2016

Treatment of Sleep Problems in Young Children: A Case Series Report of a Cognitive-Behavioral Play Intervention

Karla K. Fehr
Southern Illinois University Carbondale, kfehr@siu.edu

Sandra W. Russ
Case Western Reserve University, swr@case.edu

Carolyn E. Ievers-Landis
University Hospitals Case Medical Center, carolyn.landis@uhhospitals.org

Recommended Citation
Fehr, Karla K., Russ, Sandra W. and Ievers-Landis, Carolyn E. "Treatment of Sleep Problems in Young Children: A Case Series Report of a Cognitive-Behavioral Play Intervention." *Clinical Practice in Pediatric Psychology* 4, No. 3 (Jan 2016): 306-317. doi:10.1037/cpp0000153.

http://dx.doi.org/10.1037/cpp0000153
Fehr, K., Russ, S., & Ievers-Landis, C. (2016). Treatment of sleep problems in young children: A case series report of a cognitive-behavioral play intervention. *Clinical Practice in Pediatric Psychology, 4*(3), 306-317.

Treatment of Sleep Problems in Young Children:

A Case Series Report of a Cognitive-Behavioral Play Intervention

Karla K. Fehr and Sandra W. Russ

Case Western Reserve University, Cleveland, Ohio

Carolyn E. Ievers-Landis

University Hospitals Case Medical Center, Cleveland, Ohio

Author Note

Karla K. Fehr and Sandra W. Russ, Department of Psychological Sciences, Case Western Reserve University, Cleveland, Ohio; Carolyn E. Ievers-Landis, Division of Developmental and Behavioral Pediatrics & Psychology, Rainbow Babies & Children's Hospital, University Hospitals Case Medical Center, Cleveland, Ohio.

Karla K. Fehr is now at Department of Psychology, Southern Illinois University, Carbondale.

Study results were presented at the Society of Pediatric Psychology Annual Conference in March 2014 (Philadelphia, PA).

Correspondence concerning this article should be addressed to Karla K. Fehr, Department of Psychology, Southern Illinois University, Life Science II – Mail Code 6502, 1125 Lincoln Drive, Carbondale, IL 62901. Email: kfehr@siu.edu

Sleep problems and bedtime resistance are common in young children. Treatment is critical because sleep problems typically persist, and insufficient sleep is related to worse outcomes. Current behavioral treatments do not work directly with the child to reduce anxiety and distress at bedtime. Cognitive-behavioral play therapy is a treatment approach designed to teach coping skills to young children by combining cognitive-behavioral therapy with pretend play, a developmentally-appropriate intervention mode. The current case series examined the effectiveness of adding a brief cognitive-behavioral play intervention (CBPI) to parent behavior management for young children with sleep difficulties. Four children (4-6 years) received three 20-30 minute individual sessions during which the child played out stories with an advanced graduate student therapist (first author, K.F.) about a child coping with sleep problems. Each child's parent also received a 30-minute sleep information session. Three parents returned questionnaires post-treatment. As expected, all three parents reported improvements in their child's sleep habits, sleep anxiety, and general fears. All three parents also reported a high level of satisfaction with the treatment. These preliminary results suggest that the CBPI may be effective for decreasing anxiety and child distress when added to behavioral treatment, thus increasing the breadth of treatment approaches available for young children with sleep problems. These results are promising, although a randomized study is needed to further refine the intervention and establish the efficacy of a CBPI for treatment of sleep problems in young children.

Keywords: sleep intervention, cognitive-behavioral play therapy, behavioral insomnia, young children, preschoolers

Treatment of Sleep Problems in Young Children:
A Case Series Report of a Cognitive-Behavioral Play Intervention

An estimated 20-42% of young children experience sleep problems, display nighttime fears, or are resistant at bedtime (e.g., Kataria, Swanson, & Trevathan, 1987; Liu, Liu, Owens, & Kaplan, 2005; Lozoff, Wolf, & Davis, 1985; Meltzer, 2010; Mindell, Kuhn, Lewin, Meltzer, & Sadeh, 2006). Behavioral noncompliance at bedtime (e.g., stalling, whining, and tantrums at or leading up to bedtime) and difficulties initiating or maintaining sleep (i.e., behavior insomnia) are the most common sleep disturbances reported in the preschool age group (Blader et al., 1997) and are the fifth most commonly reported concern to pediatricians by parents (Mindell, Moline, Zendell, Brown, & Fry, 1994). Children's sleep problems are not transient in nature and are typically sustained for months or even years if not treated (Jenni, Fuhrer, Iglowstein, Molinari, & Largo, 2005; Kataria et al., 1987; Richman, Stevenson, & Graham, 1975; Richman, Stevenson, & Graham, 1982; Zuckerman, Stevenson, & Bailey, 1987). Obtaining adequate amounts of sleep is important for children's social, emotional, behavioral, and academic development (e.g., Scharf, Demmer, Silver, & Stein, 2013). Sleep problems may also contribute to parental stress, maternal depression and irritability, parental chronic fatigue, and overall family dissatisfaction (Chavin & Tinson, 1980; Meltzer & Mindell, 2007; Reid, Walter, & O'Leary, 1999). Fortunately, treatment of sleep problems corresponds with improvements in functional impairments, including the child's daytime behaviors, parent marital satisfaction and self-efficacy, and parent-child interactions as well as concomitant decreases in parenting stress, parental anxiety, and maternal depression (Adams & Rickert, 1989; Durand & Mindell, 1990; France & Hudson, 1990; Hiscock & Wake, 2002; Mindell & Durand, 1993; Pritchard & Appleton, 1988; Reid et al., 1999; Wade, Ortiz, & Gorman, 2007).

