



## Family accommodation mediates nightmares and sleep-related problems in anxious children



Eli R. Lebowitz\*, Yaara Shimshoni, Wendy K. Silverman

Yale University Child Study Center, 230 S. Frontage Rd. New Haven, CT 06519, USA

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### ABSTRACT

Nightmares are commonly reported in clinically anxious children and are associated with the presence of other sleep-related problems. Family accommodation has been theorized as playing a central role in the sleep-related problems of anxious children, but empirical data is lacking. We examined associations between nightmares, maternal reports of family accommodation, and sleep-related problems in clinically anxious children. We also examined a hypothesized mediational pathway linking nightmares to other sleep-related problems, through increased family accommodation using structural equation modeling. Participants were 277 clinically anxious children (ages 6–17), and their mothers. Nightmares were reported in over three quarters of the children and were linked to higher mother-rated accommodation and to sleep-related problems. Fit indices for the structural equation model were excellent, and data supported the hypothesis that family accommodation mediates the association between nightmares and sleep-related problems in the anxious children. Results provide the first empirical evidence for the role of family accommodation in nightmares and other sleep-related problems in anxious children. Implications for assessment and treatment of childhood anxiety are discussed.

### 1. Introduction

Sleep-related problems including insomnia, night-waking, night terrors, and bruxism are commonly reported in children with anxiety disorders (referred to henceforth as ‘anxious children’ for brevity) (Schredl, Fricke-Oerkermann, Mitschke, Wiater, & Lehmkuhl, 2009; Alfano, Pina, Zerr, & Villalta, 2010; Hudson, Gradisar, Gamble, Schniering, & Rebelo, 2009; Mindell & Barrett, 2002; Schredl, Fricke-Oerkermann, Mitschke, Wiater, & Lehmkuhl, 2009). At least one sleep-related problem is reported in as many as 80–90% of clinically anxious children, and at least two sleep-related problems are reported in upwards of 50% of cases (Alfano, Ginsburg, & Kingery, 2007, 2010; Chase & Pincus, 2011; Kerr & Jowett, 1994). Nightmares, defined as story-like sequences of dream imagery that seem real, incite anxiety, fear, or other dysphoric emotions, and are remembered upon awakening, are among the most commonly reported sleep-related problems in anxious children, with most estimates ranging from approximately 54% to 81% (Alfano, Beidel, Turner, & Lewin, 2006, 2007; Reynolds & Alfano, 2016). Prospective reports of nightmares, over a period of one week, in children with generalized anxiety disorder are lower (26.2%; Reynolds & Alfano, 2016).

The presence of nightmares and other sleep-related problems vary across child development (Peterman, Carper, & Kendall, 2015). There is

an age-related increase in some sleep-related problems, such as daytime sleepiness (Sadeh, Dahl, Shahar, & Rosenblat-Stein, 2009), while other sleep-related problems, including bedtime resistance and nighttime wakings generally decrease with age (Mindell, Meltzer, Carskadon, & Chervin, 2009), and nightmares peak in mid-childhood and then decrease (Muris, Merckelbach, Gadet, & Moulart, 2000). Nightmares tend to be chronic (Schredl et al., 2009a; Schredl et al., 2009b), and adults with nightmares often report their onset in childhood (Kales et al., 1980). Nightmares that persist into adulthood are associated with increased suicidal ideation or behavior, and death by suicide (Pigeon, Pinquart, & Conner, 2012; Sjostrom, Hetta, & Waern, 2009; Tanskanen et al., 2001). The high risks and negative sequelae associated with nightmares underscore the importance of understanding their high occurrence in anxious children.

One factor viewed to be a likely important contributor to nightmares and sleep-related problems is family accommodation (Peterman et al., 2015, 2016; Storch et al., 2007, 2008). Family accommodation is common in childhood anxiety and describes changes that parents make to their own behaviors to help their child to avoid or alleviate anxiety (Lebowitz et al., 2013; Lebowitz, 2017; Norman, Silverman, & Lebowitz, 2015; Storch et al., 2015; Thompson-Hollands, Kerns, Pincus, & Comer, 2014). By facilitating ongoing avoidance and decreasing independent coping, family accommodation is thought to maintain the

\* Corresponding author.

