (*n*=1; Harris, 2020), and at risk of ADHD (*n*=1; Zuniga & Cividini-Motta, 2021). Taken together, the most participants were typically developing. CPI was effective for all participants other than those with emotional disturbance. For that group, CPI was only effect for one of the two participants. For the studies on the BPP, all studies reported a diagnosis for all participants. Majority of the participants in these studies were typically developing (93%). Approximately 7% of the participants were diagnosed with anxiety (*n*=2). BPP was effective for 100% of participants regardless of their diagnosis.

Classroom Placement

All studies reported the specific type of classroom in which the participant received academic instruction. Approximately 62% of the participants received instruction solely in a general education classroom (*n*=13). Other classroom placements included special education classroom (*n*=2; Narozanick & Blair, 2019), an inclusive classroom (*n*=1; Narozanick &Blair, 2019), emotional/behavioral disorders classroom (EBD; *n*=1; Harris, 2020), or mixed classrooms (*n*= 4; Andreu, 2016; Collins, et al., 2016; Cook et al., 2014). Taken together, majority of the participants received academic instruction in a general education classroom. In addition, CPI was effective for participants in a wide variety of classroom placements. CPI was not effective for the participant in the EBD classroom. The studies evaluating the BPP did not report classroom placement.

Functional Behavior Assessment

All studies on CPI specified the type of functional behavior assessment utilized. Approximately 71% of articles utilized and indirect assessment that involved attaining information from a teacher (*n*=5; Andreu, 2016; Collins et al., 2020; Harris, 2020; Narozanick & Blair, 2019; Zuniga &Cividini-Motta, 2020). One article utilized both teacher and student indirect assessments (Cook et al., 2014) and one study did not used any indirect assessments (Collins et al., 2016). Approximately 71% of the studies utilized a descriptive assessment to help identify the function of the participant's problem behavior (*n*=5; Andreu, 2016; Collins et al., 2020; Cook et al., 2014; Harris, 2020; Narozanick & Blair, 2019). No study conducted a functional analysis. CPI was effective for 100% of the participants for whom a function of problem behavior was identified using indirect assessments completed by both the student and teacher, and effective for 92% effective of the participants for whom the indirect assessment was completed only by the teacher. CPI was effective for 93% of participants for whom a descriptive assessment was completed and for 100% for the participants for whom a descriptive assessment was not included. CPI was effective for 95% of participants who did not utilize a functional analysis. None of the studies on BPP conducted a functional behavior assessment.

Procedures Employed

Dependent Variables

In regard to the dependent variables assessed, six articles included both a primary and secondary variable. Disruptive behavior was listed as the primary dependent variable for 71% of studies (*n*=5; Andreu, 2016; Cook et al., 2014; Harris, 2020; Narozanick & Blair, 2019; Zuniga & Cividini-Motta, 2021). Academic engagement was listed as the secondary dependent variable for 83% of studies that included a secondary variable (*n*=5; Andreu, 2016; Cook et al., 2014;

Harris, 2020; Narozanick & Blair, 2019; Zuniga & Cividini-Motta, 2021). In regard to BPP, 50% of the articles included a primary and secondary dependent variable (Moore et al., 2007; Ravid et al., 2020). Three articles assessed the effects of BPP on crying and leaving the room as the primary dependent variable (Freeman, 2006; Friman et al., 1999; Moore et al., 2007) and one study assessed the effects of BPP on co-sleeping (Ravid et al., 2020).

Recording Methods

Disruptive behavior was recorded using a partial interval recording method in 83% of studies ($n=5$, Andreu, 2016; Cook et al., 2014; Harris, 2020; Narozanick & Blair, 2019; Zuniga & Cividini-Motta, 2021), and 17% used a modified direct behavior rating scale ($n=1$, Collins et al., 2020). Data on academic engagement were collected using a variety of recording methods, including momentary time sampling (Collins et al., 2016; Cook et al., 2014), partial interval recording (Andreu, 2016; Narozanick & Blair, 2019; Zuniga & Cividini-Motta, 2021), whole interval recording (Harris, 2020), and a modified direct behavior rating scale (Collins et al., 2020). Data on the occurrence of disruptive behavior and academic engagement were primarily collected by the teacher for only 14% of the studies ($n=1$; Collins et al., 2020).

