Most young adults sleep about 7.5 hours out of every ten nights. In a college population, this leaves little time for other activities. However, those who sleep significantly more or less than 9 or more hours a night, significantly less, 6 or fewer hours a night (Webb & Oreland, 1968; Webb & Agnew, 1970). Numerous attempts have been made to determine ways to lengthen and shorten sleep. Several factors appear to be involved, but the most consistent are sleep conditions, ambient temperature, and individual differences. In general, the shorter sleepers show more of these factors and tend to sleep less. The longer sleepers, on the other hand, show fewer of these factors and tend to sleep more. The reasons for these differences are not well understood.
requirement and observed correlations have remained sparse. However, one researcher suggested that the "low number requirement of the short sleeper...[might be a] manifestation of a need to augment suboptimal levels of cortical arousal" (Skinner, 1987, p. 670). If this is the case we might expect short sleepers to do so in other ways as well, perhaps via hallucination generation. Also, it has been suggested that amount of sleep can relate to hallucinations (Demarest, 1972). Hence, it was hypothesized that short sleepers would exhibit more reports of hallucinations than average or long sleepers.

Method

Participation and Procedure

The sample consisted of 282 undergraduate and graduate psychology students who voluntarily completed a sleep questionnaire, part of which investigated length of sleep and hallucination experiences. The mean age for the sample was 22.5 years (SD = 6.9). Ages ranged from 17 to 38 years. There was no significant difference in mean ages between the sexes (t(244) = .36, p > .05). Men comprised 40.4% (114) of the sample and women 59.6% (168). Of the respondents reporting using sleeping aids and were excluded from the analyses. Totals do not always equal 270 because data were missing.

For the purposes of this study short sleepers were defined as those who reported sleeping less than 6 hours a night. Average sleepers endorsed 6-8 hours per night, with long sleepers being those who reported greater than 8 hours per night.

Results and Discussion

A total of 40 (14.3%) of the respondents qualified as short sleepers and 211 (75.6%) as average sleepers, with 28 (10.0%) being labeled long sleepers. These proportions are similar to those reported by Hoehn (1985), with a slightly greater proportion of short sleepers than long. No significant differences were found by gender for sleep length and hallucinations, hence the responses were pooled and combined. Table 1 presents the frequency table of sleep length by whether or not hallucinations were reported. As can be seen 57.5% (25) of short sleepers reported hallucinations, while 32.7% (69) of average sleepers and 21.4% (6) of long sleepers reported hallucinations. A chi-square (11.7, df = 2) for these data was significant at the .003 level, with a contingency coefficient of .20, suggesting a significant relationship between sleep length and hallucinations. The proportion of persons experiencing having experienced hallucinations in each group was surprising. Yet, keeping with the research hypothesis, a considerably greater proportion of short sleepers than average or long sleepers reported hallucinations. The trend over the three groups indicates that the shorter the sleep period experienced, the more are the individual

Instrument

A consent form, demographic data sheet, and a number of sleep related questions were presented to the participants in multiple-choice format. Variables addressed were length of night sleep, use of sleeping drugs, and the experience of having hallucinations.
is to report hallucinations. These results may show that not only do those who sleep less have sub-optimal levels of cortical arousal, but that their neural systems attempt to compensate by introducing self-generated stimuli into the sensorium. Additional research needs to be done with far more people using a continuous measure of sleep time to see if the observed relationship between customary sleep time and hallucinations is further supported. If it is, it would be helpful to explore how the reported hallucinations are experienced and under what circumstances.

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Footnote

The questionnaire is available from the first author.