E-mail address: [eli.lebowitz@yale.edu](mailto:eli.lebowitz@yale.edu) (E.R. Lebowitz).

child's anxiety (Kagan, Frank, & Kendall, 2017; Lebowitz et al., 2013; Norman et al., 2015). Family accommodation is also associated with more severe child anxiety symptoms and greater impairment (Lebowitz, Scharfstein, & Jones, 2014; Storch et al., 2015), and may predict poorer treatment outcomes (Kagan, Peterman, Carper, & Kendall, 2016).

Although family accommodation has been repeatedly theorized to play a central role in the sleep-related problems of anxious children (Peterman et al., 2015, 2016; Storch et al., 2007, 2008), empirical data is lacking. We know of only a single study that directly examined family accommodation in relation to childhood sleep-related problems. Peterman et al. (2016) examined changes in family accommodation in anxious children who received cognitive-behavioral therapy for childhood anxiety disorders (N = 69, ages 7–17). Family accommodation was associated with more sleep-related problems in the anxious children and was lower following treatment. Another study suggesting a specific link between nightmares and family accommodation in anxious children was reported by Reynolds and Alfano (2016) who found that retrospective reports of nightmares are more frequent than prospective reports. The authors suggested that children may complain of nightmares to 'solicit parent involvement at night' (pp: 11), leading to the observed discrepancy between prospective and retrospective reports.

Despite these important preliminary findings there is clear need for empirical examination of the role accommodation plays for the association between nightmares and other sleep-related problems. It is plausible that parents of clinically anxious children respond to nightmares by increasing their accommodation and that this could, in turn, exacerbate or lead to other sleep-related problems (Dadds, Barrett, Rapee, & Ryan, 1996). For example, parents of an anxious child with nightmares may accommodate by providing repeated reassurance, staying with the child until they fall asleep or allowing co-sleeping. Although this may be helpful in the short-term, it may lead to a growing reliance on parents to regulate the child's anxiety and encourage other sleep-related problems such as prolonged bedtime or nighttime wakings. Thus, family accommodation may contribute to the maintenance and further exacerbation of other childhood sleep-related problems.

Our first aim in the current study was therefore to examine associations between reports of family accommodation, nightmares, and other sleep-related problems in a sample of clinically anxious children. We hypothesized that reports of nightmares and other sleep-related problems would be positively associated with ratings of maternal family accommodation. Our second aim was to examine whether maternal family accommodation mediates the association between nightmares and other sleep-related problems. We used structural equation modeling to test the hypothesis that the indirect path from nightmares to sleep-related problems through increased accommodation would contribute significantly to predicting sleep-related problems in the anxious children.

Mediational analysis of cross-sectional data, as in our study, cannot establish causal processes. Nevertheless, the use of structural equation modeling for mediational analysis is an accepted preliminary step in providing initial proof-of-concept for theoretical models of the directions of associations between variables, and can provide valuable preliminary support to guide further research with longitudinal data (Gaynor et al., 2017).

## 2. Method

### 2.1. Participants

Participants were 277 children, aged 6–17 years (Mean = 10.80 years; SD = 3.04; 55% females) and their mothers, who presented consecutively for evaluation at a specialty anxiety clinic at a large medical center in the Northeastern United States. Children presented with fear and anxiety problems, and were later diagnosed with a DSM-5 (American Psychiatric Association, 2013) primary anxiety disorder diagnoses of: generalized anxiety disorder (36%), social phobia (31%),

separation anxiety disorder (16%), specific phobia (12%), panic disorder (2%), selective mutism (2%) or agoraphobia (1%). Comorbid diagnoses included obsessive compulsive disorder (3%), oppositional defiant disorder (2%), attention deficit and hyperactive disorder (2%), dysthymia (1%), major depression (1%), enuresis (.5%). All participating children were enrolled in regular educational settings and English speaking. Children were predominantly Non-Hispanic White (86%) with a minority being African-American (2%), Asian (3%) and "other" (9%).

