

GLOSSARY OF MEASUREMENT AND EVALUATION TERMS

(SAMHSA/CSAP)

Hardly exhaustive, this list of definitions covers many terms used in measurement and evaluation. Some of the terms are used in the present GUIDELINES; other terms will arise in conversations with evaluators, data collectors, and data analysts.

Causal Relationship: Theoretical notion that change in one variable forces, produces, or brings about a change in another. Requires empirical support through a controlled experiment.

Content Analysis: Process of studying and tracking what has been written and discussed, then translating this qualitative material into quantitative form through some type of counting approach that involves coding and classifying of specific messages.

Correlation: Association or relationship between two variables.

Correlation Coefficient: Measure of association (symbolized as r) that describes the direction and strength of a linear relationship between two variables, measured at the interval or ratio level (e.g. Pearson's Correlation Coefficient).

Cross-Sectional Study: Study based on observations representing a single point in time.

Ethnographic Research: Relies on the tools and techniques of cultural anthropologists and sociologists to obtain a better understanding of how individuals and groups function in their natural settings. Usually, this type of research is carried out by a team of impartial, trained researchers who immerse themselves into the daily routine of a neighborhood or community, using a mix of observation, participation, and role-playing techniques, in an effort to try to assess what is really happening from a cultural perspective.

Evaluation Research: Determines the relative effectiveness of a particular program or strategy, measuring outputs and outcomes against a predetermined set of objectives.

Experiment: Controlled arrangement and manipulation of conditions to systematically observe specific occurrences, with the intention of defining those criteria that might possibly be affecting those occurrences. An experimental, or quasi-experimental, research design usually involves two groups – an experimental group exposed to given criteria, and a control group, not exposed. Comparisons are then made to determine what effect, if any, exposures to the criteria have had on those in the experimental group.

Factor Analysis: Algebraic procedure that seeks to group or combine items or variables in a questionnaire based on how they naturally relate to each other as general descriptors or factors.

Focus Group: Exploratory technique in which a group of somewhere between 8 and 12 individuals – under the guidance of a trained moderator – are encouraged, as a group, to discuss freely any and all of their feelings, concerns, problems and frustrations relating to specific topics under discussion. Focus groups are ideal for brainstorming, idea-gathering, and concept testing.

Hypothesis: Expectation about the nature of things derived from theory.

Hypothesis Testing: Determining whether expectations that a hypothesis represents are, indeed, true.

Incidence: Frequency with which a condition or event occurs within a given time and population.

Likert Scale: Developed by Rensis Likert, composite measure in which respondents are asked to choose from an ordered series of five responses to indicate their reactions to a sequence of statements (e.g., strongly agree ... somewhat agree ... neither agree nor disagree ... somewhat disagree... strongly disagree).

Longitudinal Study: Research design involving the collection of data at different points in time.

Mean: Measure of central tendency which is the arithmetic average of the scores.

Median: Measure of central tendency indicating the midpoint in a series of scores, the point above and below which 50% of the values fall.

Mode: Measure of central tendency which is the most frequently occurring, the most typical, value in a series.

Multivariate Analysis: Examination of the relationship among three or more variables.

Panel Study: 1) Type of longitudinal study in which the same individuals are interviewed more than once over a period of time to investigate the processes of response change, usually in reference to the same topic or issue. 2) Also, type of study in which a group of individuals are deliberately recruited because of their special demographic characteristics, to be interviewed more than once over a period of time on different topics or subjects.

Probability Sample: Process of random selection, in which each unit in a population has an equal chance of being included in the sample.

Qualitative Research: Usually refers to studies that are somewhat subjective, but nevertheless in-depth, using a probing, open-end, free-response format.

Quantitative Research: Usually refers to studies that are highly objective and projectable, using closed-end, forced-choice questionnaires. These studies tend to rely heavily on statistics and numerical measures.

Range: Measure of variability that is computed by subtracting the lowest score in a distribution from the highest score.

Regression Analysis: Statistical technique for studying relationships among variables, measured at the interval or ratio level.

Reliability: The extent to which the results would be consistent, or replicable, if the research were conducted a number of times.

Secondary Analysis: Technique for extracting from previously conducted studies new knowledge on topics other than those which were the focus of the original studies. Usually involves systematic re - analysis of existing data.

Standard Deviation: Index of variability of a distribution. Range from the mean within which approximately plus or minus 34% of the cases fall, provided the values are distributed in a normal curve.

Statistical Significance: Refers to the unlikeliness that relationships observed in a sample could be attributed to sampling error alone.

Survey: Systematic collection of data that uses a questionnaire and a recognized sampling method. Surveys are conducted face-to-face (in-person), by telephone, and are self-administered (usually distributed by mail, e-mail, or fax.)

Univariate Analysis: Examination of only one variable at a time.

Validity: Extent to which a research project measures what it is intended, or purports, to measure.

Variance: Measure of the extent to which individual scores in a set differ from each other. Sum of the squared deviations from the mean divided by the frequencies.