

Individual Exercise 6

Survey Research

Study A: Preventive Health Services Demonstration

Eligible population: People aged 65 and over living in 7 zip code areas in Baltimore area.

Sampling plan: Classify the population by type of usual source of care (private physician, community health center, hospital outpatient department, no usual source). Within usual source categories, select 500 people, for a total of 2,000. Following enrollment, randomize to treatment or control group.

Study B: Epidemiologic Catchment Area: Eastern Baltimore Mental Health Survey

Eligible population: People aged 18 and over living in a catchment area located in the eastern third of Baltimore City. The catchment area is composed of 71 census tracts.

Sampling plan: In each census tract, identify "segments" composed of blocks (or groups of blocks) with at least 20 housing units in them. Select segments systematically, with about 6 segments chosen in each census tract (the number of segments selected depends on the size of the census tract). Select households within segments randomly. Within households, apply a selection procedure to choose one person aged 18 to 64 years for the study; all people aged 65 and over are chosen automatically.

Study C: COSTAR

Eligible population: Chronically mentally ill and difficult to treat individuals aged 18 and over receiving or seeking treatment from the Johns Hopkins Community Psychiatry Program.

Sampling plan: All people meeting the eligibility criteria are invited to participate. Those who agree are assigned at random to the experimental (COSTAR) group or to the control group.

Study D: Child Health Status Assessment

Eligible population: Adolescents aged 11 to 17, some with health problems.

Sampling plan: Staff in several specialty clinics in the Johns Hopkins Hospital are asked to nominate teenagers with certain health problems who are articulate and might be interested in participating in the study. In one or two schools, volunteers are sought.

1. Which of these studies used random selection?
 - a. None
 - b. Study A
 - c. Study B
 - d. Study C
 - e. Study D
 - f. Studies A and B
 - g. Studies A, B, and C
 - h. Studies A and C

2. Which of these studies used randomization?
 - a. None

- b. Study A
 - c. Study B
 - d. Study C
 - e. Study D
 - f. Studies A and B
 - g. Studies A, B, and C
 - h. Studies A and C
3. What kind of sampling was used in Study D?
- a. Randomization
 - b. Random selection
 - c. Systematic sampling
 - d. Convenience sampling
4. In the Preventive Health Services Demonstration project, we know that about 75% of the elderly go to private doctors, about 10% go to community health centers, 10% use hospital outpatient departments, and 5% have no regular care source. What is the purpose of using the sampling plan described here?
- a. To get a representative sample of people aged 65 and over.
 - b. To have more people in the sample who attend health centers, hospital OPDs, or who have no usual source than there would be if a simple random sample were drawn.
 - c. To get a sample with more very sick people in it.

ANSWERS

1. **F:** Each of Studies A and B use random selection at different points. In Study A, people are selected at random within usual source groups. In Study B, random selection is applied twice, to select households within segments and again within households to select one adult aged 18-64.
2. **H:** Study A used both random selection and randomization, and Study C used randomization. In both studies, randomization was used to assign patients the study and control groups.
3. **D:** Participants were identified in a convenient way, by asking for nominations and volunteers, rather than constructing a sampling frame and selecting a sample systematically.
4. **B:** Stratifying the eligible population by type of usual source and then selecting equal numbers of people within each stratum increases the numbers in the study with rare characteristics that may be important to the study. Thus, instead of ending up with a sample with only 5% who have no usual source of care, this sample would have 25% in that group and it would be possible to analyze their experience more thoroughly.