

Nightmares: An Under-Diagnosed and Undertreated Condition?

Commentary on Li et al. Prevalence and correlates of frequent nightmares: a community-based 2-phase study. *SLEEP* 2010;33:774-780.

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THREE ASPECTS OF THE ARTICLE OF LI ET AL.¹ IN THIS ISSUE OF *SLEEP* ARE OF SPECIAL INTEREST TO CLINICIANS AND RESEARCHERS ALIKE: (1) THE prevalence of nightmares in the general population, (2) the correlation between nightmares and other sleep complaints, and (3) possible factors underlying nightmare etiology. Li et al.¹ found a prevalence of 5.1% of persons reporting frequent nightmares (defined as at least one nightmare per week). Despite the large sample size, the weakness of the Li et al. study is that they did not use an explicit definition for nightmares relative to an awakening criterion or vivid recall. The awakening criterion differentiates between nightmares (with awakenings) and bad dreams (without awakening), thus the prevalence rate of Li et al.¹ might be an overestimation of nightmare frequency because it includes also bad dreams. A smaller prevalence of frequent nightmares (2.4%), for example, was reported by Schredl² for a representative German sample using an explicitly given awakening criterion.

The characteristic of vivid recall is used to differentiate between nightmares and night terrors (a NREM parasomnia). Schredl et al.,³ however, were able to demonstrate that possibly confusing night terrors with nightmares affected nightmare prevalence rates only in a very minor way. Nevertheless, it would be desirable to provide a precise nightmare definition for the participants. Regarding nightmare etiology, it would be also very fruitful to differentiate between idiopathic and post-traumatic nightmares.⁴ In the Li et al. study,¹ there might be some subclinical cases of posttraumatic stress disorder (PTSD) or even some full-blown PTSD patients in the anxiety disorder group (which was unfortunately not specified). As there is a considerable overlap between PTSD and mood disorders,⁴ this differentiation would have been helpful in interpreting the findings of Li et al.¹

Even though sleep histories of nightmare sufferers indicate that nightmares often begin in childhood and are stable over time, longitudinal studies – especially in adults – are scarce. Schredl et al.⁵ demonstrated that children reporting nightmares over a two-year period (three measurement points) showed more pronounced daytime symptomatology, such as emotional problems and hyperactivity, than children reporting nightmares

once or twice. From a clinical viewpoint, it would be very interesting to elicit whether frequent nightmare sufferers have consulted health care professionals because of their complaints and have received therapy.

Nightmares are classified as a REM parasomnia, and this might be interpreted to mean that nonrestorative sleep or sleep disruptions present in other dyssomnias play a minor part in the nightmare syndrome. Li et al.,¹ however, clearly demonstrated that nightmares are correlated with insomnia complaints. This is still valid if daytime stress that elevates nightmare frequency and insomnia symptoms was partialled out.⁶ Why sleep quality is also reduced in nights without nightmares is still an open question—fear of re-experiencing a nightmare might be one of the reasons. Li et al.¹ also reported significant correlations between nightmare frequency and self-reported symptoms of sleep-related breathing disorders. On the other hand, respiratory disturbance indices were not related to nightmare frequency in sleep apnea patients and, overall, sleep apnea patients did not report nightmares more often than healthy controls.⁷ One might assume that self-report measures might be biased and, thus, not valid for measuring the severity of sleep-related breathing disorders. The high correlations between nightmare frequency and sleep-related daytime consequences reported by Li et al.¹ underscore the notion that nightmares might have a strong effect on the well-being of the patient⁸ and should be treated.⁹ Overall, the high internal consistency ($r = 0.846$) of the fourteen sleep questions including the nightmare question clearly indicate that nightmares are closely related to other sleep problems.¹

The phase 2 study of Li et al.¹ also addressed psychiatric diagnoses and psychosocial variables associated with frequent nightmares. Despite the large sample size of the questionnaire study and the relatively large sample size of interviewed participants, the number of persons with frequent nightmares was relatively small. This might explain why for mood disorders significant associations to frequent nightmares were found, whereas other disorders like anxiety disorders failed to reach significance even if associations to these disorders have reported in previous studies.¹⁰ Interestingly, patients with primary insomnia also report nightmares more often than healthy controls.¹¹ In terms of nightmare etiology, these findings indicate that current stressors like presence of a psychiatric illness increase nightmare frequency. On the other hand, a large twin study¹² suggested that genetic factors also play a role in nightmare etiology. It would be very interesting to analyze the data set of Li et al.¹ regarding correlations between nightmare frequency of the children with parental nightmare frequency. A positive correlation between the nightmare frequencies of children and their mothers has already been reported.¹³ The trait

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factor neuroticism was related to nightmare frequency but the effect of recent life changes did not reach significance.¹ The study may have been underpowered to assess such a relationship. A correlation mediated by the amount of current stress has been found for the relationship between neuroticism trait and nightmare frequency.⁶

A larger sample will be necessary to analyze the interaction between state and trait factors in nightmare etiology, incidence and prevalence. Another possible etiological factor is medication intake. The Li et al. study¹ did elicit frequency of medication intake and found no relationship to nightmare frequency, but the study did not specifically inquire about drug classes such as antidepressants or acetylcholine esterase inhibitors, which might be expected to be more likely to increase nightmare frequency.

Krakow⁹ pointed out that up to 16% of a sleep clinic patient population reported clinically salient nightmare conditions and often do not receive effective treatment. From a clinical viewpoint, it can be recommended that questions about nightmares should be included in taking a sleep history and that patients should be offered an effective treatment.¹⁴ On the other hand, further epidemiological studies are needed to enhance our knowledge of the prevalence of different nightmare types, nightmare stability, the impact of nightmares on daytime functioning, and the utilization of health care services by persons who suffer from nightmares.

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