Frequency of crying and leaving the room was recorded by 100% of the studies targeting these responses (Freeman, 2006; Friman et al., 1999; Moore et al., 2007). One study recorded co-sleeping and used a frequency measuring count (Ravid et al., 2020), one study assessed time to quiet and used a duration measure (Moore et al., 2007), and another recorded the number of bedtime passes saved (Ravid et al., 2020).

Duration of Observational Period

The duration of the observational period (i.e., each session) varied across each study. Three studies (43%) listed an exact time for the observational period (Collins et al, 2016; Cook

et al., 2014; Zuniga & Cividini-Motta, 2021), three studies (43%) listed a range for the duration of the observational period (Andreu, 2016; Harris, 2020; Narozanick & Blair, 2019), and one study (14%) did not report the duration of the observational period (Collins et al., 2020). Of the studies that reported duration of observational period, the duration ranged between 10 and 45 minutes. CPI was effective in 100% of cases with a specified duration, in 90% of cases with a duration range, and 100% if cases with an unknown duration of the observational period. Approximately 25% of articles on BPP reported the range of the observational period of implementing BPP (n=1; Ravid et al., 2020) and it consisted of 45 to 60 minutes.

Follow-Up

Follow-up procedures were included in all studies. Approximately 43% of studies assessed treatment effects after a specified time (Andreu, 2016; Collins et al., 2016; Cook et al., 2014) and of these three studies, four of the 11 participants (36%) experienced maintenance during follow-up, and seven (64%) experienced maintenance during a partial follow up. A study was coded partial if the complete intervention was not removed and a component was still implemented (i.e., positive reinforcement component still implemented post study; Collins et al., 2016; Cook et al., 2014). The effects of CPI maintained in 100% of cases with both follow-up and partial follow-up. Of the studies evaluating the BPP, follow-up measures were collected for 80% of the participants (n=20) and for all of them a follow-up was completed. BPP was effective in 100% of cases that included a follow-up component.

Fading

All studies reported whether or not fading procedures were implemented with each participant. Fading procedures were utilized in all studies but not with all participants. Approximately 67% of participants were required to partake in fading procedures (n=14) in CPI

related articles. CPI was effective in 86% of cases that included a fading procedure. For BPP,

one article totaling two participants (7%) included fading procedures (*n=2*; Ravid et al., 2020).

BPP was effective in 100% of cases that included a fading procedure.

Intervention Variations

Component Variations

Approximately 86% of studies on CPI utilized a positive reinforcement component (*n=6*;

Andreu, 2016; Collins et al., 2016; Collins et al., 2020; Cook et al., 2014; Harris, 2020; Zuniga

& Cividini-Motta, 2021) and one study did not use a positive reinforcement component

(Narozanick & Blair, 2019). All studies utilized negative reinforcement component. CPI was

effective in 94% of cases utilizing a positive reinforcement component, and in 100% of cases

that did not include a positive reinforcement component. CPI was effective in 95% of cases that

utilized a negative reinforcement component, 95% effective in cases that included a choice

component, and 100%effective in cases without a choice component. Regarding BPP, one of

four studies utilized the three components of the BPP: positive reinforcement, negative

reinforcement, and choice (Ravid et al., 2020). Three studies utilized a negative reinforcement

component (Friman et al., 1999; Freeman, 2006; Moore et al., 2007). BPP was effective in 100%

of cases using all three components as well as 100% of cases utilizing the negative reinforcement

component only.

Instructional Procedures

All studies on CPI reported the type of training procedures implemented to teach

implementation guidelines. Three studies (43%) utilized the Tell-Show-Do method to train

teachers on CPI (Collins et al., 2016; Collins et al., 2020; Cook et al., 2014), approximately 57%

utilized BST to train both teachers to implement and students to use CPI (Andreu, 2016; Harris,

2020; Narozanick & Blair, 2019; Zuniga & Cividini- Motta, 2021), and three studies (43%) used role plays to train students on CPI (Collins et al., 2016; Collins et al., 2020; Cook et al., 2014). CPI was effective in 100% of cases using Tell-Show-Do to train teachers, in 92% of cases using BST to train teachers and 92% of cases in which BST was used to train students, and in 100% of cases using role plays to teach students. Approximately 75% of articles on BPP did not specify the training procedure they used to teach caregivers to implement the BPP or children the BPP procedures (Friman et al., 1999; Freeman, 2006; Moore et al., 2007). However, Moore et al. (2007) indicated an instructional training method (i.e., verbal description of the procedures alone) was utilized to teach caregivers and children.

