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Control Over Anxiety and Dispositional Coping Tendencies Are Associated With Presleep Arousal Among Children Referred for Anxiety Problems

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Anxious youth typically experience sleep-related difficulties, but little is known about the role children's coping and perceived control over anxiety may play in these relations. We examined children's perceived levels of control over external anxiety-provoking events and internal anxious emotional reactions, as well as two dispositional coping tendencies (avoidant, support-seeking), and whether these were associated with anxious children's ($N = 86$) presleep arousal. Low perceived control over anxiety was significantly associated with high levels of presleep arousal. For children with low perceived control, higher avoidance was associated with greater presleep arousal, whereas lower avoidance was associated with lower presleep arousal levels. Findings suggest that efforts to avoid stressful life events may contribute to presleep arousal, especially under conditions where anxious arousal seems uncontrollable.

There is a consistently growing body of research showing that sleep problems among anxious children and adolescents are highly prevalent, with as many as 90% of anxious youth suffering from sleep difficulties (Alfano, Ginsburg, & Kingery, 2007; Chase & Pincus, 2011). These sleep problem rates are alarming because anxiety disorders are among the most common psychiatric problems in youth (Costello, Egger, & Angold, 2005) with lifetime prevalence rates as high as 31% (for any anxiety disorder) and individual lifetime disorder diagnostic rates as high as 19.3% (Merikangas et al., 2010). Moreover, presleep arousal appears to be one of the most common sleep problems among anxious youth (Alfano, Pina, Zerr, & Villalta, 2010; Cousins et al., 2011; Gregory, Willis, Wiggs, & Harvey, 2008), consisting of cognitive arousal in the form of persistent worries and rumination when trying to sleep at night, and somatic arousal, such as restlessness, trouble breathing, and body aches or pains preceding sleep. When it comes to the relations among problematic anxiety and sleep, data show that disturbances in sleep appear to temporally precede anxiety (Gregory & O'Connor, 2002; Stein, Mendelsohn, Obermeyer, Amromin, & Benca, 2001), co-occur with anxiety (e.g., Alfano et al.,

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2010; Forbes et al., 2008; Hudson, Gradisar, Gamble, Schniering, Rebelo, 2009), and bidirectionally relate to anxiety (sleep problems leading to increases in anxiety, anxiety disrupting sleep; Cousins et al., 2011; Doane, Gress-Smith, & Britenstein, 2014; Kelly & El-Sheikh, 2014).

Based on the research literature, presleep arousal is likely a problem for anxious youth for several interrelated reasons. First, anxiety is characterized by worry, intrusive thoughts, and ruminative thinking, which may occur at bedtime and delay sleep onset (Alfano et al., 2010; Beck & Emery, 1985; Daleiden & Vasey, 1997; Gregory et al., 2008; Tang & Harvey, 2004; Wicklow & Espie, 2000). Second, anxious children exhibit heightened perisleep onset cortisol levels (+/- 2 hr; Forbes et al., 2006), which may suggest increased physiological arousal at bedtime. Third, poor sleep may result in alterations in sympathetic nervous system (SNS) arousal with cascading effects on dysregulation through enhanced responsivity toward threat or anxiety-provoking situations (Yoo, Gujar, Hu, Jolesz, & Walker, 2007). Building on this knowledge, we sought to expand understanding of anxiety-presleep arousal relations by examining whether children's coping strategies and perceived control (or rather lack of control) over anxiety are implicated in sleep difficulties.

In keeping with Lazarus and Folkman's (1984) model, coping is broadly defined as cognitive or behavioral strategies used to handle stressful life events. We focused explicitly on support-seeking and avoidant coping, as these dispositional coping strategies are common among anxious children and conceptually related to sleep problems among anxious youth. Support-seeking coping entails behaviors aimed at gaining support and emotional validation relevant to problems and associated solutions, whereas avoidant coping entails efforts aimed at changing arousal via distraction or removing oneself from situations (Barlow, 2000; Kendall, 1992; Mendlowitz et al., 1999). Focusing on presleep arousal in particular, avoidant coping could be related to delayed sleep onset because it is thought to maintain worry and ruminative thinking among anxious children (Barlow, 2000; Kendall, 1992; Mendlowitz et al., 1999). Support-seeking coping also could be related to sleep delay because anxious children typically rely on others (mostly parents) to regulate fear arousal (La Greca & Lopez, 1998), including during nighttime (e.g., behaviors typical of separation anxiety such as separation distress at bedtime). Turning to anxiety control, and based on Weems and Silverman's (2006) model, our focus was on perceived control over internal anxious arousal (e.g., taking charge of anxious feelings) and external anxiety-eliciting events (e.g., ability to control or handle anxiety-ridden situations; Weems, Silverman, Rapee, & Pina, 2003). Correspondingly, because low levels of perceived control over anxiety increase attention toward emotional and cognitive states (Barlow, 2000; Chorpita, Brown, & Barlow, 1998; Hofmann, 2005; Rapee, 1997), low perceived control could increase attention to bedtime ruminative thoughts or result in low perceptions of sleep abilities, thereby interfering with initiating sleep (e.g., perceived control over anxiety has been linked to a lowered ability to down-regulate heightened emotional states; Scott & Weems, 2014).