Treatment of Sleep Problems

Behavioral treatments, such as extinction, bedtime routines, and bedtime fading (i.e., temporarily setting a later bedtime to achieve a quicker sleep onset), are the treatment of choice for preschoolers with behavioral insomnia or bedtime noncompliance (Edwards & Christophersen, 1994; Kuhn & Elliott, 2003; Meltzer, 2010; Mindell, 1999; Mindell et al., 2006; Ramchandani, Wiggs, Webb, & Stores, 2000). Using a combination of behavioral techniques, success rates of 65-77% have been reported for children ages 1-5 years with sleep difficulties (Mindell et al., 1994; Richman, Douglas, Hunt, Lansdown, & Levere, 1985). Clearly, behavioral methods may be highly effective for many preschool-aged children with sleep difficulties. However, these techniques alone are not enough for approximately one-quarter of children, and one possibility for this is because they may not sufficiently address the child's distress at bedtime.

The majority of preschoolers have fears at nighttime, which may include fears about bad dreams, monsters, or separation from parents, among others (Muris, Merckelbach, Ollendick, King, & Bogie, 2001). Child distress is a barrier to parent compliance with behavioral treatments (Reid et al., 1999; Rickert & Johnson, 1988), and in turn, treatment compliance has been found to predict treatment success (Reid et al., 1999). In adults and older children, cognitive-behavioral therapy for insomnia (CBT-I) is the treatment of choice for sleep difficulties involving symptoms of insomnia. For older children with sleep difficulties, recommended cognitive-behavioral techniques include positive self-statements (e.g., "Even if I don't sleep a lot tonight, I'll be ok tomorrow"), relaxation strategies, systematic desensitization, and positive reinforcement (see review in Tikotzky & Sadeh, 2010). Some believe these techniques are not appropriate for preschoolers because young children do not have sufficient cognitive development to utilize

CBT in its standard format. In fact, in a review of treatment of sleep problems in young children, the only cognitive component described was cognitive restructuring for the child's parents (Tikotzky & Sadeh, 2010).

Two studies have found that cognitive-behavioral techniques were effective at decreasing nighttime fears in preschool-aged children (McMenamy & Katz, 1989; Muris, Verweij, & Meesters, 2003). However, neither study examined the impact of the intervention on bedtime compliance or sleep variables. Each study also had some limitations regarding generalization of the results. Muris and colleagues (2003) conducted a randomized control trial with 142 children (4-6 years) and found that self-reported bedtime fears, but not parent report of child nighttime fears, decreased for children in the intervention group. However, the focus of treatment and treatment modality were limited because the intervention was designed only to address a single fear (i.e., fear of monsters) and provided minimal coping strategies (i.e., telling the monsters that the child is not afraid of them). McMenamy and Katz (1989) developed and tested a treatment teaching active coping strategies (i.e., relaxation, imagery, positive self-statements) to five children at bedtime. Nighttime fear behaviors and parent reports of daytime behavior problems decreased for all children in this study. Although the sample size was small, these results suggest that cognitive-behavioral strategies can be effectively taught to preschool-aged children to address nighttime fears. Taken together, the results suggest that CBT techniques with appropriate modifications for developmental level could be used with young children to decrease nighttime distress and improve coping skills. Kushnir and Sadeh (2012) tested an intervention introducing a puppy doll as a transitional/attachment object to decrease nighttime fears, which improved nighttime fears and sleep problems in preschool-aged children. Although this study demonstrated that improving nighttime fears may improve sleep problems, children were not directly taught

coping skills to address a wider range of fears or potential contributors that could cause distress at bedtime. Therefore, the need remains for a brief intervention aimed at teaching coping strategies to address multiple sources of nighttime distress to be developed and tested for young children via a controlled treatment trial. In addition to reducing the child's anxiety about sleep, adding a cognitive treatment component may help parents adhere to behavioral treatment plans. Given the importance of adherence for treatment outcomes (e.g., Reid et al., 1999), addressing nighttime fears would likely be an important addition to current treatment protocols as it may decrease distress in children and parents and make treatment success more likely. Thus, an adaptation of these methods for young children is a much needed addition to research and clinical practice.

Cognitive-Behavioral Play Therapy

As preschoolers are typically not yet able to verbalize and discuss their fears and anxieties, pretend play is often employed as an alternate approach to address these issues. Cognitive-behavioral play therapy (CBPT) incorporates CBT techniques within pretend play, a developmentally appropriate treatment modality (Knell, 1993). CBPT was designed for children 2 ½ to 6 years of age and uses a combination of principles from cognitive, behavioral, and play therapies (Knell, 1998). CBPT is recommended for young children presenting with clinical symptoms that require CBT using developmentally appropriate modifications (Knell, 1998). Previous research indicates that young children's understanding of complex issues may be increased through strategies such as providing concrete examples (Bierman, 1983). Play can be used to play out specific scenarios and practice using cognitive-behavioral strategies. Cognitive strategies (i.e., using positive self-statements such as "I'm not alone, I have my teddy bear" or "My mom is just down the hall and would come if I needed her" or challenging irrational beliefs)

and a problem-solving approach are two methods that can be modeled within CBPT (Knell, 1993, 1998). Systematic desensitization may be employed because play is an anxiety-inconsistent, relaxing behavior, thus allowing the child to play out a story about an anxiety-provoking stimulus while increasing his/her comfort to the feared stimulus (i.e., falling asleep without a parent present) (Knell, 1998). Through playing out scenarios, the child is able to achieve mastery over the situation (Knell, 1998). Generalization is also as an important focus in CBPT (Knell, 1998).