Preference Assessment

Nearly all studies on CPI included a preference assessment (Andreu, 2016; Collins et al., 2016; Collins et al., 2020; Cook et al., 2014; Harris, 2020; Zuniga & Cividini-Motta, 2021) and all of these employed an indirect assessment format (e.g., questionnaire). One study did not include a preference assessment (Narozanick & Blair, 2019). CPI was 100% effective in cases that did not use a preference assessment, and 94% effective in cases that included a preference assessment. Only one study on BPP conducted a preference assessment with the participants (Ravid et al., 2020) and BPP was effective for 100% of participants.

Duration of Implementation

All studies reported the duration of implementation in sessions. The average duration of implementation across all CPI studies was approximately 18 sessions per participant (range, 7 to 28 sessions per participant). As for BPP, the average duration of implementation was 26 sessions per participant (range, 17 to 77 sessions per participant).

Outcomes

FBA Results

Of the studies on CPI, 86% of studies reported a hypothesized social function for the target behavior of their participants but no study conducted a functional analysis. For approximately 43% of the participants the hypothesized function was escape (n=9), for 56% attention (*n=5*), and 14% multiple (attention and escape; *n=3*). A function was not identified for the target behavior of four (19%) participants. CPI was effective for 100% of the participants with escape-maintained and 100% of the participants with attention-maintained problem behavior. Of participants whose problem behavior was maintained by both attention and escape, CPI was effective for 67% of them. CPI was effective for 100% of participants with an unknown function of their behavior. The articles on BPP did not conduct FBA.

Treatment Effects

In regard to treatment efficacy, CPI had a therapeutic effect on 95% of the participants (*n=20*), indicating that treatment led to a decrease in disruptive behavior and to an increase in academic engagement. Collins et al. (2016; *n=4*) only data for only one dependent variable (i.e., academic engagement) and because CPI led to an increase of that response that intervention was also coded as having a therapeutic effect even though the study lacked data for disruptive behavior. For 5% of the participants, CPI did not have an effect on either disruptive behavior or academic engagement (i.e., coded as "none"). As for treatment efficacy of BPP, the intervention had a therapeutic effect on 100% of participants, indicating treatment led to a decrease in bedtime resistant behaviors such as crying and leaving the room, time to quiet, and co-sleeping. BPP had a therapeutic effect on the appropriate bedtime behaviors such as independent sleeping and number of passes saved, indicating there was an increase in appropriate bedtime behaviors.

Maintenance During Fading

Of the studies on CPI, fading was implemented with approximately 71% of participants (*n=*15) and for 100% and 86% (*n=*13) of these participants disruptive behaviors and academic engagement, respectively, remained at therapeutic levels during systematic thinning of passes. Only one study on BPP assessed the effects of maintenance during fading procedures and totaled 2 participants. Of those participants, 100% of the participants were able to maintain low levels of co-sleeping and high levels of the number of bedtime pass kept (Ravid et al., 2020).

Generalization Effects

The generalization of CPI was assessed by only one study (Harris, 2020). Of the three participants from this study, 100% of the participants were able to exhibit the same levels of academic engagement and disruptive behaviors when CPI was implemented in a novel setting (i.e., an untargeted academic period). Only one study assessed generalization of the BPP with one participant who was able to maintain low levels of co-sleeping and high levels of passes saved in a novel setting (i.e., second parent's house; Ravid et al., 2020).

