From the California Evidence-Based Clearinghouse Website

Glossary of Terminology Frequently Used in Research

Anecdotal – Information based on casual observations or indications rather than rigorous or scientific analysis.

Anhedonia – An inability to experience pleasure from normally pleasurable life events such as eating, exercise, and social interaction.

Attrition – The loss of participants from a sample being used in a study. Attrition may be due to participants dropping of the study out or losing contact with researchers.

Case-control study – Compares people with a disease or condition ('cases') to another group of people from the same population who don't have that disease or condition ('controls'). A case-control study can identify risks and trends, and suggest some possible causes for disease, or for particular outcomes. For example, a study could compare 4th graders with ADHD to a group of 4th graders without ADHD.

Cohort study – A 'cohort' is a group of people clearly identified: a cohort study follows that group over time, and reports on what happens to them. A cohort study is an observational study, and it can be prospective (following people forward over time) or retrospective (looking at what happened in the past). For example, a cohort study of 4th graders could follow them forward as they age, or look back at their previous health and school histories.

Controlled settings – A control is a standard against which experimental observations may be evaluated. In a controlled group study, one group of participants is given an intervention, while another group (i.e., the control group) is given the standard treatment or a placebo. For example, one classroom of 4th graders may receive an interventional health curriculum while the classroom of 4th graders across the hall receives the standard health curriculum and serves as the control group.

Correlation – A measure of the relationship between scores. Correlation scores vary between -1.0 and +1.0, with zero indicating no correlation. Scores that are measuring similar things, such as related items on scale or scores on scales measuring the same concept should be highly correlated. Scores that are measuring different things should show a low correlation. It is also possible to have negative correlation scores, indicating an opposing relationship. For example, depression should be negatively correlated with well-being.

Cross-validation – A method of testing validity by using more than one sample of people from the same population.

Diagnostic and Statistics Manual for Mental Disorders [DSM] – This manual written and published by the American Psychological Association in Washington, DC, is used by mental health professionals to diagnose mental disorders in children and adults. It is usually abbreviated

DSM and the Roman numeral following it designates which version of the manual the citation is referring to (i.e., DSM-III [1980], DSM-III-R [1987], DSM-IV [1994], DSM-IV-TR [2000]).

Effectiveness trial – An effectiveness trial focuses on whether a treatment works when used in the real world. An effectiveness trial is done after the intervention has been shown to have a positive effect in an efficacy trial.

Efficacy – Power or capacity to produce a desired effect.

Efficacy trial – An efficacy trial focuses on whether an intervention can work under ideal circumstances and looks at whether the intervention has any effect at all.

Empirical research – Research conducted 'in the field', where data are gathered first-hand and/or through observation. Case studies and surveys are examples of empirical research.

Factor analysis – A statistical method used to verify that a scale or assessment has a certain number of dimensions. That is, correlations among items in a scale should correlate with each other to form subscales that each represents a single concept.

Fidelity – In intervention research, fidelity commonly refers to the extent to which an intervention is implemented as intended by the designers of the intervention. Thus, fidelity refers not only to whether or not all the intervention components and activities were actually implemented, but whether they were implemented in the proper manner.

Matched comparison study – A study in which groups who will be compared are created by a non-random method, but where participants in each group are assigned so that they are similar in important characteristics such as ethnic or socioeconomic status, assessment scores, or other variables that might affect study outcomes.

Matched wait list study – In this type of study, subjects are matched based on certain characteristics, such as age, gender, or race/ethnicity, into pairs. One is then assigned to the intervention group, while the other half of each pair is assigned to a wait-list group, which will receive the intervention at a later time. The wait-list group serves as the control group.

Meta-analysis – A statistical technique which summarizes the results of several studies into a single estimate of their combined result. It is a key element of many systematic reviews.

Operant conditioning – A process of behavior modification in which the likelihood of a specific behavior is increased or decreased through positive or negative reinforcement each time the behavior is exhibited, so that the subject comes to associate the pleasure or displeasure of the reinforcement with the behavior.

Peer review – A refereeing process used to check the quality and importance of research studies. It aims to provide a wider check on the quality and interpretation of a report. For example, an article submitted for publication in a peer-reviewed journal is reviewed by other experts in the field.

Placebo group – A placebo is something that does not directly affect the behavior or symptoms under study in any specific way. A researcher must be able to separate placebo effects from the actual effects of the intervention being studied. For example, in a drug study, subjects in the experimental and placebo groups may receive identical-looking medication, but those in the experimental group are receiving the study drug while those in the placebo group are receiving a sugar pill. Typically, subjects are not aware whether they are receiving the study drug or a placebo.

