

Sex differences in the impact of sleep on positive and negative affect



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Abstract

The present study examines sex differences in the association between sleep and affect among a sample of young adults. Results suggest that daily sleep levels are associated with both negative (NA) and positive (PA) affect among men, while daily sleep levels are associated with only PA among women.

Introduction

High levels of negative affect (NA) and low levels of positive affect (PA) are associated with numerous forms of maladaptive functioning, including, poor mental and physical health, increased stress, and decreased life satisfaction (Watson, Clark & Tellegen, 1985; Pressman & Cohen, 2005). Thus, it is important to gain a better understanding of the particular processes associated with NA and PA fluctuations.

One factor that may be critical to understanding affective functioning is sleep. Research has shown that high levels of sleep disturbance are associated with low levels of PA and high levels of NA (Norlander et al., 2005). However, some of these investigations have also found important sex differences. Preliminary studies suggest that the relationship between sleep disturbance and affect may be stronger among women (Berry & Webb, 1983, 1985).

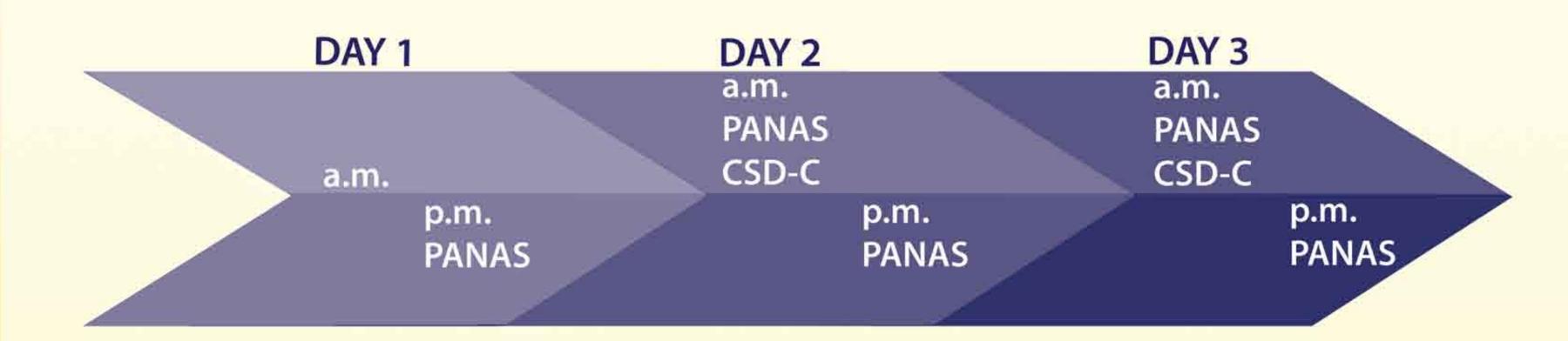
Yet, most studies have examined these sex differences among populations of older adults (Berry & Webb, 1983, 1985; Totterdell et al., 1994). Therefore, the current study aim to examin whether, among young adults, the associations between sleep and affect is different in females compared to males.