Together, children's coping style and perceived control over anxiety may interact to exacerbate sleep difficulties. Theoretically, at low levels of perceived control, support-seeking coping might be associated with fewer difficulties initiating sleep (assuming support resources are available); at low levels of perceived control, greater use of avoidant coping strategies might be associated with more difficulties initiating sleep. Given these possibilities, and the fact that these relations have not been systematically explored among anxious children (or otherwise), we examined associations among coping, perceived control, and children's presleep arousal.

This study focused on presleep arousal because it not only is one of the most prevalent sleep problems in anxious youth, but is also thought to convey a general risk for poor sleep quality and emotional difficulties (Broman & Hetta, 1994; Gregory et al., 2008). In this study, we measured presleep arousal via self-report, which is consistent with past published studies (e.g., Alfano et al., 2010). Also, consistent with past work, our assessment of presleep arousal included cognitive (e.g., presleep thoughts) and somatic arousal facets of presleep arousal (presleep restlessness, trouble breathing, body aches or pains; Gregory et al., 2008; Nicassio, Mendlowitz, Fussell, & Petras, 1985). To study the relations among the focal variables (coping, anxiety control, presleep arousal), we relied on a sample of children referred for anxiety problems. This is a methodological strength, given support for the empirically based and clinically relevant linkages between heightened anxiety and sleep problems (Alfano et al., 2010; Alfano, Reynolds, Scott, Dahl, & Mellman, 2013; Beck & Emery, 1985; Daleiden & Vasey, 1997; Gregory et al., 2008; Tang & Harvey, 2004; Wicklow & Espie, 2000). However, a caveat relevant to using a sample of children referred for anxiety problems is that presleep arousal and physiological anxiety symptoms overlap. For this reason, our analyses included an index of physiological anxiety as a covariate in all models.

For this research, we carefully considered the possible role child age, gender, and ethnicity could play in the relations among children's strategies for coping with problem situations, perceived control over anxiety, and sleep. Based on our evaluation of the literature, we examined the relations among the focal variables with and without age, ethnicity, and sex as individual covariates for several reasons. First, our past research and the work of others has demonstrated that younger children experience more sleep difficulties than older youth, including more frequent nighttime waking and bedtime resistance (Owens, Spirito, McGuinn, & Nobile, 2000; Pina, Silverman, Alfano, & Saavedra, 2002; Alfano Beidel, Turner, & Lewin, 2006; Alfano et al., 2007). Adolescents appear to display more shifts in sleep patterns and functioning (Carskadon, Viera, & Acebo, 1993; Dahl & Lewin, 2002), making them potentially more vulnerable to specific sleep disorder symptoms; albeit some found no differences in presleep arousal as a function of age (Alfano et al., 2010). Second, we have found that Hispanic/Latino children had shorter sleep duration (fewer hours) compared to Caucasians (Alfano et al., 2010), but no other studies have retested this possibility. Third, with regard to gender, greater sleep anxiety and bedtime resistance has been found for girls compared to boys (Alfano et al., 2010), but no gender differences in levels of youth global sleep problems were found in Alfano, Zakem, Costa, Taylor, and Weems (2009) or Alfano and colleagues (2007).

