Journal of Adolescence 68 (2018) 87–93

Contents lists available at ScienceDirect

Journal of Adolescence

journal homepage: www.elsevier.com/locate/adolescence

Sleep it off: Bullying and sleep disturbances in adolescents

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ARTICLE INFO

Keywords:
Bullying
Aggression
Victimization
Sleep disturbances
Adolescents

ABSTRACT

Introduction: Involvement in bullying is associated with negative health outcomes for adolescents. Recent studies suggest that bullying is related to sleep disturbances. The purpose of this study was to examine differences in sleep disturbances (bedtime fears, insomnia, parasomnias) between victims, bullies, and youth not involved in bullying, as well as to explore differences across various types of bullying behavior (verbal, physical, social, cyber).

Methods: High school students ages 14–17 years (mean = 16.0) in the United States (n = 885; 57.3% female; 87.5% White) completed The Children's Report of Sleep Patterns and questions about involvement in verbal, physical, social and cyberbullying.

Results: Differences in all three sleep disturbances were found across groups, with victims and bully-victims reporting more sleep disturbances than bullies and youth not involved. A similar pattern was found across all bullying types, with more sleep disturbances for victims and bullyvictims.

Conclusions: The results of this cross-sectional study highlight the importance of screening youth for sleep disturbances that may indicate daytime issues with bullying or victimization, as well as the need for longitudinal studies to elucidate potential pathways between sleep and bullying/victimization.

Aggressive behavior among adolescents is a persistent problem that can lead to physical and psychological harm for those involved. Across the United States, 20.8% of children ages 12–18 years reported being bullied at school during the 2014-15 academic year (Lessne & Yanez, 2016). The most commonly reported form of bullying was verbal (being made fun of, called names, or insulted), followed by social (subject of rumors), but students also report being victims of physical bullying, threats, cyber bullying and having damage done to their property. Involvement in bullying can lead to internalizing and externalizing behaviors, as well as many associated health consequences. Sleep disturbances have recently been explored as a potential factor that may contribute to, or be a consequence of, involvement in bullying. The objective of this study was to compare the frequency of specific sleep disturbances (bedtime fears, insomnia, and parasomnias) between bullies and victims.

According to the classical definition by Olweus (1978), bullying is an intentional aggressive act that is repeatedly carried out on a victim in a situation in which there is an imbalance of power. Victims of bullying have been found to suffer from anxiety, post-traumatic stress, depression, and suicide ideation (Klomek et al., 2009; Matthiesen & Einarsen, 2004; Nielsen, Tangen, Idsoe, Matthiesen, & Magerøy, 2015) as well as somatic conditions such as headaches and stomach aches (APA, 2000; Gini, Pozzoli, Lenzi, & Vieno, 2014; Løhre, Lydersen, Paulsen, Mæhle, & Vatten, 2011). Bullies also suffer from anxiety, depression and suicidal ideation, and those who are involved both as aggressors and victims appear to suffer most severely (Hymel & Swearer, 2015; Kowalski & Limber, 2013; Smokowski, Evans, & Cotter, 2014; Turner, Exum, Brame, & Holt, 2013).

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https://doi.org/10.1016/j.adolescence.2018.07.012
Received 11 January 2018; Received in revised form 21 July 2018; Accepted 23 July 2018