### 2.2. Procedure

The study was approved by the University Institutional Review Board. Informed consent and assent were obtained from mothers and children, respectively, before any additional procedures. Clinical interviews were conducted for mothers and children separately by experienced assessors with extensive training in the assessment of anxiety disorders in children. Children were aided by trained research personnel in completing questionnaires and study forms. Diagnostic decisions were made under the supervision of a licensed clinical psychologist.

### 2.3. Measures

#### 2.3.1. Child anxiety diagnoses

DSM-5 anxiety disorder diagnoses were established using the *Anxiety Disorders Interview Schedule – Children and Parent versions* (ADIS-C/P; Silverman, Saavedra, & Pina, 2001), administered separately to child and mother. ADIS-C/P is a semi-structured interview with excellent reliability for diagnoses ( $k = .80-.92$ ) and strong correspondence with anxiety questionnaires (Silverman et al., 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). Because the DSM-5 version of ADIS-C/P is not yet available, the DSM-IV version was administered, and diagnoses were established according to DSM-5 criteria. The ADIS-C/P was administered by graduate-level clinicians, or licensed psychologists, trained by one of the instrument's authors. As in past research, in cases of discordant parent and child reports the clinician considered both informants' views to derive a final diagnosis (Silverman et al., 1999; Silverman, Kurtines, Jaccard, & Pina, 2009).

#### 2.3.2. Child sleep-related problems

Child sleep-related problems were assessed using the *Children's Sleep Habit Questionnaire* (CSHQ; Owens, Spirito, & McGuinn, 2000). The CSHQ is a 33-item scale that assesses children's sleep behaviors during the most recent typical week. Items are rated on a three-point scale: "usually" (5–7 times/week); "sometimes" (2–4 times/week); and "rarely" (0–1 time/week). The CSHQ queries key sleep-domains, yielding eight subscales and a total sleep problems score. In the current study Bestime Resistance and Sleep Anxiety subscales were used. The CSHQ and its subscales have shown adequate internal consistency ( $\alpha = 0.68$  and  $\alpha = 0.78$  in community and clinical samples, respectively) and test-retest reliability (Owens et al., 2000). In the current sample internal consistency was good for total CSHQ ( $\alpha = 0.78$ ), and adequate for the Bedtime Resistance ( $\alpha = 0.66$ ), and Sleep Anxiety ( $\alpha = 0.70$ ) subscales.

#### 2.3.3. Nightmares

The presence of child nightmares was assessed by mother and child report. Mothers' report was based on a composite of three items taken from two parent-rated checklists that include items querying the presence of children's nightmares: Item 47 on the *Child Behavior Checklist* (CBCL; Achenbach, Howell, Quay, & Conners, 1991) "nightmares", and items 16 and 20 on the *Screen for Childhood Anxiety Related Emotional Disorders* (SCARED; Birmaher et al., 1997) "My child has nightmares about something bad happening to his/her parents" and "My child has nightmares about something bad happening to him/herself". Items on

**Table 1**  
Means, Standard Deviations and Pearson Bivariate Correlations for Maternal Family Accommodation and Sleep-Related Problems in Anxious Children.

Variable	M	(SD)	1	2	3	4	5	6	7	8
<b>Mother Rated Accommodation<sup>a</sup></b>										
1 Total	16.50	(8.62)								
2 Participation	10.90	(4.92)	.23**							
3 Modification	5.60	(4.45)	.91**	.69**						
<b>Child Rated Accommodation<sup>b</sup></b>										
4 Total	12.97	(7.05)	.31**	.30**	.27**					
5 Participation	9.05	(4.29)	.26**	.27**	.19**	.91**				
6 Modification	3.96	(3.60)	.31**	.26**	.31**	.87**	.59**			
<b>Child Sleep-Related Problems<sup>c</sup></b>										
7 Total	21.84	(10.44)	.36**	.35**	.36**	.14*	.13	.11		
8 Bedtime Behavior	10.86	(6.34)	.32**	.31**	.28**	.15*	.15*	.09	.87**	
9 Sleep Behavior	10.98	(5.65)	.35**	.30**	.35**	.10	.08	.12	.85**	.51**

Note. \*p < .05, \*\*p < .01.

<sup>a</sup> Based on the Family Accommodation Scale - Anxiety (FASA).

<sup>b</sup> Based on the child rated Family Accommodation Scale - Anxiety (FASA-CR).