METHOD

Participants

Data were drawn for secondary analysis from a sample of 86 children (ages 6 to 16 years old, 47.9% girls, 52.1% Hispanic/Latino, mostly of Mexican-origin) referred for anxiety by school counselors (54.1%), newspaper advertisements (9.3%), Internet (5.6%), community psychologists or mental health professionals (5.6%), pediatricians (9.0%), or other sources (16.4%; friends, radio advertisements, and community presentations about child anxiety). Based on the Anxiety Disorders Interview Schedule for DSM-IV Child and Parent Versions (ADIS-C/P;

Silverman & Albano, 1996), 72 children met criteria for an anxiety disorder diagnosis (16 separation anxiety disorder, 18 social anxiety, 14 specific phobia; 2 panic with and without agoraphobia, 15 generalized anxiety disorder, 6 obsessive compulsive disorder, and 1 posttraumatic stress disorder), 71% had at least one comorbid anxiety disorder diagnosis, 41% had at least one comorbid disruptive disorder diagnosis, and 17% had at least one co-occurring depressive diagnosis. A total of 14 met criteria for anxiety disorder symptoms but no diagnosis (e.g., the impairment or 6-month criterion was not reached). Data from children with diagnoses and children with symptoms but no diagnoses were included in these analyses as symptomatic but undiagnosed children and children with disorder diagnoses are typically more similar than different in terms of level of functioning and more representative of those presenting to community mental health care (Angold, Costello, Farmer, Burns, & Erkanli, 1999; Pina, Zerr, Villalta, & Gonzales, 2012).

In terms of sleep problems, and based on the Children's Sleep Habits Questionnaire (CSHQ; Owens, Spirito, & McGuinn, 2000), 74% of the children were above the clinical cutoff. Subscale scores were similar to those reported in clinical sleep-disordered samples: bedtime resistance ($M = 9.35$, $SD = 3.32$), sleep onset delay ($M = 1.76$, $SD = .80$), sleep duration ($M = 4.54$, $SD = 1.69$), sleep anxiety ($M = 7.18$, $SD = 2.43$), night waking ($M = 4.19$, $SD = 1.64$), parasomnias ($M = 9.04$, $SD = 2.14$), sleep-disordered breathing ($M = 3.45$, $SD = 1.18$), and daytime sleepiness ($M = 13.49$, $SD = 3.66$). Finally, 24% of children were receiving drug therapy ($n = 16$ psychotropic medications: 9 SSRIs, 3 stimulant ADHD medications, and 4 SSRIs plus ADHD stimulant medications; $n = 5$ prescription nonpsychotropic medications: 3 medications for stomach problems, 1 asthma medication, and 1 allergy medication).

Measures

The *Children's Coping Strategies Checklist* (CCSC; Ayers et al., 1996; Sandler, Tein, & West, 1994) is designed to assess children's dispositional coping tendencies. For this study, support and avoidant strategies were measured and examined. Children were asked to rate how often they used each strategy on a four-point scale ranging from 1 (never) to 4 (most of the time) to deal with a problem. Higher scores indicate a more frequent use of that coping strategy. Internal consistency estimates based on this sample are $\alpha = .80$ for avoidance coping and $\alpha = .70$ for support-seeking coping. Confirmatory factor analyses support the avoidant and support strategies subscale structure (Gonzales, Tein, Sandler, & Friedman, 2001).

The *Anxiety Control Questionnaire for Children* (ACQ-C; Weems et al., 2003) is designed to assess children's perceived levels of control over external anxiety-provoking events and internal anxious emotional reactions. Children were asked to rate the extent to which they agree with each statement on a five-point scale, ranging from 0 (none) to 4 (very, very much), and higher scores indicate greater perceived control over anxiety. The internal consistency estimate based on this sample is $\alpha = .86$ (the 10-item version was administered). Concurrent validity with measures of general anxiety (RCMAS; Revised Child Manifest Anxiety Scale) has been demonstrated ($r = -.47$; Weems et al., 2003).

The *Presleep Arousal Scale for Children* (PSAS-C; Nicassio et al., 1985) assesses children's general levels of cognitive and physiological arousal prior to falling asleep at night. Children were asked to rate the frequency of their symptoms on a five-point scale ranging from 1 (not at all) to 5 (all the time). Higher scores indicate more presleep arousal symptoms. The internal

consistency estimate based on this sample was $\alpha = .92$. In terms of concurrent validity, PSAS-C scores were associated with sleep disturbances in Gregory et al. (2008).

The *Physiological Hyperarousal Scale for Children* (PH-C; Laurent, Catazaro, & Joiner, 2004) assesses children's physiological anxiety symptoms. Children were asked to rate how often they experienced each symptom over the past two weeks, using a five-point scale ranging from 1 (very slightly or not at all) to 5 (extremely). Higher scores indicate more physiological hyperarousal symptom severity. The internal consistency estimate based on this sample was $\alpha = .89$ and concurrent validity with physiological subscales of the Revised Children's Manifest Anxiety Scale (RCMAS) has been demonstrated ($r = .56$; Laurent et al., 2004).