Case studies have demonstrated successful implementations of CBPT for children with selective mutism, phobias, separation anxiety, school anxiety, and encopresis and for children who have experienced stressful life events such as divorce and sexual abuse (see review in Knell & Dasari, 2011; Russ & Fehr, 2016). Some of the approaches described in the case studies included a CBPT child component and a behavioral parent management component, suggesting that incorporating child and parent treatment components may be successful (Knell & Moore, 1990; Russ & Fehr, 2016). In an experimental examination of CBPT, Pearson (2008) developed a cognitive-behavioral play intervention (CBPI) aimed at decreasing preschoolers' school anxiety. In this study, 48 preschoolers were randomly assigned to receive three weekly sessions (20 minutes each) of CBPI, a free play control group, or a control group that played with puzzles and coloring sheets. At each session, the CBPI and free play groups were given three scenarios describing common school problems for preschoolers (e.g., making new friends, missing their mother). In the CBPI group, the play facilitator modeled hopeful thinking/positive self-statements and problem solving and encouraged the child to practice these techniques in the play. According to teachers, who were blind to condition assignment, children in the CBPI group displayed decreased anxiety and withdrawn behavior, increased social competence, and higher

hope following the intervention compared to children in the puzzles and coloring control group. Although additional studies are needed, these results indicate that the CBPI was effective at decreasing school anxiety and increasing competence for preschoolers in a school setting.

The current study adapted Pearson's (2008) CBPI protocol to reduce distress and increase coping for young children exhibiting difficulties with sleep. It was expected that this would add to behavioral treatment by also addressing children's nighttime distress. The goal of this study was to couple information about basic behavioral strategies for sleep difficulties with the CBPI approach to improve nighttime anxiety and bedtime compliance for preschoolers and kindergarteners. It was expected that children who received the CBPI in addition to parent information about behavioral sleep strategies and a customized behavioral plan would have decreased nighttime anxiety and thus improved sleep.

Method

Development of the CBPI for Sleep Difficulties

Following Pearson's methodology, each of the three sessions included three story stems about common, intervention-relevant situations experienced by children. Sleep difficulties were targeted by including story stems about (1) nighttime fears, (2) bad dreams, and (3) separation anxiety. Nighttime fears were included because they are reported by more than 70% of preschoolers (Bauer, 1976; Muris, Merckelbach, Gadet, & Moulaert, 2000; Muris et al., 2001). Another story stem at each session was focused on coping with fears of bad dreams, as this has been proposed as the catalyst for additional nighttime fears (Muris et al., 2000), and 74% of children aged 4 to 6 years endorse experiencing scary dreams (Bauer, 1976). The third category of stories involved separation anxiety. Preschool is a time when many children experience

difficulty with separation from their caregivers, and nighttime separation is often a distressing separation for young children (Kerr & Jowett, 1994; Mindell & Owens, 2010). In one study, separation from parents was the most frequently reported worry of children 4 to 6 years old (Muris et al., 2000). Clinically, parents often report child distress when the parent prepares to leave the room at bedtime. Whether this involves the fear of separation or the removal of the child's primary coping strategy (e.g., social support from a primary caregiver), this is clearly a difficult time for many children and parents. Coping techniques encouraged by the play facilitator (i.e., self-statements and problem-solving approach) were similar to those used in the Pearson (2008) protocol. As in the Pearson (2008) study, each session ended with the child being allowed to make up a story of his or her choosing.

Participants

This study examines four children that received CBPI. Study information was provided to teachers to be sent home with children in local preschool and kindergarten classes (approximately 630 students). From this population, a convenience sample of 20 parents volunteered to participate. Parents were contacted to complete a screening questionnaire by phone assessing sleep problems. Children were eligible to participate if they were 4 to 6 years old and their parent endorsed that the child exhibited any of the following behaviors three nights or more in a typical week (adapted from Reid et al., 1999, and Wade et al., 2007): takes more than 15 minutes to settle, does not settle alone, wakes during the night and does not settle independently, sleeps with another person who defines it as problematic, or receives inadequate sleep for their age (i.e., less than 10 hours per night). Of the 20 parents who initially volunteered to participate, 16 parents were able to be contacted for screening. Of these parents, 11 met criteria for inclusion in the study. Three parents chose not to schedule or attend the parent

information session and one child chose not to participate in the study during the assent process. Thus, 7 children were randomly assigned to receive the CBPI plus parent information or parent information only. Given the small sample size and baseline differences between groups despite randomization, only the four children who received the CBPI sessions are described in this manuscript.

Procedure

All sessions took place in a private location within the child's school to make scheduling and attendance easiest for parents. Baseline measures were completed during the week before the parent information session. The baseline and end of treatment measure was administered to the child by a research assistant blind to group assignment. During the parent information session, each parent met individually with the therapist, an advanced clinical psychology graduate student, to receive a handout and discuss age-appropriate sleep habits and sleep hygiene, bedtime routines, and bedtime checking/graduated extinction strategies. Children were not present during this session. For each topic, psychoeducation about the strategy was provided, family-specific issues were identified and problem solved, and a specific behavioral plan was determined by the therapist and parent. This information session was meant to model brief behavioral recommendations that a parent might expect to receive at an expanded pediatrician visit or at an initial session with a behavioral sleep specialist. Parent information sessions were not meant to be exhaustive but were intended to provide guidance to allow parents to begin to make behavioral changes to improve their child's sleep. Thus, the specific behavioral plan was individualized based on the child's current sleep habits and the parents' readiness to implement and follow through with the specific strategy.

