Journal of Psychosomatic Research 79 (2015) 37–42

Contents lists available at ScienceDirect

Journal of Psychosomatic Research

Relationships between adult attachment style ratings and sleep disturbances in a nationally representative sample

G. Camelia Adams [a], Lachlan A. McWilliams [b,*]

[a] Department of Psychiatry, University of Saskatchewan, Saskatoon, Canada
[b] Department of Psychology, University of Saskatchewan, Saskatoon, Canada

ARTICLE INFO

Article history:
Received 14 May 2014
Received in revised form 28 November 2014
Accepted 29 December 2014

Keywords:
Attachment style
Adult attachment
Sleep disturbances
National Comorbidity Survey Replication

ABSTRACT

Objective: Recent research with small non-clinical and clinical samples suggests a positive association between attachment insecurity and sleep disturbances. The present study extends this line of research by exploring this relationship in a large sample of the U.S. population and by statistically adjusting for health conditions and psychiatric disorders as potential confounds.
Method: The data used were from the National Comorbidity Survey Replication ($N = 5692$). The main interview consisted of the *Composite International Diagnostic Interview* used to assess psychiatric diagnoses. Ratings of three adult attachment styles (viz., secure, avoidant, and anxious) were obtained along with self-reports of health conditions and four sleep disturbances (viz., difficulty initiating sleep, difficulty maintaining sleep, early morning awakening, and daytime sleepiness).
Results: Bivariate logistic regression analyses indicated that ratings of secure attachment were negatively associated with each sleep disturbance and ratings of insecure attachment were positively associated with each sleep disturbance. Multivariate logistic regression analyses were used to examine associations between the attachment ratings and sleep disturbances while statistically controlling for sociodemographic variables, the presence of a health condition, and psychiatric disorders (viz., depressive disorders, bipolar disorders, anxiety disorders, alcohol/substance disorders, and attention deficit disorder). With one exception, the insecure attachment ratings continued to be positively associated with sleep disturbances.
Conclusion: The findings demonstrate that attachment insecurity is related to sleep disturbances independent of health conditions and concurrent psychiatric disorders. Research aimed at delineating the mechanisms responsible for these associations is warranted.

Introduction

Sleep difficulties are associated with serious negative consequences, such as metabolic and endocrine dysfunction [1], cognitive impairments [2], and reduced occupational functioning [3]. Health conditions and psychiatric disorders are well-established correlates of sleep disturbances [4]. However, the links between sleep disturbances and these conditions are more complicated as sleep difficulties are thought to be both a common consequence of many health and psychiatric conditions [5,6] and to also play a role in the development of such conditions [5,7,8]. Furthermore, the presence of a sleep disturbance is a central feature (i.e., a symptom) of some psychiatric disorders (e.g., depression).

Efforts to improve prevention and treatment strategies for sleep difficulties could be enhanced by the identification of individual difference variables related to sleep disturbances. Attachment insecurity has attracted attention as a potential risk factor for sleep disturbances [9]. In brief, attachment theory posits that individuals develop enduring cognitive schemas, or working models, based on their early experiences with attachment figures, such as a parent or a caregiver [10–13]. While individual characteristics are shaped during infancy, they continue to guide behavior and expectations in interpersonal relationships throughout life, showing a relative degree of stability while also incorporating temporary or long lasting changes depending on one's life context and new attachment relevant experiences [14,15].

A large body of research on adult attachment has been based on the notion that individuals can identify themselves as fitting into one of several attachment styles. Related to this, some measures ask respondents to rate themselves in terms of their level of correspondence to specific attachment styles. Secure attachment involves positive views of self and others. Individuals with this style are comfortable with both intimacy and independence. Secure attachment promotes healthy behaviors such as seeking support and comforting response to interpersonal challenges and distress [14]. The two basic insecure attachment styles, anxious and avoidant attachment, are associated with less adaptive behaviors such as isolating oneself, choosing compulsive

* Corresponding author at: Department of Psychology, University of Saskatchewan, 9 Campus Drive, Saskatoon, SK, S7N 5A5. Tel.: +1 306 966 6966; fax: +1 306 966 8839.
E-mail address: lachlan.mcwilliams@usask.ca (L.A. McWilliams).

http://dx.doi.org/10.1016/j.jpsychores.2014.12.017
0022-3999/

self-reliance over reliance on others (i.e. insecure–avoidant style) or demanding excessive reassurance and fearing attachment loss (i.e. insecure–anxious style) [14]. A large body of research suggests that attachment insecurity is associated with negative outcomes such as relationship distress [16], psychopathology [17], somatic symptoms [18], and physical health conditions [19].

As noted earlier, there has been a growing interest in the connection between attachment and sleep [9]. One line of research has focused on infants and children. It is based on the idea that attachment characteristics and sleep quality are related because sleep–wake regulation and the attachment system both develop during infancy and both are highly influenced by interactions with caregivers. The sensitivity of both attachment and sleep to the nurturing practices of caregivers, as well as their direct interaction, have been subject to several cross-sectional and longitudinal studies spanning infancy and early childhood. For instance, biological evidence of their connection in early life has been provided by both animal studies, which have shown changes in sleep physiology during mother–infant separation [20,21], as well as human studies, which have shown increased sleep regulation in close contact mother–newborn rearing practices [22,23]. Furthermore, the relationship between attachment and sleep has also been supported by several studies suggestive of bidirectional relationships between attachment to parents, emotional security, and children's sleep [9].

