THE AUTHORS REPLY

We thank Hale and Do (1) for their comments on our paper (2). The authors suggest that we use multinomial logistic rather than linear regression to model sleep duration since previous studies have found higher health risks for both short (<6.5 hours) and long (>8.5 hours) sleepers. Our aim, though, was to examine the distribution of objectively measured sleep characteristics, not to link sleep and health.

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Nonetheless, the proposed “short” and “long” categories are not appropriate for our data. Those categories are suggested by a handful of prior studies that used as their measure of sleep a self-report of habitual sleep duration. The distribution of such subjective reports of sleep duration is quite different from the distribution of our objective measure of sleep. In our paper (2), we give mean measured sleep duration as 6.06 hours, and fully 71 percent of our study population was in the suggested “short” sleep category of less than 6.5 hours. Only six of 648 subjects (two Black and four White) had a measured mean sleep duration of more than 8.5 hours, so such a category could not be used as a dependent variable in multinomial regression. In their prior analysis of self-reported sleep hours collected in the National Health Interview Survey, Hale and Do (3) found that Blacks are overrepresented in both short and long sleep categories. Although the standard deviation for sleep duration is greater for Blacks than for Whites in our study, we find overrepresentation of Blacks in only the “short” sleep category if we use the suggested categories. There are 228 Blacks (78 percent) and 188 Whites (50 percent) with measured sleep of less than 6.5 hours.

We also collected a subjective report of sleep duration in our study (2) and found a low correlation and systematic bias between subjective sleep and measured sleep. Subjective reports of sleep average almost an hour longer than objectively measured sleep, and the correlation varies by sociodemographic factors. We are currently analyzing the complex and intriguing relation between subjective reports of habitual sleep and measured sleep; it is not yet known what categorizations of objectively measured sleep duration might best capture hypothesized associations between sleep and health outcomes. Among our findings, germane to this response, is that the correlation between subjective and objective sleep duration is much lower for Blacks than for Whites.

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REFERENCES

3. Hale L, Do DP. Sleep and the city: an analysis of sleep duration, race, and neighborhood context in the NHIS. Presented at the Annual Meetings of the Population Association of America, Los Angeles, California, April 1, 2006.

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