On the same day as the parent information session, children received the first of three

weekly individual CBPI sessions (20-30 minutes each). At each session, the child was introduced to a standardized set of toys including sleep-specific toys (e.g., bed, blanket, teddy bear) and unstructured toys (e.g., blocks, animal figure) and was asked to play out the three standardized stories about a child coping with sleep problems (i.e., a nighttime fear, worrying about a bad dream, separating from parents). The manual[1] includes standardized stories for each session to

[1]For additional information regarding the current status of the treatment manual or to request a copy, please contact the first author (K.F.).

address bad dreams and separation. Due to variability in individual children's fears (Muris et al., 2001) and to avoid introducing new fears, a variety of standardized fear stories are included in the manual and the fear story included at each session was individually tailored based on those endorsed by the child and/or parent at baseline. In this sample, the fear stories that were included addressed the following fears: dark (n = 4), storms (n = 2), scary sound (n = 2), monsters (n = 2), ghosts (n = 1), and spiders (n = 1). Please see Table 1 for specific fear stories used with each child. For each story, the child was provided with a gender-matched doll and asked to play out how the doll could "feel better." The play facilitator's doll was introduced as an "older cousin who has some ideas about how to help," and the play facilitator was active during play sessions modeling and helping the child identify and play out coping solutions as outlined by Pearson (2008). Coping self-statements were emphasized during the first session (e.g., "I'm scared right now, but I will feel better soon," "I'm not alone, my parents are just down the hall"). Sample statements are provided in the manual. A problem-solving approach was emphasized during the second session. The problem-solving steps (1. statement of problem, 2. generate solutions, 3. evaluate solutions, 4. try it, 5. evaluate the outcome, script available in manual) were prompted by the cousin doll. After generating a list of all possible solutions (e.g., hug teddy bear, think of a

good dream, hide under the covers) for the identified problem, the child chose which solution he/she thought would work best, played out the coping strategy with the doll, and evaluated the outcome. If the child reported that the doll had solved the problem, the child's problem-solving skills were praised and reinforced by the cousin doll. If the child reported that the problem was not yet solved, the cousin doll encouraged the child to play out another solution until a positive outcome was obtained. During the third session, both positive statements and a problem-solving approach were reinforced, with an emphasis on reinforcing strategies the child used during earlier sessions. After the standardized stories, the child was allowed to make up a fourth story about anything he/she wanted.

Parent and child measures were re-administered one month after the parent information session. End-of-treatment assessments were completed with all four children. One parent did not return outcome questionnaires despite receiving multiple reminders. Thus, parent-report measures after treatment were available for three participants.

Measures

Sleep Habits. The abbreviated Children's Sleep Habits Questionnaire (CSHQ; Owens, Spirito, &McGuinn, 2000) assesses parent report of children's sleep over the previous week. The CSHQ is a widely used, well-established questionnaire assessing general sleep difficulties (Lewandowski, Toliver-Sokol, & Palermo, 2011). Total Sleep Problems and the Sleep Anxiety and Bedtime Resistance subscales were used in the current study to examine each child's sleep habits. Raw scores for each scale are summed, with a total possible range for the Total Sleep Problems of 33-99. Total summed scores can range from 4-12 on the Sleep Anxiety subscale and 6-18 on the Bedtime Resistance subscale. Internal consistency is adequate, with Cronbach's alpha of .68 for a community sample (Bedtime Resistance $\alpha = .70$, Sleep Anxiety $\alpha = .63$) and

.78 for a clinical sample (Bedtime Resistance $\alpha = .83$, Sleep Anxiety $\alpha = .68$, Owens et al., 2000). Test-retest correlations over two weeks were also adequate in the community sample (Bedtime Resistance $r = .68$, Sleep Anxiety $r = .79$).

Fear. The Fear Survey Schedule for Infants-Preschool (FSSIP; Warren, Ollendick, & Simmens, 2008) is a parent-report questionnaire that measures the frequency and severity of child fears. For each item, parents rate the intensity of their child's fear as *none* (0), *some* (1), or *a lot* (2). The Total Fears score is a summation of all endorsed items (possible range 0-184). The High Intensity Fears score is the number of items the parent endorsed as being feared "a lot" (possible range 0-92). In one study examining reliability and validity, internal consistency was excellent (Cronbach's $\alpha = .94$) and test-retest reliability was adequate over a six-month time period ($r = .67$; Warren et al., 2008). Evidence for convergent and discriminant validity has been gathered by comparisons with a standardized semi-structured parent interview and validated parent and teacher rating scales.

Bedtime fears. The Nighttime Fear Interview (NFI; adapted from Muris et al., 2001) was administered to assess self-reported nighttime fears. The child's self-reported fear content was also used to tailor their intervention content if they were in the CBPI group. The NFI has previously been used with children ages 4 to 12 years old and begins with the examiner reading a story and presenting a corresponding picture about a boy going to bed and becoming scared. After reading the story, the child is asked about the frequency of their nighttime fears by using a pictorial Likert scale indicating never (1), sometimes/some days (2), or often/every day (3). Children who endorse nighttime fears are asked additional interview questions about the content and severity of their fears and coping strategies. However, only the Fear Frequency item was used in this study as it was administered to all children. The NFI results have been compared to a

similar parent-report measure in two studies examining children's nighttime fears (Muris et al., 2001; Muris et al., 2003). In both studies, the nighttime fear themes reported by children corresponded with the fear themes reported by their parents, although the frequency and rank order differed, with children reporting more fears than their parents believed they had experienced.