The *Children's Sleep Habits Questionnaire* (CSHQ; Owens, Spirito, & McGuinn, 2000) is designed to assess sleep-related difficulties in children. Parents were asked to rate the frequency of children's sleep habits over the past week on a three-point scale ranging from 1 (rarely, 0–1 times per week) to 3 (usually, 5–7 times per week). Higher scores indicate more sleep problems. The internal consistency estimate for the total score based on this sample was $\alpha = .82$ and this scale has been shown to identify children with clinically relevant sleep problems (Owens et al., 2000).

RESULTS

Descriptive statistics and correlations for all variables of interest are presented in Table 1. No variables exceeded conventional cutoffs of $|2|$ for skewness and $|7|$ for kurtosis (West, Finch, & Curran, 1995). Presleep arousal was significantly correlated with physiological hyperarousal symptoms and anxiety control, and these correlations ranged between $r = -.38$ and $r = .80$. As such, physiological hyperarousal scores were used as a covariate in the primary analyses. For the primary analyses, a series of hierarchical regressions were run to examine associations from coping style, anxiety control, and an anxiety control by coping style multiplicative interaction term on presleep arousal. Separate models were run for support-seeking and avoidant coping.

TABLE 1
Means, Standard Deviations, and Correlations for Presleep Arousal Levels, Perceived Control Over Anxiety, and Coping

	<i>M</i> (<i>SD</i>)	1.	2.	3.	4.	5.
1. Presleep arousal	31.74 (13.82)	—				
2. Anxiety control	18.60 (9.80)	-.28*	—			
3. Avoidant coping	21.56(5.88)	.11	.36**	—		
4. Support-seeking coping	16.87(5.17)	.28*	.38**	.56**	—	
5. Physiological hyperarousal	33.01 (12.96)	.80**	-.13	.13	.18	—

Note. * $p < .05$, ** $p < .001$. Presleep arousal was measured using the Presleep Arousal Scale for Children (Nicassio et al., 1985; Alfano et al., 2010), anxiety control was measured using the Anxiety Control Questionnaire for Children (Weems et al., 2003; 10-item version), coping strategies were measured using the Children's Coping Strategies Checklist (Ayers et al., 1996; Sandler et al., 1994), and physiological hyperarousal was measured using the Physiological Hyperarousal Scale for Children (Laurent, Catazaro & Joiner, 1995).

Physiological arousal was entered as a covariate in step 1 of each model. Focal independent variables in step 2 of the model were centered prior to creating multiplicative interaction terms (Cohen, Cohen, West, & Aiken, 2003). Following Cohen et al. (2003), the significant interaction was probed by calculating simple slopes at levels above and below one standard deviation from the mean of the Anxiety Control Questionnaire for Children (ACQ-C; $M = 18.60$, $SD = 9.80$). Models were run with and without age, sex, ethnicity, and medication use as covariates, but their inclusion as covariates did not change the results significantly. Findings from models without the age, sex, ethnicity, and medication use covariates are reported herein.

As shown in Table 2, both models accounted for a significant proportion of the variance in presleep arousal. For the model examining avoidant coping [$R^2 = .71$], presleep arousal was significantly associated with concurrent ACQ [$b = -.28$, $p = .005$], and the ACQ x avoidant coping interaction [$b = -.03$, $p = .03$]. There was no main effect for avoidant coping on presleep arousal [$b = .13$, $p = .43$]. The interaction accounted for a significant proportion of the variance in presleep arousal above and beyond the other independent variables in the model [$R^2_{\Delta} = .02$, $F(1,71) = 5.18$, $p = .03$]. Evaluation of simple slopes showed that, for children with low perceived anxiety control ($-1 SD$ from the mean), avoidant coping was positively associated with presleep arousal [$b = .47$, $t = 2.08$, $p = .04$], such that use of more avoidant coping was associated with more presleep arousal, and less avoidant coping was associated with less presleep arousal. For children with high ($+1 SD$ from the mean) and average levels of perceived control over anxiety, avoidant coping was not significantly associated with concurrent presleep arousal [high ACQ: $b = -.20$, $t = -.92$, $p = .36$; average

TABLE 2
Findings From Regression Analyses With Anxious Children's Presleep Arousal as the Outcome