<sup>c</sup> Based on the parent rated Children's Sleep Habit Questionnaire (CSHQ).

CBCL and SCARED are rated 'not true', 'sometimes true', or 'very true'. Mothers who rated any of these three items "sometimes true" or "very true" were considered to have endorsed the presence of child nightmares (and were dummy-coded '1'). Mothers who responded 'not true' to all three items were considered not to have endorsed the presence of child nightmares (and were dummy-coded '0').

Children's report of nightmares was based on the composite of the two (child version) SCARED items (16 and 20). A child who responded, 'sometimes true' or 'very true' to either item was considered to have endorsed nightmares (and was dummy-coded '1'). A child who responded, 'not true' to both items was considered to not have endorsed nightmares (and was dummy-coded '0').

#### 2.3.4. Family accommodation

Maternal family accommodation was rated by both mothers and children. Mothers completed the *Family Accommodation Scale Anxiety* (FASA; Lebowitz et al., 2013). The FASA includes 13 items rated on a 5-point Likert-type scale. FASA yields an overall Accommodation score (9 items; range 0–36) as well as two subscales for Participation in symptom-driven behaviors, and Modification of family routines and schedules. FASA has good internal consistency and convergent and divergent validity and is sensitive to detecting family accommodation across the anxiety disorders (Lebowitz et al., 2013; Lebowitz, Omer, Hermes, & Scahill, 2014). In the current sample, internal consistency was excellent for the 9 accommodation items ( $\alpha = 0.88$ ), and good for the Participation ( $\alpha = 0.81$ ), and Modification ( $\alpha = 0.83$ ) subscales.

Children rated their mother's accommodation on the *Family Accommodation Scale Anxiety - Child Report* (FASA-CR; Lebowitz, Scharfstein, & Jones, 2015; Lebowitz, Scharfstein, & Jones, 2015). Items and scoring for FASA-CR parallel those for FASA. Previous research demonstrated the validity of FASA-CR as a child-rated indicator of family accommodation in children aged 6–17 (Lebowitz et al., 2015b; Lebowitz et al., 2015a, 2016). Internal consistency in the current sample was good for the nine accommodation items ( $\alpha = 0.82$ ), and adequate for the Participation ( $\alpha = 0.71$ ) and Modification ( $\alpha = 0.74$ ) subscales.

#### 2.4. Data analytic strategy

Chi square and t-tests were performed using SPSS version 24 to compare the prevalence of nightmares reported by children and mothers and to examine associations between the reports of nightmares and other study variables rated by both children and mothers. Structural equation modeling was performed using M Plus version 7.44 (Muthén & Muthén, 1998–2012; Muthén & Muthén, 1998–2012). A

variety of fit indices were examined to evaluate model fit (e.g., Chi square test of model fit, Root Mean Square Error Approximation (RMSEA) and p close, Comparative Fit Index (CFI), and Standardized Root Mean Square Residual (SRMR)). For the structural equation model, nightmares were indicated if the child and/or the mother endorsed them; family accommodation and sleep problems were based on maternal reports.

### 3. Results

Nightmares were reported in more than three quarters of the anxious children ( $N = 214$ , 77.3%). Children were significantly more likely than mothers to endorse the presence of child nightmares ( $N = 189$ , 68.2%; and  $N = 140$ , 50.5%, respectively;  $\chi^2 = 26.74$ ,  $p < .001$ ). Among children who endorsed nightmares, 61% of mothers also endorsed child nightmares. Among mothers who endorsed child nightmares, 82.9% of the children also endorsed nightmares.

Report of nightmares was not significantly associated with child sex, race, and ethnicity. Mean age was lower for children whose mothers endorsed nightmares compared to children whose mothers did not endorse nightmares (Mean age: 10.3 and 11.2, respectively;  $t = 2.22$ ,  $p < .05$ ), but was not significantly different when comparing children who endorsed nightmares and those who did not. Sleep-related problems and maternal accommodation of child anxiety symptoms were common and significantly positively associated. See Table 1 for a summary of bivariate correlations between total and subscales scores of sleep-related problems and maternal family accommodation ratings.

