

Case 16: Sleep Hygiene Practices on Sleep Quality

A sleep research institute develops a nonpharmacological intervention program focusing on sleep hygiene practices, and the study evaluates the effectiveness of this 4-week intervention program by measuring participants' sleep quality scores before and after the intervention. Twenty participants with mild to moderate sleep difficulties are recruited for the study. The Pittsburgh Sleep Quality Index (PSQI) is administered before and after the 4-week intervention. The PSQI provides a score ranging from 0 to 21, where higher scores indicate poorer sleep quality. Does the sleep hygiene intervention program significantly improve participants' sleep quality as measured by PSQI? ([download data](#))

Initial Questions

1. What are the research objectives?
2. What are the statistical questions?
3. What is the response variable, and what is the data type of the response variable?
4. What are the explanatory variables of interest?
5. Are there covariates?
6. What is the population of interest?
7. What is the subject, and what is the number of distinct subjects?
8. Are there subject-level data?
9. Are response variables dependent (repeated measures / clustered subjects)?
10. Are the subjects selected randomly?
11. Are the subjects randomly assigned to different groups?

Initial Thoughts