

Sleep Difficulties in Adults: United States, 2020

Dzifa Adjaye-Gbewonyo, Ph.D., Amanda E. Ng, M.P.H., and Lindsey I. Black, M.P.H.

Key findings

Data from the National Health Interview Survey

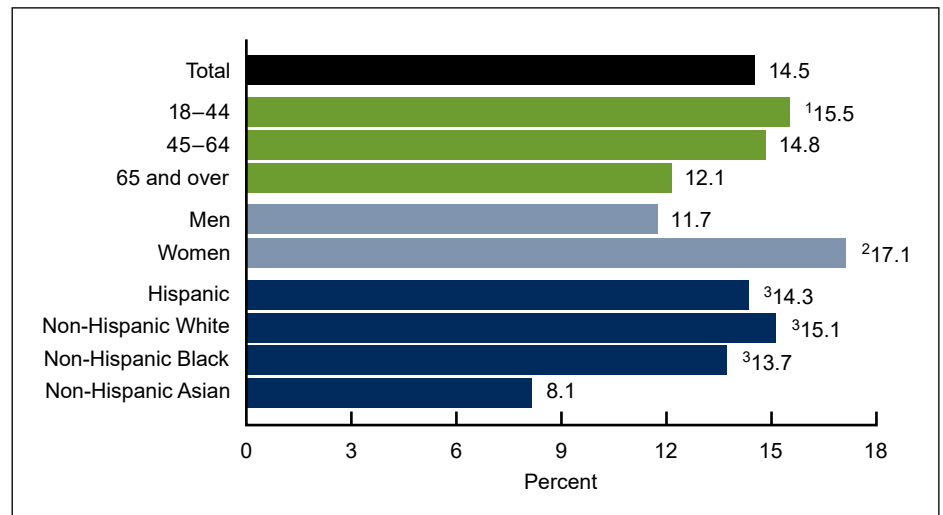
- In 2020, 14.5% of adults had trouble falling asleep most days or every day in the past 30 days.
- The percentage of adults who had trouble falling asleep increased as educational attainment and family income decreased and as place of residence became more rural.
- A greater percentage of non-Hispanic White (21.0%) adults had trouble staying asleep most days or every day in the past 30 days compared with non-Hispanic Black (15.4%), Hispanic (10.6%), and non-Hispanic Asian (8.7%) adults.
- The percentage of adults who had trouble staying asleep increased as family income decreased and as place of residence became more rural.

The American Academy of Sleep Medicine and the Sleep Research Society recommend adults sleep at least 7 hours a night (1); over one-quarter of adults do not meet this recommendation (2). Signs of good sleep quality include taking less time to fall asleep and not waking up often or for long periods (3). This report uses 2020 National Health Interview Survey (NHIS) data to describe the prevalence of sleep difficulties, defined here as trouble falling or staying asleep most days or every day in the past 30 days, among adults in the United States by sociodemographic and geographic characteristics.

What percentage of adults had trouble falling asleep most days or every day in the past 30 days, and were there differences by demographic characteristics?

- In 2020, 14.5% of adults had trouble falling asleep most days or every day in the past 30 days (Figure 1).

Figure 1. Percentage of adults aged 18 and over who had trouble falling asleep most days or every day in the past 30 days, by age, sex, and race and Hispanic origin: United States, 2020



¹Significant linear trend by age ($p < 0.05$).

²Significantly different from men ($p < 0.05$).

³Significantly different from non-Hispanic Asian adults ($p < 0.05$).

NOTES: Estimates are based on household interviews of a sample of the civilian noninstitutionalized population. Access data table for Figure 1 at: <https://www.cdc.gov/nchs/data/databriefs/db436-tables.pdf#1>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.