Social Validity

For CPI, teacher and student social validity data were collected by all studies but only reported for 86% of studies (*n=*6; Andreu, 2016; Collins et al., 2016; Cook et al., 2014; Harris, 2020; Narozanick & Blair,2019; Zuniga & Cividini-Motta, 2021) reported individual scores. The average acceptability score provided by students was 89% (range, 78% to 100%) and by teachers 88.5% (range, 77% to 93%). Collins et al. (2020) indicated that social validity was "acceptable". Regarding the BPP, 50% of articles assessed social validity (Friman et al., 1999; Moore et al. 2007). Friman et al. (1999) assessed the acceptability of the intervention with pediatricians and parents (not parents of the participants) and reported an 82% acceptability rating. Moore at al.

(2007) assessed acceptability of this treatment with parents of the participants and found an 85%

acceptability rating.

Table 1

Descriptive Synthesis: Participants' Characteristics and Functional behavior Assessment for CPI (white cells) and BPP (gray cells) Studies

Article	Participant Characteristics				Functional Behavior Assessment		
	Sex	Age, Grade Level	Race/ Ethnicity	Diagnosis, Classroom Placement	Ind. Assessments	Descriptive Assessments	Functional Analysis
Cook et al. (2014)	M	NR, 5th	WH	TD, GE	Both	Yes	No
	M	NR, 4th	LX	TD, GE			
	M	NR, 5th	AA	SLD, Mixed			
Collins et al. (2016)	M	NR, 9th	WH	TD, GE	None	No	No
	M	NR, 10th	AA	SLD, Mixed			
	M	NR, 9th	AA	SLD, Mixed			
	M	NR, 11th	AA	TD, GE			
Andreu (2016)	M	9 yo, 3rd	AA	GI, Mixed	Teacher Only	Yes	No
	F	9 yo, 3rd	AA	TD, GE			
	M	8 yo, 2nd	AA	ADHD, GE			
	M	8 yo, 3rd	LX	TD, GE			
Narozanick & Blair (2019)	M	10 yo, 5th	WH	SPLD, IE	Teacher Only	Yes	No
	M	8 yo, 3rd	WH	ASD + LI, SPED			
	M	9 yo, 4th	WH	ASD+ADHD, SPED			
Harris (2020)	M	8 yo, 3rd	NR	ED, EBD	Teacher Only	Yes	No
	M	7 yo, 1st	WH	ANX, GE			
	F	8 yo, 3rd	LX	ED+ADHD+ODD, GE			
Zuniga & Cividini-Motta (2021)	M	9 yo, 4th	NR	ADHD, GE	Teacher Only	No	No
	M	6 yo, 1st		AR-ADHD, GE			
	M	6 yo, 1st		ADHD, GE			
Collins et al. (2020)	F	7 yo, 2nd	LX	TD, GE	Teacher Only	Yes	No
Friman et al. (1999)	M	3 yo, NR	NR	TD, NR	N/A	N/A	N/A
	M	10 yo, NR	NR	TD, NR	N/A	N/A	N/A
Freeman (2006)	M	3 yo, NR	WH	TD, NR	N/A	N/A	N/A
	M	3 yo, NR	WH	TD, NR	N/A	N/A	N/A
	M	3 yo, NR	WH	TD, NR	N/A	N/A	N/A
	M	3 yo, NR	WH	TD, NR	N/A	N/A	N/A
Moore et al (2007)	11 F, 8 M	3-6 yo, NR	70% WH (~13 WH, 6 UNK)	TD, NR	N/A	N/A	N/A
Ravid et al. (2020)	F	5 yo, NR	WH	ANX, NR	N/A	N/A	N/A
	M	9 yp, NR	WH	ANX, NR	N/A	N/A	N/A

Note: F=female, M= male, WH= White, LX = Latinx, AA= African American, TD= typically developing, SLD= specific learning disability, SPLD= speech language delay, ASD=autism spectrum disorder, LI= language impairment, SPED= special education, GI= gifted, ANX=anxiety, ED= emotional disturbance, ODD= oppositional defiant disorder, EBD= emotional/behavior disorder, GE = general education classroom, IE= inclusive classroom

Table 2

Descriptive Synthesis: Procedures Employed and Intervention Variations for CPI (white cells) and BPP (gray cells) Studies