Treatment Satisfaction. The Therapy Attitude Inventory (TAI; Eyberg, 1993) evaluates parent satisfaction with treatment for their child's behavioral problems. Parents rate their satisfaction on this 10-item measure with response options on the 5-point scale ranging from dissatisfaction with the treatment or worsening of problems to high satisfaction with the treatment or greatly improved problems (range 10-50). Given clinical experience and research that child distress relates to parent adherence to behavior management strategies, it was expected that parents would have high satisfaction with the treatment as it included a child-directed portion to reduce child distress. Internal consistency has been excellent with Cronbach's alpha ranging from .88 to .91 (Brestan, Jacobs, Rayfield, & Eyberg, 1999; Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993). Test-retest reliability was good (r = .85; Brestan et al., 1999). Construct validity examinations demonstrated that TAI scores were positively related to the amount of behavior change reported by parents and observed change in child compliance over the course of treatment (Brestan et al., 1999). In addition, treatment completers had significantly higher scores on the TAI than those who dropped out of treatment.

After completion of the study, parents were interviewed to provide feedback about the study. During this interview, parents were asked if they had noticed any improvements in their child's sleep since beginning the study. Parents were asked to respond with one of the following response choices: not at all (1), a little bit (2), some (3), or a lot (4).

Results

There were one male and three female child participants with a mean age of 5.25 years (SD = 0.96 years; see Table 1). All parents who participated were mothers. The sample was 50% biracial, 25% Caucasian, and 25% African American. Two parents had completed some college and two had completed a bachelor's or master's degree.

The main hypothesis of this study was that children who received CBPI would experience a decrease in distress at bedtime. This hypothesis was supported as parents of all three children for whom parent data post-intervention was provided reported decreases in CSHQ Sleep Anxiety from pretest to post-test (see Table 1). This means that after receiving the CBPI, parents reported improvement in their children's need to have their parent in the room to fall asleep, difficulty sleeping away from their parent, and fear of sleeping in the dark or sleeping alone. As parents also received information and problem-solving regarding behavioral sleep strategies to develop a plan, parent-reported improvements in children's sleep was also expected over the one-month study, and this hypothesis was supported. Decreases in CSHQ Total Sleep Problems and Bedtime Resistance were reported by all three parents from pretest to post-test. At posttest, all three parents also reported decreases in FSSIP Total Fears and FSSIP High Intensity Fears, suggesting that the intervention effects generalized to decrease other fears that the child experienced in his or her daily life. After treatment, two children reported decreases in nighttime fears on the NFI, but two children reported increases in nighttime fears on the NFI. All three parents also reported a high degree of satisfaction with the treatment, as measured by the TAI. Two parents reported that they had noticed "a lot" of improvements in their child's sleep since beginning the study; the other parent reported that they had noticed "some" improvements.

Discussion

Each child received the CBPI and experienced a parent-reported reduction in anxiety and distress at bedtime. These results suggest that the CBPI may be effective at decreasing child anxiety and distress when added to parent information about behavioral sleep strategies and assistance with developing a specific plan for young children with sleep problems. There is a strong literature basis supporting the use of behavioral sleep medicine strategies to decrease bedtime noncompliance and insomnia in young children. However, these treatment strategies do not provide children with coping skills aimed at decreasing their distress or helping them feel better when faced with their fears (e.g., separation, dark, bad dreams). If the CBPI is effective at reducing sleep fears in future studies, this would increase the breadth of clinical treatment options available for this age. The CBPI may be especially useful as an adjunct for children who are distressed and for whom nighttime fears or worries may be causing or contributing to the sleep problems. Although a randomized study with a larger sample is needed, the current results are consistent with the play therapy literature indicating that play interventions decrease anxiety and distress in children (e.g., Briggs, Runyon, & Deblinger, 2011; Moore & Russ, 2006; Pearson, 2008; Pincus, Chase, Chow, Weiner, & Pian, 2011; Russ & Fehr, 2016). For example, Moore and Russ (2006) reviewed the literature on pretend play in medical settings and concluded that pretend play interventions effectively reduce anxiety and distress in children in outpatient and inpatient medical settings.

In addition to decreases in child anxiety, parent-reported improvements in children's high intensity fears and satisfaction with the intervention were both in the desired direction. The High Intensity Fear Score on the FSSIP was originally developed to examine clinical significance (Warren et al., 2008). All three parents reported reductions in the number of items that their child feared at the highest level, indicating that the intensity of their children's fears had decreased.

Parent satisfaction and perceived success of the intervention were also examined. On the TAI, all three parents reported a high degree of satisfaction with the treatment. Previous research with the TAI has found a mean level of satisfaction of 45.12 (range 28-50) for parents who completed Parent-Child Interaction Therapy (PCIT), a well-established parent behavior management treatment program (Brestan et al., 1999). Satisfaction scores in the current study (range 33-46) suggest that parents were satisfied with the current treatment at a rate similar to satisfaction with PCIT. Parents also reported a high degree of perceived change following the intervention with two parents reporting the highest rate of change over the course of the intervention ("a lot") and one parent reporting the next highest rate of change ("some"). These results are promising as they indicate that this brief, child-focused intervention coupled with parent information resulted in clinically significant changes and high rates of parent satisfaction.