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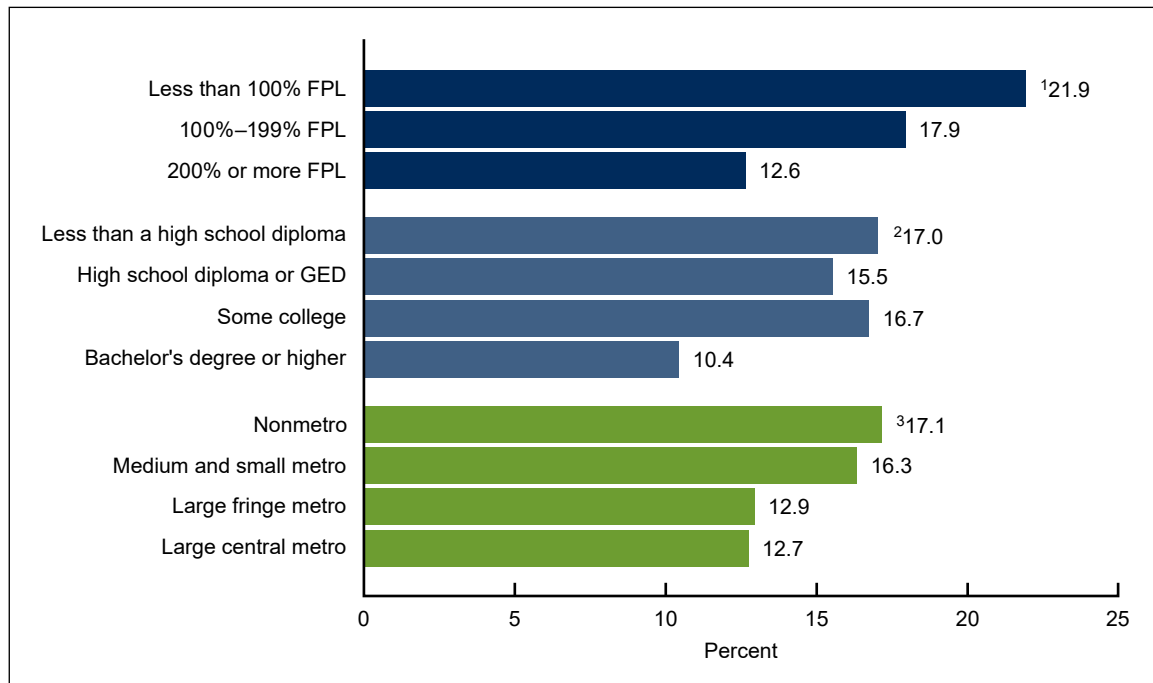


- The percentage of adults who had trouble falling asleep decreased with increasing age, from 15.5% among adults aged 18–44 to 12.1% among those aged 65 and over.
- Women (17.1%) were more likely to have trouble falling asleep than men (11.7%).
- Non-Hispanic Asian adults (8.1%) were less likely than non-Hispanic Black (13.7%), Hispanic (14.3%), and non-Hispanic White (15.1%) adults to have trouble falling asleep.

Were there differences in the percentage of adults who had trouble falling asleep by socioeconomic status and urbanization level?

- In 2020, the percentage of adults who had trouble falling asleep most days or every day in the past 30 days decreased with increasing family income, from 21.9% among adults with family incomes less than 100% of the federal poverty level (FPL) to 12.6% among those with family incomes greater than or equal to 200% of FPL (Figure 2).
- About one in six adults with less than a high school diploma (17.0%), 15.5% of adults with a high school diploma or GED, 16.7% of adults with some college, and 10.4% of adults with a bachelor’s degree or higher had trouble falling asleep.
- The percentage of adults who had trouble falling asleep increased as the place of residence became more rural, from 12.7% among adults living in large central metropolitan areas to 17.1% among adults living in nonmetropolitan areas.

Figure 2. Percentage of adults aged 18 and over who had trouble falling asleep most days or every day in the past 30 days, by family income, education, and urbanization level: United States, 2020



¹Significant linear trend by family income ($p < 0.05$).

