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Just Sleep it Off: Does Sleep Moderate the Impact of Insecure Attachment Styles on Cortisol Levels?

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Does Sleep Moderate the Impact of Insecure Attachment Styles on Cortisol Levels?

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Abstract

Current literature suggests an association between attachment styles and hypothalamic-pituitary-adrenal (HPA) axis regulation. In particular, insecure attachment (high anxiety and/or high avoidance) has been associated with higher cortisol release at both baseline and post-stressor measurements. Sleep has been shown to serve a protective and regulatory role in HPA axis functioning. It is proposed that proper sleep hygiene may beneficially moderate the impact of insecure attachment styles on cortisol release; therefore, potentially decreasing disease and increasing overall health.

Introduction

Adult Attachment & Physiology

Adult romantic attachment style has been associated with biological and psychological functioning that regulates responses to stressors and recovery (Bowlby, 1969; Hazan & Shaver, 1987). Research has begun to explore the impacts of attachment style on physiological functioning, specifically its impact on the HPA axis. Brennan, Clark, & Shaver (1998) suggested that attachment styles exist on two dimensions (anxiety and avoidance), and people who rate high on either or both (insecure attachment) tend to have more dysregulation in their HPA axis (Figure 1). In particular, they have been shown to have higher levels of the stress hormone, cortisol, at both baseline and post-stressor measurements (Kidd, Hamer, & Steptoe, 2011; Pietromonaco, DeBuse, & Powers, 2013; Quirin, Pruessner, & Kuhl, 2008). Higher levels of cortisol can contribute to an increased risk for poor health and disease outcomes, especially poor cardiovascular, endocrine, and immune system functioning (Bauer, 2005; Whitworth, Williamson, Mangos, & Kelly, 2005). Research suggests that those with the highest cortisol levels are at a fivefold increase of dying from causes related to cardiovascular disease (Vogelzangs, et al., 2010). Therefore, insecure attachment styles may put people at an increased risk for disease and possibly premature death (Figure 2).

Sleep's Protective Role

Proper sleep hygiene has been associated with better psychological and physical health outcomes, particularly healthy HPA axis regulation (Balbo, Leproult, & Van Cauter, 2010). However, sleep deprivation has been associated with neurocognitive dysfunction, behavior dysregulation, and poor physiological functioning (AlDabal & Bahammam, 2011; Chittora, et al., 2015; Goel, Rao, Durmer, & Dinges, 2009). Research suggests that there is a relationship between insecure attachment styles and poor sleep hygiene (Adams & McWilliams, 2015; Adams, Stoops, & Skomro, 2014). Therefore, the current study is a novel exploration of the impact of proper sleep hygiene as a moderator to blunt the negative impact of insecure attachment on cortisol levels.

Objectives & Purpose of Proposed Research

- To examine the protective role that proper sleep hygiene may play to blunt the negative impact of insecure attachment on cortisol levels, for both baseline and post-stressor measurements.
- To reaffirm the connection between attachment styles and cortisol levels, particularly the link between insecure attachment and higher cortisol levels.
- To further explore the associations between attachment styles, cortisol levels, behavior dysregulation, and gender.

