

The reported sleep characteristics of meditators and nonmeditators*

IRA B. ALBERT and BARBARA McNEECE
Old Dominion University, Norfolk, Va. 23508

A sleep questionnaire was administered to a group of experienced meditators and to an appropriate control group. Meditators reported that they awakened in the morning more rested than nonmeditators. Meditators also reported more dreaming and a more positive quality in their dream content.

It has often been reported anecdotally that various forms of meditation dramatically affect sleep and dreaming; however, very few scientific experiments have attempted to evaluate these claims. Because of the growing use of meditation in the general population, it is essential that scientists should address this problem.

Traub et al (1973) have studied the effects of one relaxation technique (autogenic training) upon chronic insomnia. Seven insomniacs were studied for 12 nonconsecutive nights. This investigation revealed only minor changes in actual sleep patterns, although all Ss reported subjective improvements in their sleep.

Becker & Herter (1973) observed the effects of transcendental meditation upon the sleep patterns of seven experienced meditators, and found that meditation resulted in a reduction of rapid eye movement (REM) sleep. The meditators had between 6 months' and 3 years' experience with these techniques.

Although these two investigations have certainly contributed to our knowledge of the sleep characteristics associated with the various altered states of consciousness, it should be noted that both of these studies were limited to a small number of Ss. It is clear, therefore, that there is a need for sleep data obtained from a larger population of meditating Ss.

The Ss for this experiment were 50 females (mean age = 29.9 years). Twenty-nine of the Ss were experienced for at least 6 months with a type of meditation advanced in the psychic readings of Edgar Cayce. This method of meditation is similar in many ways to transcendental meditation (Sechrist, 1972). Twenty-one nonmeditating females with a strong interest in the readings of Edgar Cayce were chosen for the control group. All control Ss were either members of the Association for Research and Enlightenment (founded by Edgar Cayce) or had independently studied the readings of this individual. Because of these similar interests, it was assumed that experimental and control Ss were similar in their basic personality characteristics.

A sleep questionnaire based upon the University of Florida sleep inventory was administered to

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experimental and control Ss. Each item was to be answered on a 1-to-5 scale. All responses were recorded on computer cards to facilitate data analysis.

The subjective responses of the meditators and nonmeditators were compared by means of Student's *t* test (Runyon & Haber, 1972). It was immediately apparent that there were many significant differences between the reported sleep characteristics of the two groups.

Meditators reported that they awakened in the morning more rested than nonmeditators ($t = 2.19$, $df = 48$, $p < .05$). The experimental group reported that they found it easier to get up in the morning ($t = 1.79$, $df = 48$, $p < .10$), and that they took less time to begin functioning and feeling well ($t = 2.10$, $df = 48$, $p < .05$).

This reported difference in morning arousal may have resulted from the fact that meditators relied less on alarm clocks and radios to get up in the morning ($t = 2.3$, $df = 48$, $p < .05$). Therefore, it might be expected that nonmeditators are more likely to be aroused during the middle of their sleep cycle. Another possible explanation for these results might arise from a differential usage of drugs. Meditators reported less drug usage than control Ss ($t = 2.46$, $df = 48$, $p < .05$). In particular, the two groups markedly differed in their reported consumption of alcohol ($t = 3.79$, $df = 48$, $p < .001$). The decreased consumption of drugs for meditators has already been reported by other investigators (Levine, 1972). It is also well known that the usage of drugs has dramatic consequences for the sleep and dream cycle (Kales, 1969).

Although meditators reported that they went to sleep about 1 h before nonmeditators, there were no reported differences in latency to sleep, total sleep time, or awakenings during the night.

Meditators reported dreaming more times per night than nonmeditators ($t = 2.70$, $df = 48$, $p < .01$). In addition, dream content was dramatically different for the two groups. Meditators reported significantly more often that they liked to dream ($t = 2.66$, $df = 48$, $p < .05$), and that their dreams gave them solutions to problems ($t = 3.36$, $df = 48$, $p < .01$). In contrast, nonmeditators reported more bad dreams and nightmares ($t = 2.29$, $df = 48$, $p < .05$), more dreams of being chased ($t = 2.39$, $df = 48$, $p < .05$), more sexual dreams ($t = 1.63$, $df = 48$, $p < .10$), and more repetitious dreams ($t = 2.15$, $df = 48$, $p < .05$).

It is clear from the above data that there are significant differences between the reported sleep characteristics of meditators and nonmeditators. Meditators report better sleep quality and a change in the amount and type of dreaming activity. Further

laboratory research, however, is necessary to test the validity of these reports. Changes in sleep quality and the nature of dreaming should be accompanied by systematic variations in the amount and sequencing of the various EEG sleep stages.

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