²Significant quadratic trend by education ($p < 0.05$).

³Significant linear trend by urbanization level ($p < 0.05$).

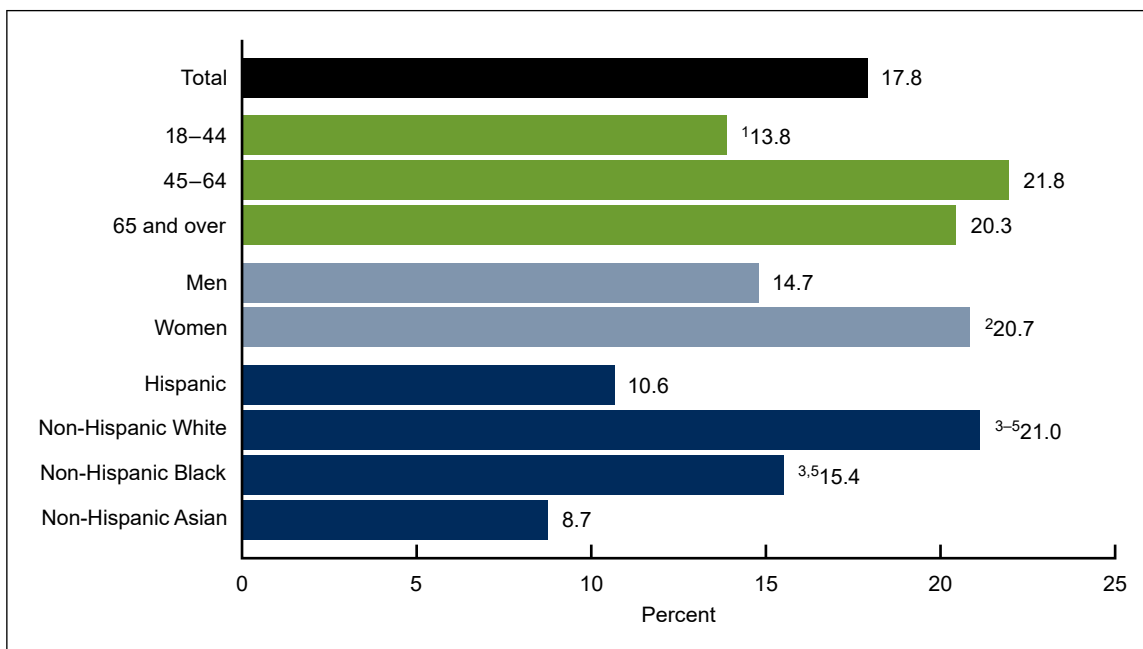
NOTES: FPL is federal poverty level. Estimates are based on household interviews of a sample of the civilian noninstitutionalized population. Access data table for Figure 2 at: <https://www.cdc.gov/nchs/data/databriefs/db436-tables.pdf#2>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.

Were there differences in the percentage of adults who had trouble staying asleep by sex, age, and race and Hispanic origin?

- In 2020, 17.8% of adults had trouble staying asleep most days or every day in the past 30 days (Figure 3).
- Younger adults were less likely to have trouble staying asleep (13.8% of those aged 18–44) compared with adults aged 45–64 (21.8%) and adults aged 65 and over (20.3%).
- Women (20.7%) were more likely than men (14.7%) to have trouble staying asleep.
- Non-Hispanic White adults (21.0%) were more likely to have trouble staying asleep than non-Hispanic Black (15.4%), Hispanic (10.6%), and non-Hispanic Asian (8.7%) adults. Non-Hispanic Black adults were more likely to have trouble staying asleep than Hispanic and non-Hispanic Asian adults.

Figure 3. Percentage of adults aged 18 and over who had trouble staying asleep most days or every day in the past 30 days, by age, sex, and race and Hispanic origin: United States, 2020



¹Significant quadratic trend by age ($p < 0.05$).

