

Case 36: Assessing Factors Affecting Customer Complaints

A telecommunications company serves many customers through phone calls, and customers have the option to leave a complaint about the service they received from the service representative right after their service interaction. The company wants to understand factors associated with the number of complaints received by service representatives during a workday, which can help the company to improve customer satisfaction and service quality. The company collects data from 40 service representatives randomly selected from multiple call centers for a single day. For each representative, the following variables are recorded: number of complaints, number of customers served, and years of experience of the service representative. The goal is to understand what factors influence the number of complaints about the service provided by service representatives. ([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