

Sampling techniques: Advantages and disadvantages

| Technique | Descriptions | Advantages | Disadvantages |
|-------------------|---|---|--|
| Simple random | Random sample from whole population | Highly representative if all subjects participate; the ideal | Not possible without complete list of population members; potentially uneconomical to achieve; can be disruptive to isolate members from a group; time-scale may be too long, data/sample could change |
| Stratified random | Random sample from identifiable groups (strata), subgroups, etc. | Can ensure that specific groups are represented, even proportionally, in the sample(s) (e.g., by gender), by selecting individuals from strata list | More complex, requires greater effort than simple random; strata must be carefully defined |
| Cluster | Random samples of successive clusters of subjects (e.g., by institution) until small groups are chosen as units | Possible to select randomly when no single list of population members exists, but local lists do; data collected on groups may avoid introduction of confounding by isolating members | Clusters in a level must be equivalent and some natural ones are not for essential characteristics (e.g., geographic: numbers equal, but unemployment rates differ) |
| Stage | Combination of cluster (randomly selecting clusters) and random or stratified random sampling of individuals | Can make up probability sample by random at stages and within groups; possible to select random sample when population lists are very localized | Complex, combines limitations of cluster and stratified random sampling |
| Purposive | Hand-pick subjects on the basis of specific characteristics | Ensures balance of group sizes when multiple groups are to be selected | Samples are not easily defensible as being representative of populations due to potential subjectivity of researcher |
| Quota | Select individuals as they come to fill a quota by characteristics proportional to | Ensures selection of adequate numbers of subjects with appropriate characteristics | Not possible to prove that the sample is representative of designated population |

| | | | |
|------------------------------------|--|--|--|
| | populations | | |
| Snowball | Subjects with desired traits or characteristics give names of further appropriate subjects | Possible to include members of groups where no lists or identifiable clusters even exist (e.g., drug abusers, criminals) | No way of knowing whether the sample is representative of the population |
| Volunteer, accidental, convenience | Either asking for volunteers, or the consequence of not all those selected finally participating, or a set of subjects who just happen to be available | Inexpensive way of ensuring sufficient numbers of a study | Can be highly unrepresentative |

Source: Black, T. R. (1999). *Doing quantitative research in the social sciences: An integrated approach to research design, measurement, and statistics*. Thousand Oaks, CA: SAGE Publications, Inc. (p. 118)