²Significantly different from men ($p < 0.05$).

³Significantly different from Hispanic adults ($p < 0.05$).

⁴Significantly different from non-Hispanic Black adults ($p < 0.05$).

⁵Significantly different from non-Hispanic Asian adults ($p < 0.05$).

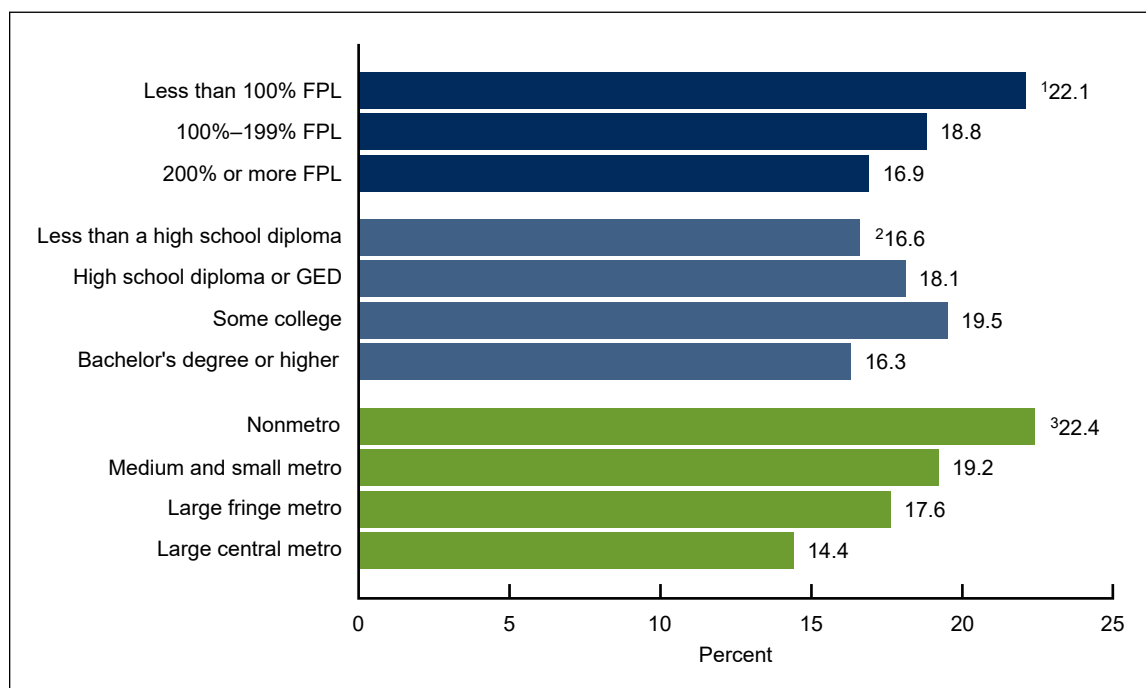
NOTES: Estimates are based on household interviews of a sample of the civilian noninstitutionalized population. Access data table for Figure 3 at: <https://www.cdc.gov/nchs/data/databriefs/db436-tables.pdf#3>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.

Were there differences in the percentage of adults who had trouble staying asleep by socioeconomic status and urbanization level?

- In 2020, the percentage of adults who had trouble staying asleep most days or every day in the past 30 days decreased as adults' family income increased, from 22.1% among those with family incomes below 100% of FPL to 16.9% among those with family incomes greater than or equal to 200% of FPL (Figure 4).
- About one in six adults (16.6%) with less than a high school diploma, 18.1% of adults with a high school diploma or GED, 19.5% of adults with some college, and 16.3% of adults with a bachelor's degree or higher had trouble staying asleep.
- The percentage of adults who had trouble staying asleep decreased as place of residence became more urban, from 22.4% in nonmetropolitan areas to 14.4% in large central metropolitan areas.

