

## EPP0289

## Gender differences in the relationship between sleep and childhood traumas

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**Introduction:** Sleep is one of the most important factors for well-being. Numerous studies have linked poor sleep to negative consequences such as depression (Guo et al., 2014), substance use (Comasco et al., 2010), obesity (Wu et al., 2015), and suicidality (Liu & Buysse, 2006). Understanding the causes of poor sleep is an important public health concern. Childhood trauma can have a lifelong influence on mental health and development. However, many examinations of childhood trauma focus on the number of experiences and not the impact of specific experiences. Research has shown gender differences in both insomnia and childhood maltreatment outcomes (Lee et al., 2014); however, less attention has been paid to the potential role of gender in the link between other types of childhood trauma and sleep disturbance.

**Objectives:** The goal of the current study is to understand the role of gender in the relationship between childhood traumas and sleep problems among a community sample of emerging adults. This research aims to build on and extend previous work in three different ways: 1) add to the literature on childhood trauma among emerging adults; 2) examine specific types of childhood traumas; and 3) expand the categories to explore the role of some less studied adversities.

**Methods:** The study included a sample of 211 young adults from an urban community. Traumas were measured with the Brief Trauma Questionnaire (BTQ; Schnurr et al., 1999) and sleep was measured with the Pittsburgh Sleep Quality Index (Buysse et al., 1989). Logistic regression was used to calculate odds ratios for the relationship between sleep problems and five traumas (involved in a serious accident, experienced serious injury, violent death of a close family member or friend, witnessed someone's serious injury or death, and natural disaster).

**Results:** Results showed that males and females experienced similar rates of trauma. Trauma experienced during childhood was associated with an increased prevalence of poor sleep. In the male model, being involved in a serious accident (OR=1.47), experiencing serious injury (OR=1.24), and experiencing a natural disaster (OR=1.11) were all significantly associated with poor sleep. In the female model, the violent death of a close family member or friend (OR=2.02), witnessing someone's serious injury or death (OR=1.78), and experiencing a natural disaster (OR=1.69) were all significantly associated with poor sleep.

**Conclusions:** Traumatic events may impact men and women differently. Women in the study showed greater sleep problems in the wake of childhood traumatic events. They also responded more strongly to events that they saw happening to other people, while men were more greatly affected by things that happened directly to them. Natural disasters are a relatively common event that has a strong impact on sleep. Intervention efforts addressing trauma and poor sleep should be aware of gender differences for greater efficacy.

**Disclosure of Interest:** None Declared

## EPP0290

## Comparison of sleep microarchitecture in screen failure subjects with insomnia complaints and randomized subjects from two phase 3 studies on insomnia disorder

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**Introduction:** Daridorexant, a dual orexin receptor antagonist, was shown to be effective and safe in improving sleep and daytime functioning in subjects with insomnia in two Phase 3 studies. All patients screened had subjective insomnia, but many did not meet the study eligibility criteria.

**Objectives:** As the randomized subjects represent only a subsection of the real-world population, we analyzed differences in sleep microarchitecture between included and excluded subjects in both studies.

**Methods:** Out of 7016 screened subjects, 1851 randomized (included) subjects and 602 screen-failure (SF, excluded) subjects that had at least 1 scored eligibility polysomnography available, were included in this analysis. For the remaining SF subjects, no scored polysomnography was available. The randomized subjects met the DSM 5 insomnia disorder criteria and objective and subjective criteria for disrupted sleep. The main reasons for the 602 SF subjects were not meeting at least 1 objective sleep criteria for sleep onset latency, sleep maintenance, or total sleep time, however all excluded subjects had subjective insomnia. Delta (1-3Hz), theta (4-7Hz), alpha (8-12Hz), and beta (13-38Hz), band spectral power of sleep EEGs were estimated using multi-taper spectrograms (2s window/1s overlap). Relative power was computed using the sum of these four band powers within the 2s window as the denominator. The resulting relative and band power ratios were then aggregated to 30s epochs and assessed by sleep stages (N1, N2, N3, REM, Awake). Sleep spindles (amplitude, peak frequency, oscillation count, symmetry index, slow oscillation phase peak, duration, density, and dispersion) were calculated in N2 sleep using an open-source Luna package. Statistical analysis was done using a univariate analysis of spindle and spectral features via linear mixed-effects regression.

**Results:** Age and sex distribution were similar between groups (Median age: 59vs59 years and 68%vs70% Females for included and excluded subjects, respectively). Included subjects had higher relative alpha power (5.6%;  $p < 0.001$ ) and lower relative delta power (-2.3%;  $p 0.031$ ) in N1 than excluded subjects. The mean relative spectral power did not differ significantly for other relative powers in N1 and for any relative powers in stages N2, N3, REM and AWAKE. Included subjects had lower spindle density (-9.8%;  $p 0.005$ ) than excluded subjects. Other spindle features did not significantly differ between the groups.

**Conclusions:** This comparison of sleep architecture between included and excluded subjects, showed only minor differences in