	Presleep arousal			ΔR^2
	β	<i>t</i> value	<i>p</i> value	
Model 1				
Step 1				
Physiological Hyperarousal	.804***	11.36	< .001	
Step 2				
Anxiety Control	-.285**	-2.89	.005	
Avoidant Coping	.131	.782	.436	
Anxiety Control x Avoidant Coping	-.035*	-2.27	.026	.021
Model 2				
Step 1				
Physiological Hyperarousal	.772***	11.07	< .001	
Step 2				
Anxiety Control	-.367***	-3.75	< .001	
Support Coping	.542**	2.77	.007	
Anxiety Control x Support Coping	-.021	-.123	.221	.006

Note. In regressions examining presleep arousal separately by cognitive (e.g., presleep thoughts) and somatic arousal facets (presleep restlessness, trouble breathing, body aches or pains) as independent variables, the pattern of findings remained as shown for support-seeking coping and were no longer significant for avoidant coping. * $p < .05$, ** $p < .01$, *** $p < .001$. Models were run with and without age, sex, ethnicity, and medication use (dummy coded) as covariates, and their inclusion did not significantly change the pattern of results.

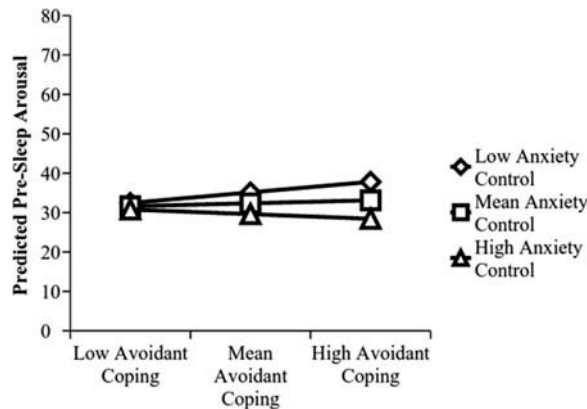


FIGURE 1 Simple slopes demonstrating relations between avoidant coping and presleep arousal at levels of anxiety control.

ACQ: $b = .14$, $t = .78$, $p = .44$; see Figure 1]. For the model examining support-seeking coping [$R^2 = .85$], presleep arousal was significantly negatively associated with concurrent ACQ [$b = -.36$, $p = .003$] and positively associated with concurrent support-seeking coping [$b = .54$, $p = .007$]. The ACQ x support-seeking interaction was not significantly associated with presleep arousal [$b = -.02$, $p = .22$].

DISCUSSION

This research augments understanding of the clinical relations between child anxiety and sleep problems through the examination of conceptually relevant associations with youths' presleep arousal, a prevalent sleep problem in anxious children (Alfano et al., 2010; Gregory et al., 2008). When examining children's perceived levels of control over external anxiety-provoking events and internal anxious emotional reactions as well as children's dispositional coping tendencies (avoidant, support-seeking), our findings showed interesting relations to self-reported subjective presleep arousal. In particular, low perceived control over anxiety was significantly related with high levels of presleep arousal. For children with low perceived control, higher avoidance was associated with greater presleep arousal, whereas lower avoidance was associated with lower presleep arousal levels. From these findings, we believe low perceived control reflects the cumulative effects of failed attempts at directing attention away from the emotional and cognitive states of anxiety that result in sleep-onset delay. Furthermore, it might be the case that avoidant dispositional coping is implicated in the relation between anxiety control and presleep arousal because concentrated efforts to avoid or suppress negative thoughts often has the paradoxical effect of increasing the frequency and intensity of the targeted thought(s) and has been suggested to heighten the idea that anxiety is uncontrollable (Alfano et al., 2009; Ginsburg, Lambert, & Drake, 2004; Rapee, Craske, Brown, & Barlow, 1996; Weems et al., 2003; Weems & Silverman, 2006).

Our findings also indicated that presleep arousal levels were positively associated with children's support-seeking dispositional coping tendencies, even though seeking and using sources of social support is often related to adaptive functioning (Berman, Kurtines, Silverman, & Sarafini, 1996; Erath, Flanagan, Bierman, & Tu, 2010; Levitt et al., 2005). For some anxious children, however, support seeking might be related to presleep arousal through negative reinforcement of bedtime fears and concerns, as it might reflect excessive reassurance seeking. This is possible since the type of reassurance anxious children receive from parents may lead to greater anxiety over time. For instance, parents of anxious children have been shown to be more likely to respond to their children with intrusive behaviors (Hudson, Comer, & Kendall, 2008) and encourage or reward avoidant responses to anxiety-eliciting situations (Dadds, Barrett, Rapee, & Ryan, 1996), both of which enhance anxious arousal and could even relate to greater presleep arousal at night. It also is possible that seeking constant reassurance from family members, especially at bedtime, results in disruptions in family routines and restful sleep among caregivers, further taxing support resources (parents, older siblings; Alfano et al., 2007). In this context of disruptions and taxed resources, support could become unavailable (some parents may become nonresponsive) when the child experiences nighttime distress.