#### 3.1. Nightmares, maternal family accommodation, and sleep-related problems

See Table 2 for a summary of total and subscales scores of accommodation ratings and sleep-related problems in children with and without endorsement of nightmares. Mothers' ratings of their family accommodation were higher when nightmares were endorsed, compared to when nightmares were not endorsed, and the pattern held for both child and mother reports of nightmares, and for total accommodation as well as the Participation subscale of FASA.

Child ratings of maternal family accommodation on the FASA-CR did not differ significantly between children with and without endorsement of nightmares.

Mothers' ratings of child sleep problems were higher when nightmares were endorsed by either the child or the mother compared when nightmares were not endorsed, and the pattern held for total CSHQ scores as well as the Bedtime Resistance and Sleep Anxiety subscales.

**Table 2**  
Maternal Family Accommodation and Sleep-Related Problems of Anxious Children with and without Nightmares.

	Mother Reported Child Nightmares					Child Reported Child Nightmares				t-test
	Yes (n = 140, 50.5%)		No (n = 136, 49.1%)		t-test	Yes (n = 189, 68.2%)		No (n = 87, 31.4%)		
	Mean	(SD)	Mean	(SD)		Mean	(SD)	Mean	(SD)	
<b>Mother Rated Accommodation<sup>a</sup></b>										
Total	18.86	(8.21)	14.07	(8.38)	–4.77***	17.51	(8.81)	14.29	(7.78)	–2.91**
Participation	12.14	(4.45)	9.62	(5.08)	–4.38***	11.66	(4.87)	9.24	(4.67)	–3.86***
Modification	6.71	(4.56)	4.45	(4.05)	–4.34***	5.85	(4.67)	5.05	(3.90)	–1.39
<b>Child Rated Accommodation<sup>b</sup></b>										
Total	13.06	(6.74)	12.93	(7.37)	–.15	13.49	(6.57)	11.93	(7.92)	–1.71
Participation	9.20	(4.11)	8.89	(4.48)	–.60	9.31	(3.97)	8.46	(4.89)	–1.55
Modification	3.89	(.30)	4.04	(.32)	.37	4.17	(3.51)	3.51	(3.76)	–1.41
<b>Child Sleep-Related Problems<sup>c</sup></b>										
Total	26.10	(10.04)	17.54	(9.01)	–6.55***	23.26	(9.38)	18.99	(9.38)	–2.89**
Bedtime Behavior	12.80	(6.19)	8.89	(5.89)	–4.75***	11.56	(6.50)	9.47	(5.82)	–2.30*
Sleep Behavior	13.26	(5.35)	8.65	(4.98)	–6.54***	11.71	(5.78)	9.51	(5.11)	–2.72**

Note. \*p < .05, \*\*p < .01, \*\*\* p < .001.

<sup>a</sup> based on the Family Accommodation Scale - Anxiety (FASA).

<sup>b</sup> based on the child rated Family Accommodation Scale - Anxiety (FASA-CR).

<sup>c</sup> based on the parent rated Children's Sleep Habit Questionnaire (CSHQ).

### 3.2. Mediation model

Structural equation modeling was used to examine the hypothesis that family accommodation mediates the impact of child nightmares on child sleep-related problems. We controlled for age in the model, based on the significant links between child age, accommodation, and child report of nightmares, in the current sample. The presence of nightmares (based on either parent or child report, or both) was dummy coded (0 = no endorsement of nightmares; 1 = endorsement of nightmares by child and/or mother, respectively), and as such the path from child nightmares to maternal family accommodation represents a mean difference. For the accommodation measure we used the mother-rated FASA, because mothers' accommodation ratings were significantly higher when children or mothers endorsed the presence of child nightmares. The interaction between nightmares and accommodation was tested but was not a significant predictor of sleep-related problems, and thus was not included in the model (Kline, 2016; MacKinnon, 2008). Analyses were conducted using the maximum-likelihood method in Mplus (Version 7.4).

Fig. 1 illustrates the proposed model with the standardized and unstandardized path coefficients, in parentheses, resulting from the analysis. Fit indices indicated excellent model fit: Chi Square = .48, p = .49; standardized root-mean-square residual (SRMR) = .013; root-mean-square error of approximation (RMSEA) = .01, p-close = .6.

