

This Week's Citation Classic

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Monroe L J. Psychological and physiological differences between good and poor sleepers. *J. Abnormal Psychol.* 72:255-64, 1967.
[University of Chicago, IL]

Compared with good sleepers, poor sleepers (moderate insomniacs) had significantly less total sleep, a higher proportion of Stage 2 sleep, markedly less REM sleep, more awakenings, and greater sleep latencies. Insomniacs scored much higher on various measures of neuroticism and showed higher levels of physiological activity before and during sleep. [The Science Citation Index® (SCI®) and the Social Sciences Citation Index® (SSCI®) indicate that this paper has been cited in over 195 publications since 1967.]

Lawrence J. Monroe
Department of Psychiatry
Clinical Psychology
Ohio State University
Columbus, OH 43210

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"This study was conceptualized in the early years of the 'golden era' of modern sleep research while I was a graduate student in clinical psychology at the University of Chicago. The concept of the relative 'depth' of the various sleep stages had emerged and was the impetus for a number of investigations pertaining to light and deep sleep; however, no studies had been reported on the differences, if any, between light sleepers and deep sleepers. In an attempt to identify light and deep sleepers through questionnaire procedures, I discovered that people had very definite impressions about whether they were good or poor sleepers and that these respondents were much more concerned with the quality of their sleep than they were with the depth of sleep. The somewhat unexpected results about the perceived importance of the presence or absence of good sleep, coupled with the prevail-

ing paucity of scientific investigations into the quality of sleep, led to the development of a proposed study for my PhD dissertation. The specific question investigated was whether or not there were measurable differences between self-defined good and poor sleepers in electrophysiologically determined sleep patterns, in psychophysiological functions, and in personality patterns.

"There are several apparent reasons why this paper has become a classic in the field of sleep research. The timing was important in that this was the first study to report physiological, psychological, and EEG-defined sleep-pattern differences between people who sleep well and those who report considerable suffering. The study has been cited by numerous authors as being the first EEG investigation into the qualitative aspects of sleep; these findings established poor sleep or insomnia as a valid disorder, thus disproving the common notion that insomnia is just an unfounded hypochondriacal complaint. This research was also a major stimulant for subsequent studies of poor sleep, insomnia, and related sleep disturbances. One surprising aspect of this study was the robustness as well as the number of meaningful differences observed between the good and poor sleepers. Perhaps even more surprising is the frequency and consistency with which the major findings of this study have been confirmed by other investigators over the past 15 years. The originally suggested relationship between insomnia and heightened levels of physiological and emotional functioning has been verified and remains a significant factor in current theorizing about insomnia."^{1,2}

1. Kales A, Caldwell A B, Preston T A, Healey S & Kales J D. Personality patterns in insomnia. *Arch. Gen. Psychiat.* 33:1128-34, 1976.
2. Johns M W, Gay T J A, Masterson J P & Bruce D W. Relationship between sleep habits, adrenocortical activity and personality. *Psychosom. Med.* 33:499-508, 1971.