CBPT has been described as an effective treatment to decrease child distress and anxiety in a wide variety of case studies (Knell & Dasari, 2011). Separate from this study, the CBPI approach for sleep problems was offered clinically to a family receiving behavioral treatment after the parents reported minimal effects with behavioral treatment and noted that separation anxiety appeared to be contributing to the child's sleep difficulties. Over the course of one CBPI session, the child was able to gradually tolerate and engage in playing out stories about a doll who copes with separation from parents at bedtime. By the last play story, the child independently initiated the doll's use of coping strategies and demonstrated generalization by creating a new story requiring coping at bedtime. These positive results also generalized to the home setting as the parents reported improved sleep habits and decreased distress and separation anxiety at bedtime after using the coping strategies practiced during the CBPI (Russ & Fehr, 2016). A central tenet of CBPI is generalization of the coping strategies, which may extend

beyond the identified stressor.

The results of this case series are promising, although a number of limitations need to be considered and addressed in future studies. First, this case series had a very small sample size. A rigorous study with a large sample size, control group, random assignment, additional measures, and longer-term follow up is needed to test this promising new cognitive-behavioral intervention for young children's sleep problems. Second, based on established prevalence rates of sleep difficulties in this age group, a minimum of 126 children were expected to be eligible to participate in the current study. The significantly lower response rate raises a number of practical questions including parents' knowledge of problematic sleep patterns, parental knowledge of the effectiveness of behavioral treatment for sleep problems, and parents' willingness to seek treatment for clinical concerns through the school setting. For example, previous research has found that parent knowledge of healthy sleep habits is generally low (Owens & Jones, 2011; Schreck & Richdale, 2011). Further, parents are less likely to endorse sleep difficulties when asked to identify if their child has a "sleep problem" as compared to when asked whether their child has difficulty with settling at night, night waking, waking early, or other specific sleep difficulties (Robinson & Richdale, 2004). Even when parents do identify difficulties with their children's sleep, only a small portion of these parents seek treatment by speaking with someone about these concerns (Fehr, 2015). For the current study, it may also have been that parents were uninterested in seeking treatment for a clinical issue through the school setting. Future research regarding parent treatment-seeking behavior for young children with sleep difficulties is clearly warranted. It may also be more fruitful to use this intervention with families already seeking treatment through their pediatrician or sleep specialist rather than in school-based settings. Another limitation is that parents in the current study were not provided with any instruction or

feedback regarding the CBPI coping strategies being taught to their children. Should this intervention prove to be effective with a larger sample, direct instruction and encouragement of parent reinforcement of coping strategies learned as a part of CBPI may bolster generalization and treatment effects. Lastly, half of the children reported increases on the child self-report measure of nighttime fears. Self-report in young children is often a challenge, and although the NFI has been used with this age before, the measure may not have been sensitive enough to detect changes over time. It may also be that some children's ability to label their fears and describe their experience of anxiety in a verbal format increased after playing out and discussing stories about their fears, which could have resulted in increased reporting of anxiety on the NFI.

Despite these limitations, the preliminary results suggest that this theory-based, brief CBPI may be effective at decreasing anxiety and child distress when added to behavioral treatment for sleep problems among young children. Neglecting to adequately address child distress, anxiety, and coping strategies is an important limitation of current behavioral treatments. Future studies with larger sample sizes may find that CBPI might be a useful treatment adjunct to address this crucial clinical need.

References

Adams, L., & Rickert, V. (1989). Reducing bedtime tantrums: Comparison between positive routines and graduated extinction. *Pediatrics, 84,* 756-761.

Bauer, D. (1976). An exploratory study of developmental changes in children's fears. *Journal of Child Psychology and Psychiatry, 17,* 69-74.

Bierman, K. L. (1983). Cognitive development and clinical interviews with children. In B. B. Lahey & A. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 6, pp. 217-250). New York: Plenum.

Blader, J., Koplewicz, H., Abikoff, H., & Foley, C. (1997). Sleep problems of elementary school children: A community sample. *Archives of Pediatrics & Adolescent Medicine, 151*(5), 473-480.

Brestan, E., Jacobs, J., Rayfield, A., & Eyberg, S. (1999). A consumer satisfaction measure for parent-child treatments and its relation to measures of child behavior change. *Behavior Therapy, 30,* 17-30.

Briggs, K., Runyon, M., & Deblinger, E. (2011). The use of play in trauma-focused cognitive-behavioral therapy. In S. W. Russ & L. N. Niec (Eds.). *Play in clinical practice: Evidence-based approaches* (pp. 168-200). New York, NY: The Guilford Press.

Chavin, W., & Tinson, S. (1980). Children with sleep difficulties. *Health Visitor, 53,* 477-480.

Durand, V. M., & Mindell, J. (1990). Behavioral treatment of multiple childhood sleep disorders: Effects on child and family. *Behavior Modification, 14*(1), 37-49.

Edwards, K., & Christophersen, E. (1994). Treating common sleep problems of young children. *Developmental and Behavioral Pediatrics, 15*(3), 207-213.

Eisenstadt, T. H., Eyberg, S., McNeil, C. B., Newcomb, K., & Funderburk, B. (1993). Parent-

child interaction therapy with behavior problem children: Relative effectiveness of two stages and overall treatment outcome. *Journal of Clinical Child Psychology, 22*(1), 42-51.

Eyberg, S. (1993). Consumer satisfaction measures for assessing parent training programs. In L. VandeCreek, S. Knapp, & T. L. Jackson (Eds.), *Innovations in clinical practice: A source book (Vol. 12)* (pp. 377-382). Sarasota, FL: Professional Resource Press.

