GLOSSARY OF MODULE 1 TERMS

Chapter 2: Basic Statistics & Research Concepts

data	information, evidence, numbers and/or words indicating measurement of an object or phenomenon; THE DATA ARE!
population	a complete collection of organisms or objects having some common characteristic
sample	a subset of a population
parameter	a measurable characteristic of a population
statistics	a set of tools concerned with the collection, organization, and analysis of data; technically statistics are summaries (e.g., averages, medians) of sample characteristics, like *age*
statistic	a measurable characteristic of a sample
sampling	the process of selecting a sample from a population
reliability	when an experiment or test yields similar findings repeatedly, under similar circumstances
validity	when an experiment or test measures what they are claimed to measure,
random sampling	sampling in which each population member theoretically has an equal chance of being selected
unbiased or representative sample	a sample that shows no systematic tendency relative to the population; a sample that accurately reflects the population from which it was drawn
biased sample	a sample that is unrepresentative of the population from which it was drawn
random assignment	every participant in a study has an equal chance of being assigned to one or another experimental condition or group
single-blind study	participant does not know which experimental group he/she has been assigned to
double-blind study	neither the participant nor the experimenter knows which experimental group the participant is really in
description	observing an object or event and noting its characteristics
correlation	measure of a relationship between two variables
variable	any object or event that may take on different values or amounts

independent variable	the variable manipulated or controlled by the experimenter, changes from one research condition to another and affects the dependent variable
dependent variable	the object or event being measured, "depends on" independent variable
experiment	research in which hypothetical assumptions are tested in a controlled environment
survey	Series of questions designed to assess a particular psychological phenomenon
naturalistic observation	when data are collected about objects or events in their normal environment
laboratory	research setting in which variables can be tightly controlled

Chapter 3: Variables and Scales of Measurement

operationalize	translating a psychological phenomenon or something abstract into something concrete and quantifiable/countable
independent variable	the variable manipulated or controlled by the experimenter
dependent variable	in behavioral science, the object or event that is being measured (e.g., counted)
Qualitative variable	non-numeric, categorical, cannot be ordered numerically (sequentially)
Quantitative Variable	measured in terms of numeric value
continuous variable	variable whose measurement can take an infinite number of values
discrete variable	variable capable of assuming only specific values
scales of measurement	rules used to assign numbers to objects or events or behaviors
nominal scale	scale assigning names or labels to different objects or events, usually expressed as a name, qualitative
ordinal scale	measurement scale wherein numbers identify quantitative value to rank-order events, unequal intervals between scale values
interval scale	scale wherein numbers serve to identify and rank-order objects or events, equal intervals, no real 0 point
ratio scale	interval scale with a true 0 point
descriptive statistics	used to illustrate quantities of numeric observations
inferential statistics	statistical techniques that allow us to make conclusions about a larger group based on a subset of it and tell us how confident we are in our conclusions

Chapter 4: Distributions

score	data point, symbolized by X

frequency distribution	distribution in which the scores are ranked from highest to lowest, and the number of times each score occurs (its frequency) is listed beside it
frequency	the number of times each scores occurs; symbolized by f
apparent limits	limits of intervals with gaps between them
real limits	limits of scores without gaps between them; constructed by subtracting a half unit from the lower apparent limit and adding a half unit to the upper apparent limit
percentage frequencies	frequencies of occurrence presented as percentages of the total sample
cumulative frequency distribution	distribution constructed by starting with the distribution's lowest interval and accumulating frequencies as you ascend
cumulative percentage	tells the percentage of scores in an interval plus the percentage of scores below the interval
cumulative percentage distribution	frequency distribution in which the percentage frequencies are accumulated from the lowest score to the highest score

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Content adapted from various sources including:

Online Statistics Education: A Multimedia Course of Study (http://onlinestatbook.com/). Project Leader: David M. Lane, Rice University

Thorne, M.B. and Giesen, J.M. (2002). Statistics For The Behavioral Science (4th ed.). New York: McGraw-Hill.

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