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Subjective Assessment of Sleep Quality Across the Menstrual Cycle in Women with Premenstrual Dysphoric Disorder

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SUBJECTIVE ASSESSMENT OF SLEEP QUALITY ACROSS THE MENSTRUAL CYCLE IN WOMEN WITH PREMENSTRUAL DYSPHORIC DISORDER

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Introduction: Existing evidence demonstrates that sleep structure varies across the menstrual cycle in healthy women (1). These variations could be more severe in women suffering from premenstrual dysphoric disorder (PMDD) (2). In a previous study of healthy women, subjective sleep quality was shown to be constant across both phases of the menstrual cycle (3). The current study aims to test whether there exists a variation in subjective sleep quality of PMDD sufferers across the follicular and luteal phases of the menstrual cycle.

Methods: Five women (ages 28-41) with a clinical diagnosis of PMDD maintained regular sleep/wake habits over one entire menstrual cycle. Sleep/wake times outside of the laboratory were kept constant and confirmed by wrist actigraphy. Daytime napping was prohibited during the entire study. Every third night of one entire menstrual cycle, sleep was polysomnographically recorded in the laboratory using a standard montage. Intrinsic sleep disorders were ruled out during the first sleep recording. Participants also assessed the quality of their prior sleep episode, upon waking using a 10 cm visual analog scale.

Results: Mean sleep length in the laboratory was 8h12min + 10 minutes. A Wilcoxon signed ranks test was performed to compare subjective sleep quality scores of the early follicular (first week) and the late luteal (last week) phases of the menstrual cycle. During the early follicular phase, subjective sleep quality was 6.43 (SD= 2.89), while that of the late luteal phase was 5.41 (SD = 3.43) (Figure 1). The scores were found to vary significantly between the phases of the menstrual cycle ($p = 0.041$). Furthermore, participants' assessment of sleep quality was positively correlated with polysomnographic measures of sleep efficiency ($r = 0.550$, $p = 0.02$) (Figure 2).

Figure 1

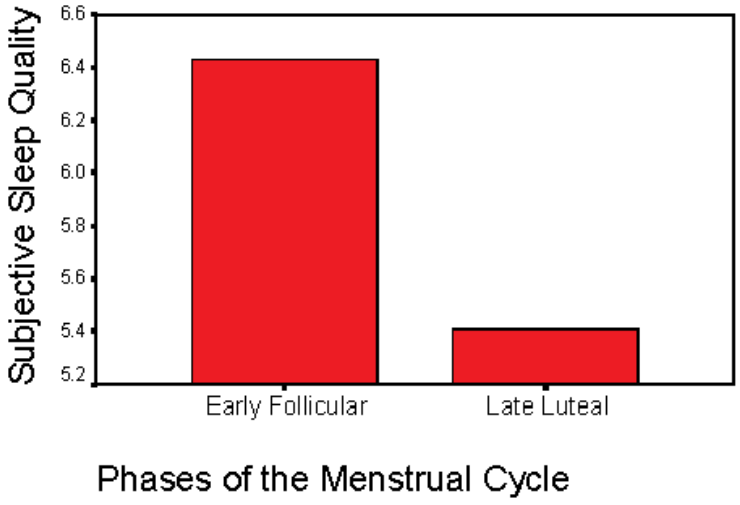
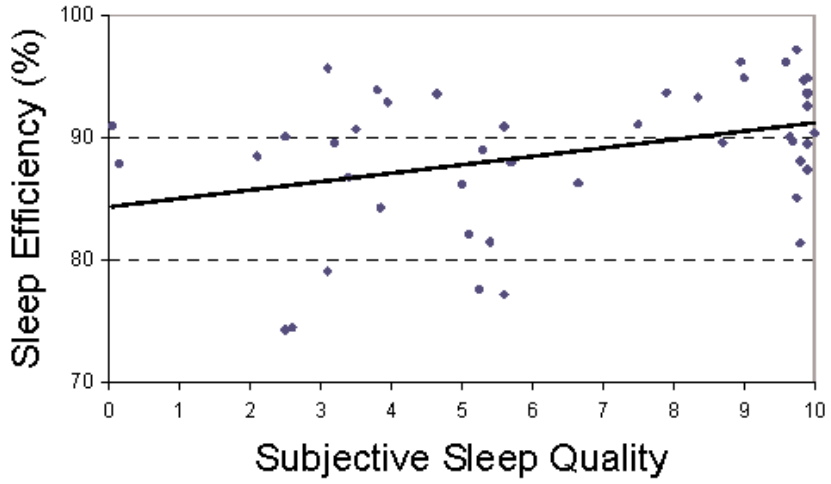


Figure 2



Conclusions: The present study indicates that subjective sleep quality deteriorates significantly during the late luteal phase in women with PMDD. This is not surprising since sleep disturbances are an important diagnostic criteria of PMDD. These results are different from what has been reported in healthy women (3). Elucidation of the factors mediating changes in sleep during menstruation in participants with PMDD may have key implications in developing new and innovative treatments.

References:

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