Parental Report of Sleep Problems among Preschool Children and Their Predictors

Pi-Chen Chang, PhD
College of Nursing, Taipei Medical University, Taipei, Taiwan

BACKGROUNDBACKGROUND

Shortened child sleep duration has been identified as a ‘risk factor’ for poor child health outcomes like obesity. Identification of predictive factors for insufficient sleep may be helpful in developing interventions to change sleep health risk behaviors and for the purpose of preventing obesity in preschool populations. Preschool is the developmental stage of adopting health habits, thus it is an optimal time to promote healthy behaviors. Family is a health socialization unit and health habits aggregate within the family. Family is the major component of young children’s social and environmental contexts, and therefore parents have strong influence on children health behaviors. In addition, the effectiveness of parents’ socialization of their children will have an effect on their establishment, training, and enforcement of children’s health behavior. Hence, the overall objective for this study is to identify parental report of sleep problems among preschool children and their predictors.

METHODS

The design of the research is descriptive correlational. A purposive sampling was used to recruit 178 preschool children and their parents.

MEASURES

Subjective Measures of Sleep

The Children’s Sleep Habits Questionnaire (CSHQ) (Owen, Sparito, & McQuinn, 2000) includes items relating to a number of key sleep domains that encompass the major presenting clinical sleep complaints in the age group of 4 to 10: bedtime behavior and sleep onset; sleep duration; anxiety around sleep; behavior occurring during sleep and night wakings; sleep-disordered breathing; parasomnias; and morning waking/daytime sleepiness. A higher score is indicative of more sleep problems. The CSHQ are scored: Usually=3; Sometimes=2; Rarely=1 for the entire questionnaire except for the reversed items, which are considered to be “desirable” sleep behaviors, and thus scored in the opposite direction). On the current research version, the sleepiness item is scored 1 for “not sleep”, 2 for “very sleep”, 3 for “fall sleep” for each item.

Measures of Sleep Hygiene

Children’s sleep hygiene was assessed using the Children’s Sleep Hygiene Scale (CSHS) developed by the Sleep Research Laboratory of the University of Southern Mississippi (Harsh et al., 2002). The CSHS comprises 25 short questions about sleep hygiene with a 6-point response scale (1 = never; 6 = always) to be completed by the parents. The scale has shown adequate internal consistency (Cronbach’s alpha = 0.76). Reverse-coded items of the CSHS need to be recorded to align all responses in a positive direction (high score means poor sleep hygiene). In this study, internal consistency for the Children’s Sleep Hygiene Scale was 0.48.

RESULTS

Sleep patterns and duration

Co-sleeping was a common practice, with a prevalence of 96.6% (routine bed-sharing: 74.2%; room-sharing: 19.7%) in this sample of preschool children. There were 48.6% of participants slept with light on. The mean sleep duration as reported by parents was M = 9.52 hours, SD = 1.03, with a range from 7.5 to 13.0 hours. There were 39.6% of children had less than ten hours of sleep. The average bedtime and wake-up time were 9:31 PM.

Sleep problem

The CSHQ showed adequate internal consistency for this sample (α = 0.75); alpha coefficients for the various subscales of the CSHQ ranged from 0.38 (Waking) to 0.72 (Duration). The total scores of CSHQ for this community sample ranged from 33 to 70 (M = 48.09, SD = 7.28). A ROC curve analysis described in Owen, Sparito & McQuinn (2000) suggested a cut-off score of 41 yielded the best diagnostic. In this study had 82.5% children’s total score upper 41. Mean scores of total child sleep problems and bedtime resistance were higher among children co-sleeping with their parents than room-sharing or sleeping alone. Compared to room-sharing and sleeping alone, bed-sharing was correlated with bedtime resistance. Among six sleep problems, bedtime resistance had the strongest association with bed-sharing. Better parental sense of competence is related to less child sleep problems (r = −0.28).

Sleep Hygiene

Compared to room-sharing and sleeping alone, bed-sharing children had worse sleep hygiene. Correlation between parent sleep hygiene and their child’s sleep hygiene was .43, indicating parents’ sleep practices have moderate effect on their children’s sleep health behaviors. Besides that, worse child sleep hygiene is related to poor parental sense of competence.

Variables predicting child sleep problems

Results of the multiple regression analysis predicting children’s sleep problems are summarized in the following table. Twenty three percent of the variance in children’s sleep problems was explained by measures of child sleep hygiene and parental sense of competence predicting child sleep problems.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
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<td>7.621</td>
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<td>Child Sleep Hygiene</td>
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<td>0.82</td>
</tr>
<tr>
<td>Parental Sense of Competence</td>
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<td>0.62</td>
</tr>
<tr>
<td>Parental Sleep Hygiene</td>
<td>629</td>
<td>1.41</td>
</tr>
</tbody>
</table>

p < 0.005

Conclusion

The results will be used to help health professionals to understand sleep problems and its impact among preschool children for the improvement of quality of care.

PROCEDURES

A packet containing informed consent forms; a brief survey regarding children’s age, height, weight and parent’s education and occupation; and selected measures, were sent home with the children to be completed by their parent.

Parent's sleep hygiene was assessed using the Sleep Hygiene Index which was developed to assess the practice of sleep hygiene behaviors (Mastin, Bryson, & Corwyn, 2006). The Sleep Hygiene Index , an instrument with 13 items derived from the diagnostic criteria for a diagnosis of inadequate sleep hygiene as defined in the International Classification of Sleep Disorders (American Sleep Disorders Association), participants were asked to indicate how frequently they engage in specific behaviors (always, frequently, sometimes, rarely, never). Item scores were summed to provide a global assessment of sleep hygiene. Higher scores are indicative of more maladaptive sleep hygiene status. Reliability was shown by Cronbach’s α for the Sleep Hygiene Index (α = 0.66) and test-retest reliability (r (139) = 0.71, p < 0.01). The Sleep Hygiene Index correlated positively with the Epworth Sleepiness Scale (r (599) = 0.244, p < 0.01) and the Pittsburgh Sleep Quality Index total score (r (269) = 0.481, p < 0.01). In this study, internal consistency for Sleep Hygiene Index was 0.71.

Parent Attributes Measure

Parenting sense of competence was measured by The Parenting Sense of Competence (PSOC) scale which is a commonly used measure of parental self-efficacy (Gibaud-Wallant & Wandersman 1978, cited in Johnston & Mash 1989). The PSOC was originally designed to measure parenting self-efficacy in first-time parents of infants. The PSOC is a 17-item scale designed to measure parents’ satisfaction with parenting and their self-efficacy in the parenting role (Gibaud-Wallant & Wandersman 1978, cited in Johnston & Mash 1989). PSOC items are appropriately worded for the parent completing the questionnaire (e.g. My mother/father was better prepared to be a good mother/father than I am). Parents indicate their level of agreement with each item by circling a number between 1 (strongly disagree) and 7 (strongly agree), respectively. Scores range from 17 (low self-efficacy) to 119 (high self-efficacy). The PSOC demonstrated good internal consistency (Cronbach's α = .85) and test-retest reliability (intraclass correlation coefficient = .87). Factor analysis supported the two-factor structure reflecting the efficacy and satisfaction dimensions of the original instrument. In this sample, Cronbach’s alpha was .85 for the total scale and .84 and .82, respectively, for the subscales measuring Efficacy and Satisfaction, which indicated adequate internal consistency. Subscales to total scale correlations were .88 for the Efficacy subscale and .92 for the Satisfaction subscale, and correlation between subscales was .63, indicating homogeneity of the scale.

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