Methods

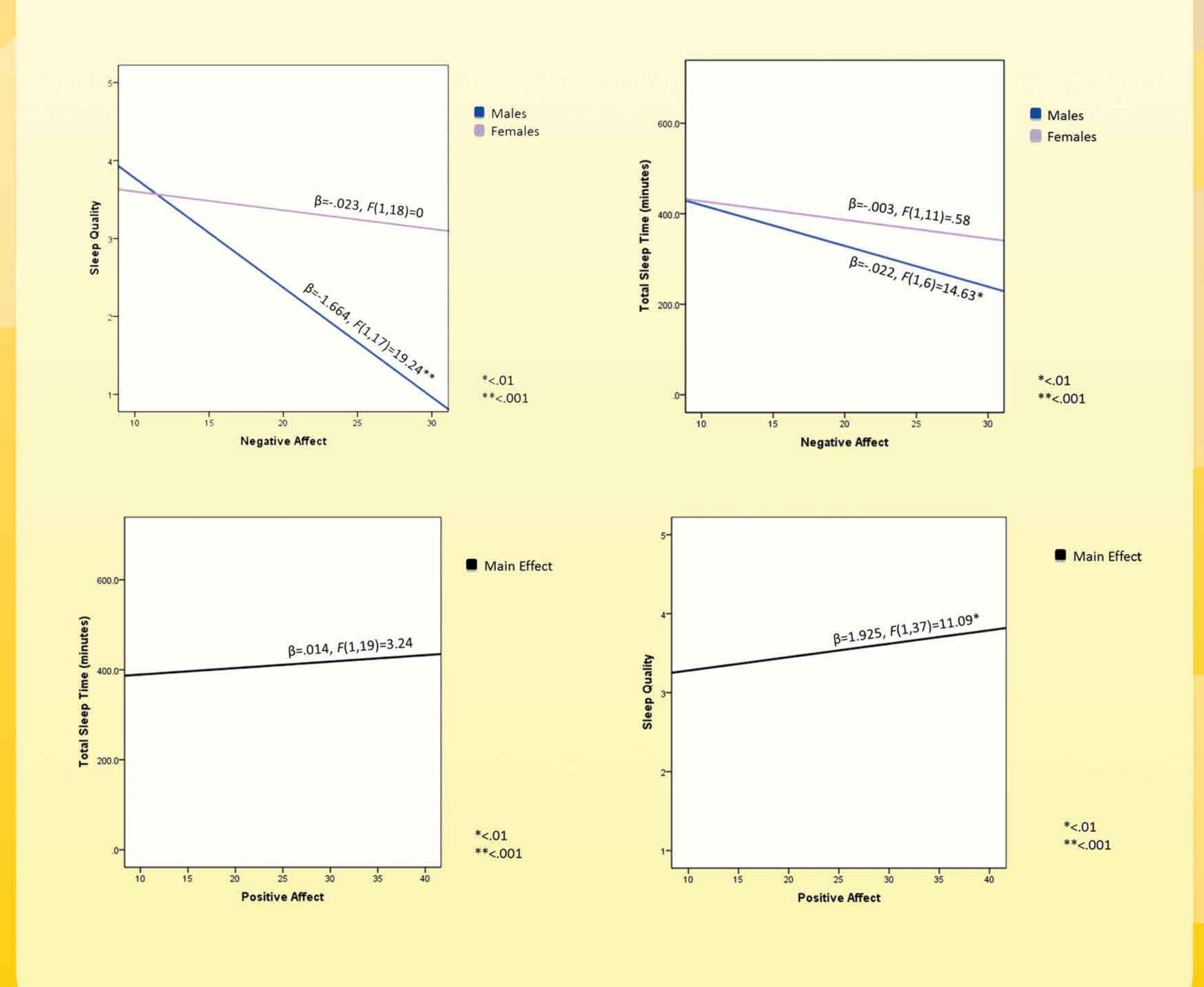
Fifty-nine undergraduate students (28 males; mean age = 18.7). Participants were assessed multiple times across three consecutive days.

Measures:

- Positive and Negative Affect Scale (PANAS; Watson, Clark & Tellegen, 1988
- Consensus Sleep Diary Core (CSD-C; Carney et al., 2012)



Results



Results

In order to examine sex differences in the association between sleep and affect, separate mixed model repeated measures analyses were conducted on NA and PA. After controlling for previous nights' levels of NA (nNA), there were significant main effects of sleep quality and TST (p=.0005 and p=.0016, respectively) on morning levels of NA (mNA). After controlling for nPA, there was a significant main effect of sleep quality (p=.0020) on mPA.

Discussion

Contrary to prior research, these findings suggest that the associations between sleep quality and total sleep time (TST) and negative affect are stronger among men compared to women. Specifically, men who reported low levels of daily sleep quality or TST reported higher levels of negative affect. However, low levels of daily sleep quality significantly predicted low levels of positive affect among both men and women. Notably, this study utilized self-report measures (i.e. CSD-C, PANAS) to assess TST and subjective sleep quality. Future studies may benefit from adopting more objective and rigorous measures of sleep (i.e. polysomnography), and affect (e.g., facial affect coding).