Prevention (Primary) - This type of prevention consists of activities designed to impact families prior to any allegations of abuse and neglect, and include public education activities, such as parent education classes, family support programs, public awareness campaigns, etc.

Prevention (Secondary) - This type of prevention consists of activities targeted to families that have one or more risk factors, including families with substance abuse or domestic violence issues, teenaged parents, parents of special needs children, single parents and low-income families. These services include parent education classes for high-risk parents, respite care, home visiting programs, crisis nurseries, etc.

Prevention (Tertiary) - This type of prevention consists of activities targeted to families in which abuse has already occurred and include early intervention and targeted services, such as individual, group, and family counseling; parenting education - such as Parent-Child Interactive Therapy (PCIT); community and social services referrals for substance abuse treatment, domestic violence services, psychiatric evaluations, and mental health treatment; infant safe-haven programs; family reunification services (including follow-up care programs for families after a child has been returned); temporary child care; etc.

Randomization – A process that reduces the likelihood of bias by assigning people to specific groups (e.g., experimental and control groups) by chance alone (randomly). When groups are created by random assignment, individual characteristics are less likely to make the results inaccurate.

Randomized controlled trials (RCTs) – In a randomized controlled trial, participants are randomly assigned to receive either an intervention or control treatment (often usual care services). This allows the effect of the intervention can be studied in groups of people who are: (1) the same at the outset and (2) treated the same way, except for the intervention(s) being studied. Any differences seen in the groups at the end can be attributed to the difference in treatment alone, and not to bias or chance.

Reinforcers – A stimulus, such as a reward, the removal of an unpleasant event, or punishment, that in operant conditioning maintains or strengthens a desired response.

Reliability – The extent to which the same result will be achieved when repeating the same measure or study again. There are four types of reliability mentioned on this website:

- **Inter-rater -** Persons independently administering the same assessment to the same person should have highly similar results.

- **Internal** - Items on an assessment aimed at measuring the same thing or parts of the same thing (e.g., physical symptoms of anxiety) should be correlated.
- **Split-half** - A method of measuring internal reliability by verifying that half of the items on a scale are correlated with the other half.
- **Test-retest** - A method in which the same measure is administered multiple times and the resulting scores are compared. Assuming no important intervening events, a person's scores on a measure taken multiple times should be correlated.

Research Evidence – Defined on this website as research studies that have been published in a peer-reviewed journal.

Single subject studies – These prospective observation designs focus on a single subject and typically involve reporting data individually over time.

Uncontrolled group study – A study that does not have another group to compare results objectively against. In this case, only the group that receives the intervention is examined, so you cannot be certain that any changes seen were caused by the intervention itself, as other factors may have been acting.

Untreated group – This group serves as a control group for comparison with the treatment or intervention group. This group receives no treatment at all during the study.

Validity – The degree to which a result is likely to be true and free of bias. There are many types of validity:

- **Concurrent** – Scores on an assessment should be related to scores on a previously-validated measure of the same or similar construct/concept.
- **Construct** – The assessment measures content related to the theoretical definition of the assessment's purpose (the construct/concept). For example, items on a depression assessment measure should address the diagnostic criteria for depression.
- **Content** – Similar to construct validity. Assessment items should address the full range of the criteria for the construct/concept being measured.
- **Convergent** – Scores on assessments designed to measure the same construct (e.g., different depression assessment measures) should be positively correlated.
- **Criterion** – Scores on an assessment should relate to or predict outcomes relevant to its theoretical construct/concept. For example, an assessment of mathematical aptitude should predict performance in a mathematics class.
- **Divergent** – Measures of constructs/concepts that are not theoretically related (e.g., age and intelligence) should not be correlated across different scales
- **External validity** – External validity is the extent to which the results of a study can apply to people other than the ones that were in the study. This is a measure of how generalizable the results are to others outside of the study.
- **Face validity** – Items on an assessments should appear to the reader to measure what the assessment is designed to measure. Note: However, for some assessments intended to measure socially undesirable traits or behaviors, concealing the nature of the assessment may make it a more valid measure of the construct. For example, an assessment of

abusive behavior might not contain the term "abuse," but might focus instead on specific acts.

- **Internal validity** – Internal validity is the extent to which a study properly measures what it is meant to.

Validation sample – A group of people used to test the validity of a measure.