The path from child nightmares to maternal family accommodation was statistically significant (regression coefficient = 2.89, CR = 4.3, p < .001) indicating that children with reports of nightmares were more heavily accommodated by their mothers, relative to children without reports of nightmares. The path from accommodation to child sleep-related problems was also statistically significant (regression coefficient = .27; CR = 3.2, p = .001).

Total effect of nightmares on sleep-related problems was 2.76 (standardized effect = .22, p = .001). The indirect effect of nightmares on sleep-related problems via maternal family accommodation was 0.8 (standardized effect = .06, p = .008), supporting the hypothesis that the impact of nightmares on child sleep-related problems is partially mediated through increased family accommodation.

## 4. Discussion

This is the first study of family accommodation and nightmares in clinically anxious children and provides the first empirical support for

the role of accommodation in nightmares and other sleep-related problems (Peterman et al., 2015, 2016; Storch et al., 2007, 2008). As hypothesized, mothers of anxious children with reports of nightmares reported more sleep-related problems in their child compared to mothers of anxious children without reports of nightmares, and the finding held regardless of whether the child or the mother endorsed the presence of nightmares. Mothers of anxious children with reports of nightmares also reported providing more accommodation of the child's anxiety, compared to mothers of anxious children without reports of nightmares. These findings are consistent with previous findings linking sleep-related problems to nightmares (Schredl et al., 2009a; Krakow, Tandberg, Scriggins, & Barey, 1995; Reynolds & Alfano, 2016; Schredl et al., 2009b) and to family accommodation (Peterman et al., 2016).

We find it interesting that while mother's ratings of their accommodation were higher when nightmares were endorsed, the children's ratings of their mothers' accommodation were not linked to endorsement of nightmares. One possible explanation is that mothers included more nightmare-related accommodating behaviors in their ratings, than did children (e.g., reassuring a child who has woken up from a nightmare). The fact that mother and child ratings of maternal accommodation were more alike when the child was not reported to have nightmares, and more discrepant when they were (see Table 2), would seem to support this possibility. As to why mothers would include more nightmare-related behaviors in their accommodation ratings than children, it may be that children do not consider their nightmares symptoms of anxiety, or that they do not find the parental behaviors as helpful as other accommodations, or the child may not even remember many of these parental behaviors, which can occur when the child wakes at night and is sleepy. More research is required to further explore this question, but the different patterns of associations between child and mother reports of maternal family accommodation and nightmares underscore the importance of utilizing multiple informants when assessing childhood anxiety and related factors, such as accommodation, nightmares and sleep-related problems (Lebowitz et al., 2015b; Karp et al., 2017; Lebowitz et al., 2015a; Peterman et al., 2015; Reynolds & Alfano, 2016).

Results of the structural equation model support the hypothesized mediational role of family accommodation in linking nightmares to other sleep-related problems. Results fit our theoretical model by which anxious children's nightmares can entangle parents in increased family accommodation, and in turn predict more overall sleep-related problems. This finding builds on recent research linking family