Article	Procedures Employed					Intervention Variations					
	Primary DV, Recording Method	Secondary DV, Recording Method	Observational Period	Follow Up	Fading	Positive reinforcement	Negative reinforcement	Choice	Instructional Procedures	Pref. Assess.	Duration of Implementation (In sessions)
Cook et al. (2014)	DB, PIR	AE; MTS	40 min	Partial	No Yes Yes	Yes	Yes	Yes	T: TSD S: RP	Yes, Indirect	17 17 20
Collins et al. (2016)	AE, MTS	N/A	40 min	Partial	Yes	Yes	Yes	Yes	T: TSD S: RP	Yes, Indirect	16 16 16 19
Andreu (2016)	DB, PIR	AE, PIR	30 -45 min	Yes	Yes	Yes	Yes	Yes	T: BST S: BST	Yes, Indirect	20 28 22 25
Narozanick & Blair (2019)	DB, PIR	AE, PIR	AVG: 18 min (Range: 10-41 min)	No	No No Yes	No	Yes	No	T: BST S: BST	No	15 12 22
Harris (2020)	DB, PIR	AE, WIR	20 -30 min	No	No Yes No	Yes	Yes	Yes	T: BST S: BST	Yes, Indirect	11 7 15
Zuniga & Cividini-Motta (2021)	DB, PIR	AE, PIR	30 min	No	Yes No No	Yes	Yes	Yes	T: BST S: BST	Yes, Indirect	13 23 22
Collins et al. (2020)	AE, MDBR	DB, MDBR	UNK	Yes	Yes	Yes	Yes	Yes	T: TSD S: RP	Yes, Indirect	27
Friman et al. (1999)	C+L, FR	N/A	NS	Yes	No	No	Yes	No	NR	No	50 50
Freeman (2006)	C+L, FR	N/A	NS	No	No	No	Yes	No	NR	No	34 24 65 61
Moore et al (2007)	C+L, FR	TTQ, DR	NS	Yes	No	No	Yes	No	P: IST CH: IST	No	17
Ravid et al. (2020)	CO, FR CO, FR	BPK, FR BPK, FR	45-60 min	No Yes	Yes Yes	Yes	Yes	Yes	NR	Yes, Indirect	77 70

Note. TSD = Tell-Show-Do, RP = Roleplaying, BST = Behavioral Skills Training, DB= Disruptive Behavior, AE= Academic Engagement, PIR= Partial Interval Recording, MTS= Momentary Time Sampling, WIR= Whole Interval Recording, P= Parent, S= Student, CH= Children, T= Teacher, C+L = Crying and Leaving the Room, FR= Frequency, CO= Co Sleeping, TTQ = Time to Quiet, DR = Duration, BPK = Bedtime Passes Kept, UNK = Unknown, IST = Instructional training method

Table 3

Descriptive Synthesis: Outcomes for CPI (white cells) and BPP (gray cells) Studies

Article				Outcomes		
	FBA Results	Treatment Effect	Main. Fading: Primary DV	Main. Fading: Secondary DV	Gen., Type of Gen.	Social Validity (AVG)
Cook et al. (2014)	Escape	Therapeutic	NR	NR	NR, NR	S: 5.7/6 (95%) T: 5.5/6 (92%)
		Therapeutic	Yes	Yes		
		Therapeutic	Yes	No		
Collins et al. (2016)	N/A	Therapeutic	NR	N/A	NR, NR	S: 5.8/6 (97%) T: 5.1/6 (86%)
		Therapeutic	Yes			
		Therapeutic	NR			
		Therapeutic	No			
Andreu (2016)	Attn	Therapeutic	Yes	Yes	NR, NR	S: 4.87/6 (81%) T: 5.4/6 (90%)
	Attn	Therapeutic	Yes	Yes	NR, NR	
	Attn	Therapeutic	Yes	Yes	NR, NR	
	Escape	Therapeutic	Yes	Yes	NR, NR	
Narozanick & Blair (2019)	Escape	Therapeutic	Yes	Yes	NR, NR	S: 4.67/6 (78%) T: 5.6/6 (93%)
		Therapeutic	NR	NR	NR, NR	
		Therapeutic	NR	NR	NR, NR	
Harris (2020)	Multiple	None	NR	NR	Yes, Settings	S:3/3 (100%) T: 5.6/6 (93%)
	Escape	Therapeutic	NR	NR	Yes, Settings	
	Multiple	Therapeutic	Yes	Yes	Yes, Settings	
Zuniga & Cividini-Motta (2021)	Attn	Therapeutic	Yes	Yes	NR, NR	S: 5/6 (83%) T: 4.6/6 (77%)
	Attn	Therapeutic	Yes	Yes	NR, NR	
	Multiple	Therapeutic	Yes	Yes	NR, NR	
Collins et al. (2020)	Escape	Therapeutic	Yes	Yes	NR, NR	NR
Friman et al (1999)	N/A	Therapeutic	NR	N/A	NR, NR	O: 4.1/5 (82%)
		Therapeutic	NR	N/A	NR, NR	
		Therapeutic	NR	N/A		
Freeman (2006)	N/A	Therapeutic			NR, NR	N/A
		Therapeutic				
		Therapeutic				
Moore et al (2007)	N/A	Therapeutic	NR	NR	NR, NR	P: 34.1/40 (85%)
Ravid et al (2020)	N/A	Therapeutic	Yes	Yes	No, Settings	N/A
		Therapeutic			NR, NR	