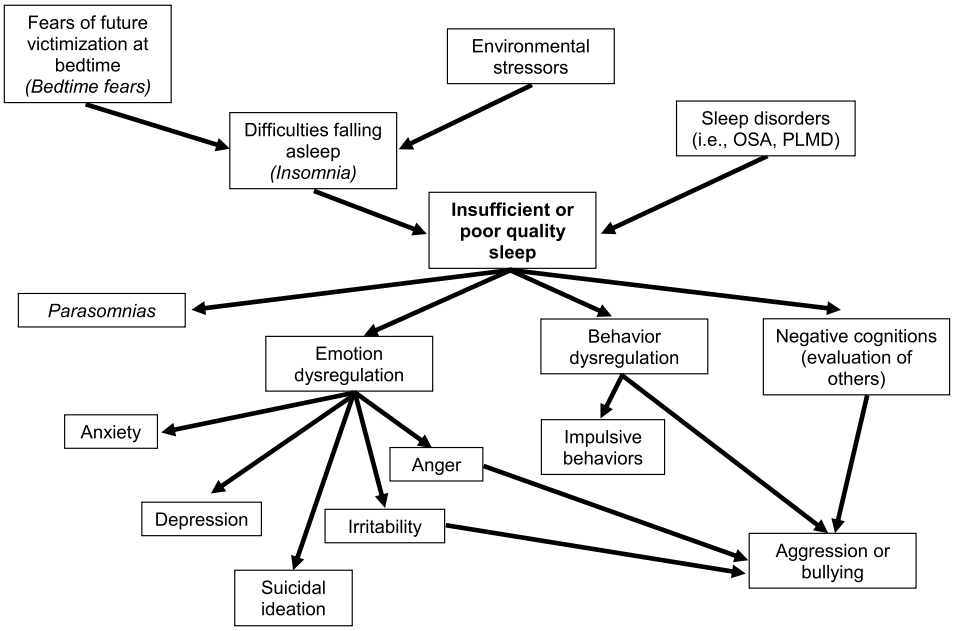

Fig. 1. Potential pathways between sleep, negative outcomes of being a victim of bullying, and aggression or bullying.

Sleep has been associated with negative psychosocial outcomes commonly seen among both bullies and victims. Both objective sleep duration and subjectively reported sleep problems (e.g., trouble sleeping, bedtime worries) have been linked to stress, anxiety, depression and greater risk for attempted suicide in adolescents (Alfano, Zakem, Costa, Taylor, & Weems, 2009; Doane & Thurston, 2014; Greenfield, Lee, Friedman, & Springer, 2011; Liu, 2004). There is not a clear, direct pathway between sleep and negative outcomes for either bullies or victims, however a review of the literature highlights the associations, as well as indirect pathways, as seen in Fig. 1. This model is centered around insufficient or poor quality sleep, which may be a result of being a victim or a bully, and/or a causal factor for bullying behaviors.

Specifically, for victims, the fear of future victimization can interfere with sleep onset if they are thinking about victimization or its effects at bedtime (Astor, Benbenishty, Zeira, & Vinokur, 2002; Randa, Reyns, & Nobles, 2016). These negative thoughts and feelings result in arousal and vigilance that are not conducive to sleep, resulting in bedtime fears and insomnia (Dahl, 1996). Delayed sleep onset can result in insomnia, as well as insufficient sleep duration, which contributes to both non-REM parasomnias and negative daytime functioning (i.e., sleep walking, sleep talking, sleep terrors) (American Academy of Sleep Medicine, 2014; Wolke & Lereya, 2014).

Studies have also shown different aspects of sleep to mediate the relationship between being a victim and psychosocial outcomes. For example, Tu, Erath, and El-Sheikh (2015) found that teens who were less frequent victims of peer aggression were less likely to internalize or externalize, if they also reported better sleep quality (Tu et al., 2015). In another study of students in an alternative high school, daytime sleepiness was found to mediate the relationship between teacher reported bullying and learning and attention problems (Rubens, Miller, Zeringue, & Laird, 2018). Conversely, youth who have been victims also reported more general sleep problems, insufficient sleep, excess sleep, insomnia, and parasomnias (Biebl, DiLalla, Davis, Lynch, & Shinn, 2011; Herge, LaGreca, & Chan, 2015; Wolke & Lereya, 2014; van Geel, Goemans, & Vedder, 2016).

For bullies, insufficient or poor quality sleep may be a result of environmental stressors such as being in a poor school climate or being victimized themselves, causing bullies to feel the need to remain vigilant at all times, which can contribute to insomnia (Lepore & Kliewer, 2013). In addition, sleep disorders such as sleep disordered breathing, restless legs syndrome, and periodic limb movements have also been associated with increased conduct problems, bullying, and other aggressive behaviors in children (Chervin, Dillon, Archbold, & Ruzicka, 2003; O'Brien et al., 2011). In addition, short sleep duration (both reported by diary and actigraphy) has been associated with aggression (Aronen, Paavonen, Fjällberg, Soininen, & Törrönen, 2000; Kamphuis, Meerlo, Koolhaas, & Lancel, 2012; Krizan & Herlache, 2016), and poor sleep quality has been associated with self-reported involvement in bullying (Tu, Spencer, El-Sheikh, & Erath, 2017; Zhou et al., 2015).

Aggression and behavior problems may result from insufficient or poor quality sleep via three pathways: affective (e.g., anger and irritability); behavior (e.g., reduced ability to inhibit negative impulses, aggressive behaviors); and cognition (e.g., negative evaluation of others contributes to risk of hostile/aggressive responses) (Dahl & Lewin, 2002; Krizan & Herlache, 2016). Insufficient sleep, irregular sleep schedules, and insomnia have also been shown to mediate the relationship between peer aggression and externalizing behaviors among bullies ages 10–18 years in France (Kubiszewski, Fontaine, Potard, & Gimenes, 2014). Together these studies suggest that multiple aspects of sleep play a role in the relationship between aggression, violence and negative outcomes.

In summary, the current literature suggests that victims of bullying experience increased symptoms of bedtime fears and insomnia