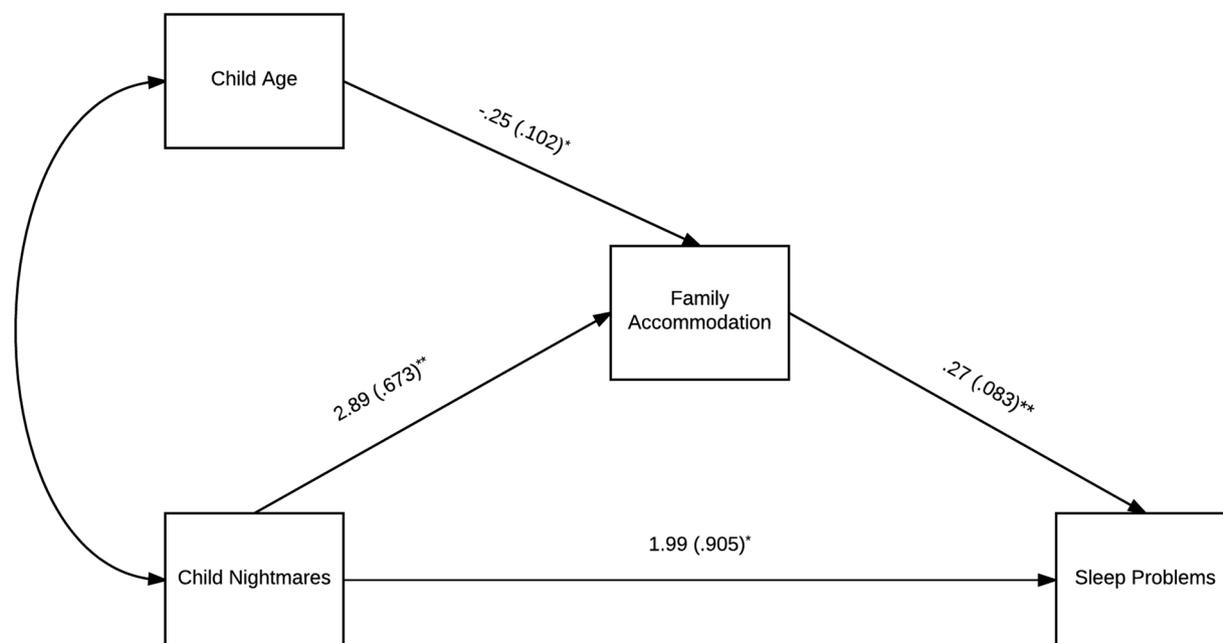


Fig. 1. Structural equation model (N = 277) with standardized path coefficients and unstandardized path coefficients in parentheses. \* =  $p < .01$ .

accommodation to child sleep-related problems (Peterman et al., 2016). One important implication of the theoretical model is that when nightmares are endorsed in anxious children there is greater risk of additional sleep-related problems if parents accommodate. The increased sleep-related problems can contribute to more impairing anxiety (Peterman et al., 2015; Reynolds & Alfano, 2016), with the potential for a negative cycle of anxiety, nightmares, accommodation, and sleep disturbance, leading to higher and higher levels of overall impairment.

One implication for treatment is that in cases of anxious children who also experience nightmares, reducing maternal accommodation may be an important treatment goal. Parent-based treatments for child anxiety that focus on reducing family accommodation have been developed and show promise in early clinical trials (Lebowitz, 2013; Lebowitz, Omer et al., 2014).

The current results should be interpreted in light of certain limitations. First, the sample was relatively homogenous in terms of race and ethnicity and focused on clinically anxious children. Further research is necessary to establish whether the pattern of results reported here are generalizable to other more diverse samples, including non-clinical populations. Second, we included a wide age range (6–17). The presence of nightmares and other sleep-related problems has been shown to vary across development (Muris et al., 2000; Peterman et al., 2015). The use of a heterogeneous age range and the inclusion of age in our structural equation model allowed us to maximize our sample size and to examine the role of age for the relations between reports of nightmares, maternal family accommodation and other sleep-related problems in this preliminary study. Third, parental data was attained using mother ratings only, as mothers have been the focus of most previous research on childhood anxiety (McLeod, Wood, & Weisz, 2007; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Thus, we do not know whether a similar pattern of findings would emerge for fathers. Fourth, the study utilized cross-sectional data and thus could only test whether the proposed mediational model is a good fit for the data but cannot confidently establish the causal role of accommodation. The excellent fit results provide initial proof-of-concept for the theoretical model and point to a robust result, but longitudinal data are required to confirm the theoretical model, or to guide the development of alternative models. Another limitation relates to the subjective, multi-informant and retrospective assessment of nightmares, which may have yielded

higher endorsement rates relative to other assessment strategies. These limitations notwithstanding, the current study presents novel and important evidence for the role of maternal accommodation in nightmares and sleep-related problems in anxious children.

In conclusion, child nightmares and other sleep-related problems are commonly reported in anxious children and are associated with greater impairment and additional risks. Using a multi-informant approach integrating both mother and child reports, we found that maternal family accommodation was associated with the reports of nightmares and mediated the impact of nightmares on other sleep-related problems in anxious children. Results of this study highlight the importance of considering parental behaviors, such as accommodation, when assessing and treating children with anxiety disorders and nightmares.

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