Figures

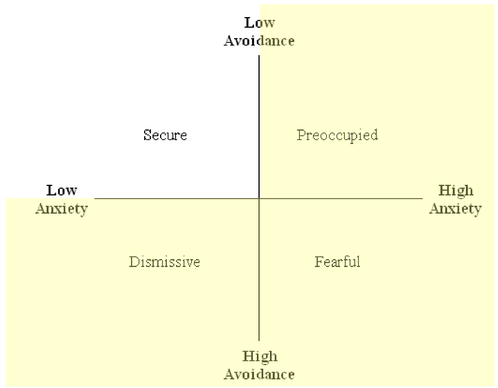


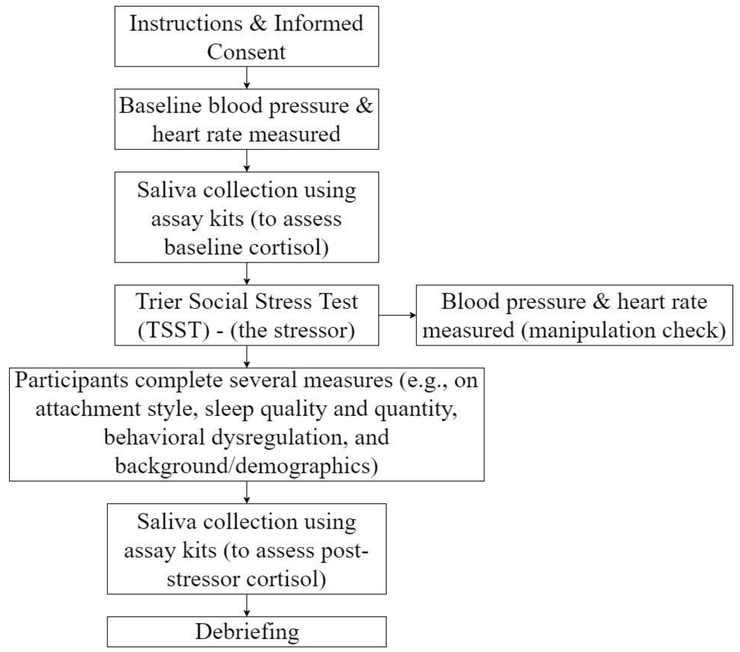
Figure 1. Attachment styles based on anxiety and avoidant dimensions (insecure highlighted). Categorically known as:
- Secure (⬇Anxiety, ⬇Avoidance)
- Preoccupied (⬆Anxiety, ⬇Avoidance)
- Dismissive (⬇Anxiety, ⬆Avoidance)
- Fearful (⬆Anxiety, ⬆Avoidance)

Figure 2. How attachment style impacts health & disease outcomes.

Method

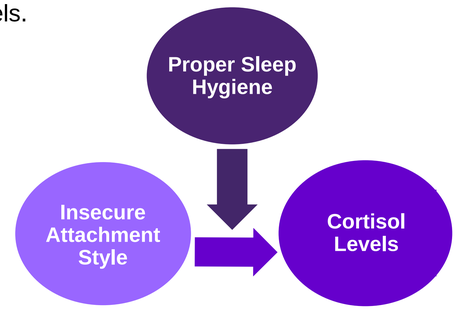
Participants: n = 180 undergraduate students from the University of Northern Iowa (UNI) recruited using SONA participant systems (Credit given for participation)

Procedure:



Expected Results

- Better sleep scores will blunt the impact of insecure attachment (high anxiety and/or high avoidance) for both baseline and post-stressor cortisol levels.



- Poor sleep scores will have no impact on insecure attachment (high anxiety and/or high avoidance); therefore, participants would have higher baseline and post-stressor cortisol levels than participants with secure attachment.
- Exploratory data analyses may find associations between attachment styles, cortisol levels, behavioral dysregulation, and gender.

Conclusions

- Current study will be first to examine sleep as a beneficial moderator between insecure attachment styles and cortisol levels.
- If proper sleep hygiene blunts the negative impact of insecure attachment on cortisol levels, sleep management could be an especially crucial tool in regulating cortisol, which may:
  - Lessen damage to overall physical and psychological health
  - Prevent and/or improve cardiovascular damage
  - Increase quality of life and potentially prevent premature death
- If the association between attachment style and cortisol levels are reaffirmed:
  - The importance of caregivers providing a stable and supportive environment to create a secure attachment style in childhood should be emphasized (because attachment style tends to remain unchanged throughout the lifespan).
- If associations are found between attachment styles, sleep, cortisol levels, behavior dysregulation, and gender:
  - More information could be gained as to the interplay between those factors leading to more informed future research.

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