Together, despite our small sample size, results are robust for several reasons. First, the pattern of findings did not vary when controlling for child characteristics (age, sex, ethnicity or race, medication use) and concur with initial findings by Alfano and colleagues (2007) and Alfano and colleagues (2009). Second, we found that presleep arousal was significantly correlated with our measure of physiological arousal, as conceptually expected (Tang & Harvey, 2004). Third, our significant findings resulted from models that included physiological arousal as a covariate, eliminating significant construct overlap, and suggesting these facets of coping and control are related to presleep arousal above and beyond specific physiological anxiety disorder symptoms. Fourth, we used a sample of anxious youth with heterogeneous anxiety disorders rather than youth mostly diagnosed with separation anxiety disorder, the disorder typically associated with bedtime sleep difficulties (Alfano et al., 2007). Fifth, our self-report measurement approach is robust given new empirical data showing that beliefs about poor sleep appear to be more clinically meaningful and may even be more relevant than objective indicators of sleep quality for anxious youth (Alfano, Patriquin, & De Los Reyes, 2015). Despite strengths, this research is limited in that inferences about causality and directionality cannot be made. It is possible that presleep arousal is influencing coping and anxiety control, such that presleep arousal could lead to shorter sleep duration, which in turn disrupts emotion regulatory systems and efficient use of coping strategies. Additional measures of subjective (e.g., parent and child reports of sleep quality and quantity) and objective sleep (e.g., actigraphy) could help clarify the associations found herein. As noted, subjective ratings of sleep difficulty are not always corroborated by objective measures among anxious youth, for whom subjective reports of cognitive and physiological symptoms prior to sleep onset may be most clinically meaningful (Alfano et al., 2015). Thus, research focusing on how coping relates to objective as well as subjective measures of sleep problems could help shed light on temporal predictors of the various aspects of sleep in anxious children. Turning to avenues for future research, it would be important to examine whether our findings replicate, and whether knowledge about the presleep arousal–anxiety relations can be expanded. For example, the influences of coping and anxiety control may vary for different types of anxiety disorders. Illustratively, perceived control over anxiety at separation could be associated with presleep arousal, given that arousal when

separated from parents would be inherent to bedtime for most children. While theoretically sound, a caveat is that typical comorbidity rates among the anxiety disorders are high (64%–79%; Last, Strauss, & Francis, 1987; 71% in the current sample), which limits empirical validation of disorder-driven variations in sleep problems. Another future research avenue could be to employ profile analyses to help identify typologies of dispositional coping tendencies that relate to control and explain day-to-day patterns of presleep arousal as well as its effects, if any, on objective sleep measures (Aldridge & Roesch, 2008). Future research also should carefully consider the role puberty may play in relations among focal variables examined in this study. In fact, we know that shifts in the sleep-wake cycle begin during puberty (Carskadon, Acebo, & Jenni, 2004; Dahl, 1996; Dahl & Lewin, 2002). These shifts sometimes coincide with alterations in neurological systems responsible for regulating affect in general, and possibly anxiety in particular (Casey, Jones, & Hare, 2008). As such, relations among coping, anxiety control, and presleep arousal may be moderated by pubertal status.

In terms of clinical application, it would be important to determine whether our findings have prevention or treatment implications for targeting sleep in anxious youth. Preliminary findings suggest that cognitive-behavioral interventions for anxiety in children may be associated with significant reductions in subjective reports of sleep-related disturbances, which may even be more important than objective sleep indicators for anxious youth (Alfano et al., 2015; Hudson et al., 2009) and there is some evidence indicating that cognitive-behavioral interventions targeting child sleep are promising (see Clementi & Alfano, 2014; Paine & Gradisar, 2011). Moving forward, however, there is a need to clarify how sleep-related difficulties and the factors that are associated with sleep problems could be specifically targeted with intervention. For instance, anxiety control and the dispositional coping tendencies examined herein could mediate intervention response, and, if so, prove helpful if specifically targeted during intervention. Indeed, some research suggests that enhancing anxiety control beliefs and positive coping is associated with better anxiety response following child intervention (Hogendoorn et al., 2014; Lau, Chan, Li, & Au, 2010) and thus it might be important for future research to establish if changes in control and coping mediate program response along children's sleep indicators.

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