Fehr, K. (2015, October). *Parent treatment-seeking behavior for childhood sleep problems.* In R. Hazen (Chair), *Understanding the Family Perspective in the Medical Setting: Ethical and Clinical Implications.* Symposium conducted at the annual meeting of the Society for Developmental & Behavioral Pediatrics, Las Vegas, NV.

France, K., & Hudson, S. (1990). Behavior management of infant sleep disturbance. *Journal of Applied Behavior Analysis, 23,* 91-98.

Hiscock, H., & Wake, M. (2002). Randomised controlled trial of behavioural infant sleep intervention to improve infant sleep and maternal mood. *BMJ, 324,* 1-6.

Jenni, O., Fuhrer, H.Z., Iglowstein, I., Molinari, L., & Largo, R. (2005). A longitudinal study of bed sharing and sleep problems among Swiss children in the first 10 years of life. *Pediatrics, 115*(1), 233-240.

Kataria, S., Swanson, M., & Trevathan, G. E. (1987). Persistence of sleep disturbances in preschool children. *The Journal of Pediatrics, 110*(4), 642-646.

Kerr, S., & Jowett, S. (1994). Sleep problems in pre-school children: A review of the literature. *Child: Care, Health and Development, 20,* 379-391.

Knell, S. (1993). *Cognitive-behavioral play therapy.* Northvale, New Jersey: Jason Aronson Inc.

Knell, S. (1998). Cognitive-behavioral play therapy. *Journal of Clinical Child Psychology, 27,*

28-33.

Knell, S., & Dasari, M. (2011) Cognitive-behavioral play therapy. In S. Russ & L. Niec (Eds.), *Play in clinical practice: Evidence-based approaches* (pp. 236-263). New York: Guilford Press.

Knell, S., & Moore, D. (1990). Cognitive-behavioral play therapy in the treatment of encopresis. *Journal of Clinical Child Psychology, 19,* 55-60.

Kuhn, B., & Elliott, A. (2003). Treatment efficacy in behavioral pediatric sleep medicine. *Journal of Psychosomatic Research, 54,* 587-597.

Kushnir, J., & Sadeh, A. (2012). Assessment of brief interventions for nighttime fears in preschool children. *European Journal of Pediatrics, 171*(1), 67-75.

Lewandowski, A., Toliver-Sokol, M., & Palermo, T. (2011). Evidence-based review of subjective pediatric sleep measures. *Journal of Pediatric Psychology, 36*(7), 780-793.

Liu, X., Liu, L., Owens, J., & Kaplan, D. (2005). Sleep patterns and sleep problems among schoolchildren in the United States and China. *Pediatrics, 115*(1), 241-249.

Lozoff, B., Wolf, A., & Davis, N. (1985). Sleep problems seen in pediatric practice. *Pediatrics,* 75(3), 477-483.

McMenamy, C., &Katz, R. (1989). Brief parent-assisted treatment for children's nighttime fears. *Developmental and Behavioral Pediatrics, 10*(3), 145-148.

Meltzer, L. (2010). Clinical management of behavioral insomnia of childhood: Treatment of bedtime problems and night wakings in young children. *Behavioral Sleep Medicine, 8*(3), 172-189.

Meltzer, L., & Mindell, J. (2007) Relationship between child sleep disturbances and maternal sleep, mood, and parenting stress: A pilot study. *Journal of Family Psychology, 21*(1),

67-73.

Mindell, J. (1999). Empirically supported treatments in pediatric psychology: Bedtime refusal and night wakings in young children. *Journal of Pediatric Psychology, 24*(6), 465-481.

Mindell, J., & Durand, V. (1993). Treatment of childhood sleep disorders: Generalization across disorders and effects on family members. *Journal of Pediatric Psychology, 18,* 731-750.

Mindell, J., Kuhn, B., Lewin, D., Meltzer, L., & Sadeh, A. (2006). Behavioral treatment of bedtime problems and night wakings in infants and young children. *SLEEP, 29*(10), 1263-1276.

Mindell, J., Moline, M., Zendell, S., Brown, L., & Fry, F. (1994). Pediatricians and sleep disorders: Training and practice. *Pediatrics, 94*(2), 194-200.

Mindell, J., & Owens, J. (2010). *A clinical guide to pediatric sleep: Diagnosis and management of sleep problems* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Moore, M., & Russ, S. (2006). Pretend play as a resource for children: Implications for pediatricians and health professionals. *Developmental and Behavioral Pediatrics, 27*(3), 237-248.

Muris, P., Merckelbach, H., Gadet, B., & Moulaert, V. (2000). Fears, worries, and scary dreams in 4- to 12-year-old children: Their content, developmental pattern, and origins. *Journal of Clinical Child Psychology, 29*(1), 43-52.

Muris, P., Merckelbach, H., Ollendick, T., King, N., & Bogie, N. (2001). Children's nighttime fears: Parent-child ratings of frequency, content, origins, coping behaviors and severity. *Behavior Research and Therapy, 39,* 13-28.

Muris, P., Verweij, C., & Meesters, C. (2003). The "anti-monster letter" as a simple therapeutic tool for reducing night-time fears in young children. *Behaviour Change, 20*(4), 200-207.

Owens, J., & Jones, C. (2011). Parental knowledge of healthy sleep in young children: Results of a primary care clinic survey. *Journal of Developmental & Behavioral Pediatrics, 32*(6), 447-453.