Note. S= Student, T= Teacher, O= Others, P= Parents

CHAPTER FOUR:

DISCUSSION

The purpose of this literature review was to synthesize the literature assessing the effects of CPI and BPP. A total of 11 articles were included in this review, seven on CPI and four on BPP. The articles included in this review were reviewed and summarized in regard to participants' characteristics, functional behavior assessment, procedures employed, intervention variations, and outcomes. Overall, CPI decreased disruptive behaviors and increased academic engagement for 95% of students who had various races/ethnicities, diagnoses and classifications. However, given the limited literature CPI, more research is warranted. Additionally, BPP was found to be effective at decreasing bedtime resistant behaviors such as crying, leaving the room, and co-sleeping for 100% of the participants. However, due to the homogenous participant sample (i.e., mainly young, typically developing, White males), the generality of these findings to other populations is unknown.

CPI is a Tier II support that could be used to decrease problem behaviors and increase prosocial behaviors while utilizing three components of BPP: positive reinforcement, negative reinforcement, and choice. As previously described, there were implementation variations across articles in the utilization of all these components. Specifically, the positive reinforcement component was utilized with 86% of participants, negative reinforcement component with 100% of participants, and the choice component with 100% of participants. Other procedural variations across the studies on CPI included the type of functional behavior assessment included, recording methods employed, and duration of observations. Given the many procedural

variations across studies, it is not possible to determine which specific variables (e.g., procedures modifications) are responsible for the differing outcomes across studies and participants. However, results of previous studies suggest CPI is effective regardless of the inclusion of an FBA, procedures employed (e.g., primary and secondar dependent variable, recording methods, observational period, and inclusion of follow up and fading procedures), intervention variations (e.g., components utilized, instructional procedures, preference assessments, and duration of implementation), and the hypothesized function of problem behavior. However, therapeutic effects were more likely when CPI included the negative reinforcement and choice components (14% of participants) relative to when CPI included all three components (86%% of participants). CPI was also equally effective with individuals whose problem behavior was hypothesized to be escape maintained or attention maintained when compared to participants whose problem behavior was hypothesized to be multiply controlled (i.e., escape and attention).

Similarly, BPP was also found to be effective independent of the inclusion of an FBA (e.g., indirect assessments, descriptive assessments, and functional analysis), procedures employed (e.g., primary and secondary dependent variable, recording methods, observational period), and intervention variations (e.g., components utilized, instructional procedures, preference assessments, and duration of implementation). However, due to the limited articles ($n=4$), additional research should be conducted assessing the effects of BPP on a variety of participants and across varying races and ethnicities, diagnoses, ages, and modification of procedures. However, it should be noted that all studies on BPP included the negative reinforcement and choice components, and that BPP was implemented by parents in a naturalistic environment. Only one study on the BPP included the positive reinforcement component (Ravid et al., 2020).