Figure 4. Percentage of adults aged 18 and over who had trouble staying asleep most days or every day in the past 30 days, by family income, education, and urbanization level: United States, 2020



¹Significant linear trend by family income ($p < 0.05$).

²Significant quadratic trend by education ($p < 0.05$).

³Significant linear trend by urbanization level ($p < 0.05$).

NOTES: FPL is federal poverty level. Estimates are based on household interviews of a sample of the civilian noninstitutionalized population. Access data table for Figure 4 at: <https://www.cdc.gov/nchs/data/databriefs/db436-tables.pdf#4>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.

Summary

This report describes sleep difficulties in U.S. adults using data from the 2020 NHIS. Overall, 14.5% of adults had trouble falling asleep and 17.8% of adults had trouble staying asleep. With increasing age, adults were less likely to have trouble falling asleep but more likely to have trouble staying asleep. Women were more likely than men to have trouble both falling and staying asleep. Sleep difficulties varied by race and ethnicity, with non-Hispanic Asian adults having less trouble falling and staying asleep and non-Hispanic White adults having more trouble staying asleep. In addition, similar patterns for both falling asleep and staying asleep were seen by family income as well as urbanization level. Sleep difficulties decreased as income and urbanization level increased. Adults with a bachelor's degree or higher also had less trouble falling and staying asleep, though patterns by educational attainment varied by sleep difficulty.

Although previous research has noted disparities in sleep duration among demographic subgroups (4,5), sleep quality has received less attention and findings on sleep difficulties have not always been consistent (6). Detailing patterns of poor sleep quality among subgroups may inform future research on improvements in sleep health.

Definitions

Family income as a percentage of FPL: Based on the federal poverty level, which was calculated from the family's income in the previous calendar year and family size using the U.S. Census Bureau's poverty thresholds (7). Family income was imputed when missing (8).

Race and Hispanic origin: Adults categorized as Hispanic may be of any race or combination of races. Adults categorized as non-Hispanic White, non-Hispanic Black, or non-Hispanic Asian indicated one race only. Estimates for non-Hispanic adults of other races are not shown.

Trouble falling asleep: Based on a response of "most days" or "every day" to the question, "During the past 30 days, how often did you have trouble falling asleep?"

Trouble staying asleep: Based on a response of "most days" or "every day" to the question, "During the past 30 days, how often did you have trouble staying asleep?"

Urbanization level: Counties were classified according to their metropolitan status using the National Center for Health Statistics (NCHS) Urban–Rural Classification Scheme (9). Urban counties include large central counties (inner cities); the fringes of large counties (suburbs); and medium and small counties. Rural counties include micropolitan statistical areas and noncore areas, including open countryside, rural towns (populations of less than 2,500), and areas with populations of 2,500–49,999 that are not part of larger labor market areas (urban areas).

Data source and methods

NHIS is a nationally representative household survey of the civilian noninstitutionalized U.S. population. It is conducted continuously throughout the year by NCHS. Interviews are typically conducted in respondents' homes, but follow-ups to complete interviews may be conducted over the telephone. Due to the COVID-19 pandemic, data collection procedures in 2020 were disrupted. From April through June all interviews were conducted by telephone only, and from July through December interviews were attempted by telephone first with follow-ups to complete interviews by personal visit. For more information about NHIS, visit <https://www.cdc.gov/nchs/nhis.htm>.

Point estimates and the corresponding confidence intervals for this analysis were calculated using SAS-callable SUDAAN software (10) to account for the complex sample design of NHIS. All estimates are based on self-report and meet NCHS data presentation standards for proportions (11). Differences between percentages were evaluated using two-sided significance tests at the 0.05 level. Linear and quadratic trends by age group, family income, education, and place of residence were evaluated using Proc Descript, poly option.

About the authors

Dzifa Adjaye-Gbewonyo, Amanda E. Ng, and Lindsey I. Black are with NCHS' Division of Health Interview Statistics.

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