Owens, J., Spirito, A., & McGuinn, M. (2000). The Children's Sleep Habits Questionnaire (CSHQ): Psychometric properties of a survey instrument for school-aged children. *Sleep, 23*(8), 1-9.

Pearson, B. (2008). Effects of a cognitive behavioral play intervention on children's hope and school adjustment (Doctoral dissertation, Case Western Reserve University, 2008). *Dissertation Abstracts International, 69/06*.

Pincus, D., Chase, R., Chow, C., Weiner, C., & Pian, J. (2011). Integrating play into cognitive-behavioral therapy for child anxiety disorders. In S. W. Russ & L. N. Niec (Eds.). *Play in clinical practice: Evidence-based approaches* (pp. 218-235). New York, NY: The Guilford Press.

Pritchard, A., & Appleton, P., (1988). Management of sleep problems in pre-school children: Effects of a behavioural programme on sleep routines, maternal depression and perceived control. *Early Child Development and Care, 34,* 227-240.

Ramchandani, P., Wiggs, L., Webb, V., & Stores, G. (2000). A systematic review of treatment of setline problems and night waking in young children. *WJM, 173,* 33-38.

Reid, M. J., Walter, A., & O'Leary, S. (1999). Treatment of young children's bedtime refusal and nighttime waking: A comparison of "standard" and graduated ignoring procedures. *Journal of Abnormal Child Psychology, 27*(1), 5-16.

Richman, N., Douglas, J., Hunt, H., Lansdown, R., & Levere, R. (1985). Behavioural methods in the treatment of sleep disorders-A pilot study. *Journal of Child Psychology and*

Psychiatry, 26(4), 581-590.

Richman, N., Stevenson, J., & Graham, P. (1975). Prevalence of behavioural problems in 3 year old children: An epidemiological study in a London Borough. *Journal of Child Psychology and Psychiatry, 16,* 277-287.

Richman, N., Stevenson, J., & Graham, P. (1982). *Preschool to school: A behavioral study.* London: Academic Press.

Rickert, V., & Johnson, M. (1988). Reducing nocturnal awakening and crying episodes in infants and young children: A comparison between scheduled awakenings and systematic ignoring. *Pediatrics, 81*(2), 203-212.

Robinson, A.M., & Richdale, A.L. (2004). Sleep problems in children with an intellectual disability: Parental perceptions of sleep problems, and views of treatment effectiveness. *Child: Care, Health & Development, 30*(2), 139-150.

Russ, S., & Fehr, K. (2016). The use of pretend play to overcome anxiety in school age children. In A. Drewes & C. Schaefer (Eds.) *Play Therapy in Middle Childhood* (pp. 77-95). American Psychological Association.

Scharf, R., Demmer, R., Silver, E., & Stein, R. (2013). Nighttime sleep duration and externalizing behaviors of preschool children. *Journal of Developmental & Behavioral Pediatrics, 34,* 384-391.

Schreck, K., & Richdale, A. (2011). Knowledge of childhood sleep: A possible variable in under or misdiagnosis of childhood sleep problems. *Journal of Sleep Research, 20*(4), 589-597.

Tikotzky, L., & Sadeh, A. (2010). The role of cognitive-behavioral therapy in behavioral childhood insomnia. *Sleep Medicine, 11,* 686-691.

Wade, C., Ortiz, C., & Gorman, C. (2007). Two-session group parent training for bedtime noncompliance in Head Start preschoolers. *Child & Family Behavior Therapy, 29*(3), 23-

55.

Warren, S., Ollendick, T., & Simmens, S. (2008). Reliability and validity of The Fear Survey Schedule for Infants-Preschoolers. *Depression and Anxiety, 25*, E205-E207.

Zuckerman, B., Stevenson, J., & Bailey, V. (1987). Sleep problems in early childhood: Continuities, predictive factors, and behavioral correlates. *Pediatrics, 80*(5), 664-671.

Table 1: Individual Outcomes for Sleep Problems, Fears, and Parent Satisfaction

Variable		Child 1	Child 2 [a]	Child 3	Child 4
Age		5 years	6 years	4 years	6 years
Gender		Female	Male	Female	Female
Fear Stories Provided [b]	Session 1	Dark	Dark	Dark	Monsters
	Session 2	Scary sound	Ghosts	Monsters	Dark
	Session 3	Storm	Storm	Spiders	Scary sound
CSHQ Sleep Anxiety	Pretest	12	8	11	6
(range 4-12)	Post-test	8	--	8	4
CSHQ Total Sleep Problems	Pretest	77	62	58	45
(range 33-99)	Post-test	56	--	53	44
CSHQ Bedtime Resistance	Pretest	17	14	15	8
(range 6-18)	Post-test	14	--	12	6
FSSIP Total Fears	Pretest	107	26	71	42
(range 0-184)	Post-test	63	--	52	36
FSSIP High Intensity Fears	Pretest	40	6	22	3
(range 0-92)	Post-test	15	--	17	1
NFI Fear Frequency	Pretest	2	1	2	3
(range 1-3)	Post-test	1	2	3	2
Therapy Attitude Inventory	Post-test	46	--	42	33
(range 10-50)					
Parent report of improvements in child's sleep (range 1-4)	Post-test	4	--	4	3

Note: CSHQ: Children's Sleep Habits Questionnaire, FSSIP: Fear Survey Schedule for Infants-Preschool, NFI: Nighttime Fear Interview

Ranges listed indicate raw score ranges possible based on scoring for each particular scale.

[a] Parent post-test data unavailable due to attrition.

[b] Intervention stories addressing bad dreams and separation were standardized and presented to each child in the same order as described in the manual.