Although many procedural variations were identified across studies, some similarities also exist across studies on CPI. For example, all studies on CPI involved the teacher. Not only did teachers implement the intervention, but during all studies teachers were also required to train students on the CPI procedures. Additionally, all studies utilized physical passes that were given to each student and specific break areas were identified prior to the intervention began. All studies on CPI assessed whether the teacher implemented the intervention steps as intended utilizing a checklist and procedural fidelity scores for the teachers were high. If scores dropped below an acceptable level, an additional training session was completed to ensure the intervention was implemented with accuracy. Finally, all studies on CPI collected social validity, and data collected from teachers as well as students indicated that they found CPI to be acceptable.

As mentioned before, CPI was derived from BPP and thus similarities exist between the procedures employed by the studies evaluating CPI and BPP. In the previous studies, both CPI and BPP interventions usually include positive reinforcement, negative reinforcement, and choice and were evaluated within naturalistic settings (i.e., bedroom or classroom) and during naturally occurring activities. Another similarity across the studies on CPI and BPP is that no studies employed a functional analysis to identify maintaining variable(s) of problem behaviors. It is possible that BPP and CPI could be modified to be more effective or lead to a greater or faster decrease in bedtime resistant or disruptive classroom behaviors if a function was identified through a functional analysis. However, the BPP and CPI studies differ in a few ways. For instance, all of the studies in CPI employed a procedure to identify a hypothesized function of problem behavior whereas no studies on BPP attempted to identify a function. In addition,

preference assessments were seldomly used in BPP articles while majority of CPI articles included a preference assessment.

Limitations

The current literature review identified multiple venues for future research. Due to the lack of procedural and training information included in some articles, future research on BPP should include more detailed procedural details to aid in replication. Additional research on BPP should also assess parental treatment fidelity and increase the population sample to include other races, ethnicities, and disabilities (i.e., Autism, Downs Syndrome, and emotional/behavioral disorders). Assessing parental treatment fidelity ensures the intervention is being implemented as intended, and increasing population sample allows us to determine the generalizability of the BPP to other populations. A few of the previous studies on CPI utilized teachers to collect data during the intervention (Collins et al., 2020; Narozanick et al., 2019). Future research on CPI should continue to assess the feasibility and accuracy of data collected by teachers as it would make the intervention more contextually fit. Future research should also be conducted to assess different variables and their effects on differentiated results. For instance, it would be helpful to determine whether class pass usage correlates to the function of the participant's disruptive behavior and to conduct a functional analysis to confirm the function of the problem behavior. It is also unclear if the effects of CPI persist when implemented during longer instructional periods (i.e., the entire school day or multiple academic periods) because in previous studies the observation periods never exceeded 45 minutes. Future research should also assess if the effects of CPI can generalize to other teachers and to other activities (e.g., novel academic class). Another limitation of the literature on CPI is that its effect was only assessed on disruptive behaviors but has yet to be applied to other problem behaviors. It is unclear if CPI could be

effective in decreasing other problem behavior in the classroom such as social withdrawal, self-injury, bullying, and more.

There are several limitations of the current literature review that must be considered. First, outcomes of the previous research were coded as therapeutic, non-therapeutic, mixed, or none by assessing the change in levels from baseline to intervention, but this review did not quantify the effect size. Second, although duration on implementation was collected, this review did not assess efficacy of each intervention relative to the amount of time implemented across sessions. In other words, this review did not consider the amount of time (e.g., sessions) needed for each of the interventions to have a therapeutic effect. Also, this review did not consider the amount of time that elapsed from the end of the intervention until the follow-up was completed. Therefore, it is unclear if the maintenance effects were affected by the variation in time elapsed before follow up assessments were conducted. Another limitation of this current review is that articles were only searched for using EBSCO and Google Scholar. Perhaps if the search had extended to other databases, more articles could have been identified. Also, this literature review did not assess inter-rater agreement.

Conclusion

Altogether, the results of this literature review indicate that CPI is effective in decreasing disruptive classroom behaviors and increasing academic engagement in students with a variety of diagnosis and classifications. The results also suggest CPI is effective across various age groups and for students with social negative escape and social positive attention-maintained behaviors. Results also indicate that BPP effectively decreasing bedtime resistant behaviors such as crying and leaving the room, time to quiet, and co-sleeping.

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