Research focused on adult attachment and sleep has primarily been based on the idea that attachment insecurity involves a heightened sense of threat and increased vigilance that interfere with sleep. To date, nine studies with adult samples have examined relationships between attachment variables and subjective reports of sleep impairments or disturbances. Of these, six utilized non-clinical samples, such as female health workers [24], university students [25], both members of romantic/cohabitating couples [26,27], and small community samples of healthy adults [28] and older adults [29]. Three studies examined clinical populations, including women with recurrent major depression [30], military veterans with posttraumatic stress disorder symptoms and sleep disturbances [31], and breast cancer survivors [32]. In general, these studies found support for an association between attachment insecurity and poorer self-reported sleep quality [24–26,28,29,32]. Approximately equal numbers of studies have found attachment avoidance [24,26,28,29,32] and attachment anxiety [24–26,32] to be related to self-reported sleep problems, with three obtaining significant findings regarding both forms of insecurity [24,26,32]. There have also been several null findings [27,30,31]. However, it is important to note that these studies found attachment insecurity to be associated with reduced sleep quality as assessed by polysomnographic sleep measures [30,31] and with increased sleep difficulties during separations from romantic partners [27].

In the current study, data from the National Comorbidity Survey Replication (NCS-R) [33] were used to address two limitations of past research investigating associations between adult attachment and sleep disturbances. First, previous studies have primarily utilized small samples of university students, other unique samples (e.g., female health workers), and clinical samples, and as a result the generalizability of the findings of these studies is uncertain. The NCS-R involved a large sample representative of the general U.S. civilian population. As such, findings based on it are highly generalizable. Second, previous studies did not account for health conditions and psychiatric disorders as possible confounds. Health conditions and psychiatric disorders are both well-established correlates of sleep disturbances [4], and are both positively associated with attachment insecurity [17,19]. Given this situation, it is necessary to demonstrate that relationships between attachment and sleep variables are not simply the result of their shared variance with poor health and psychological distress. To address this issue, two studies have demonstrated that associations between attachment insecurity and self-reports of sleep disturbances remain after adjusting for depressive symptoms [26,29]. It is important to note that these studies did not adjust for health conditions and included only one form of psychopathology (viz., depression) assessed with self-report measures. The current study provided a more comprehensive evaluation of the impact of potential confounds by statistically adjusting for health conditions and a wide range of psychiatric disorders. Given past studies have found that relationships between attachment and sleep variables are not the result of their shared variance with depressive symptoms, it was hypothesized that attachment insecurity would be positively associated with each form of sleep disturbance even after controlling for relevant comorbidity.

Methods

Participants and procedures

The NCS-R public use data set was utilized. The NCS-R involved a probability sample of the United States non-institutionalized civilian population, aged 18 or older, and had a response rate of 70.9%. Administration of the interview was in two parts. Part I consisted primarily of a diagnostic assessment of psychiatric disorders, and was administered to the entire sample ($N = 9282$). Part II was administered to all the respondents who reported a lifetime disorder in Part I and to a probability subsample of the others ($N = 5692$). Weighting procedures were developed to adjust for differential probabilities of selection and non-response, and to adjust the sample to reflect the U.S. population's demographics (i.e., sex, race, marital status, education, living arrangements, region, and urbanicity). The variables of primary interest in the present study (i.e., attachment and sleep disturbances) were included in the Part II interview, so the weighted Part II data were utilized. Basic demographic information regarding the sample is presented in Table 1. Ethical approval for the primary data collection of the NCS-R was provided by the Human Subjects Committees of Harvard Medical School and the University of Michigan. Further details of the NCS-R methodology are presented by Kessler and colleagues [33]. The interview materials are available at http://www.hcp.med.harvard.edu/ncs/replication.php.

Measures

Demographic variables

Participants provided information regarding their demographic characteristics. This information was used to calculated odds ratios that adjusted for gender, marital/relationship status (married or

Table 1
Descriptive statistics regarding sample demographic characteristics and study variables.

Variables	Mean	Prevalence	95% Confidence interval
Demographic			
Age	45.01		44.10–45.92
Female gender		53.05%	51.01–55.09
Married or cohabitating		55.94%	53.45–58.4
Caucasian race		72.75%	69.09–76.42
Health condition and psychiatric disorders			
Health condition (1 or more)		77.57%	75.65–79.43
Depressive disorders		7.51%	6.82–8.20
Bipolar disorders		2.88%	2.44–3.32
Anxiety disorders		18.21%	16.90–19.52
Alcohol/substance use disorders		8.51%	7.54–9.49
Attention deficit disorder		2.22%	1.85–2.59
Attachment			
Secure attachment ratings	2.90		2.86–2.93
Anxious attachment ratings	1.31		1.28–1.33
Avoidant attachment rating	1.77		1.74–1.81
Sleep disturbances			
Difficulty initiating sleep		16.42%	15.16–17.71
Difficulty maintaining sleep		19.88%	18.28–21.47
Early morning awakenings		16.66%	15.22–18.10
Daytime sleepiness		16.22%	14.91–17.52