

Quality Indicator Checklist: Single-Subject Studies

Design type: _____ (e.g., multiple baseline...)

Participants

- (1) Participants were described with sufficient detail to allow others to select individuals with similar characteristics (e.g., age, gender, disability, diagnosis).
- (2) The process for selecting participants was described with replicable precision. (not necessary for moderate)

Setting

- (3) Critical features of the physical setting were described with sufficient precision to allow replication.

Dependent Variable/ Measures

- (4) All dependent variables were described with operational precision.
- (5) Each dependent variable was measured with a procedure that generates a quantifiable index.
- (6) The measurement process was described with replicable precision.
- (7) Dependent variables were measured repeatedly over time.
- (8) Data were collected on the reliability or inter-observer agreement (IOA) associated with each dependent variable, and IOA levels met minimal standards (e.g., IOA = 80%; Kappa = 60%).

Independent Variable/ Intervention

- (9) Independent variable was described with replicable precision.
- (10) Independent variable was systematically manipulated and under the control of the experimenter.
- (11) Overt measurement of the fidelity of implementation for independent variable (not necessary for moderate)

Procedures

- (12) A baseline phase provided repeated measurement of a dependent variable and established a pattern of responding that can be used to predict the pattern of future performance, if introduction or manipulation of the independent variable did not occur.
- (13) The procedural characteristics of the baseline conditions were described with replicable precision.

Results/ Graphs/ Design

- (14) The design provides at least three demonstrations of experimental effect at different points in time.
- (15) The design controls for common threats to internal validity (e.g., permits elimination of rival hypotheses).
- (16) Experimental effects were replicated across participants, settings, or materials to establish external validity.

Social Validity [must of have 1 of these 4 for acceptable quality]

- (17) The dependent variable is socially important.
- (18) The magnitude of change in the dependent variables resulting from the intervention is measured as socially important.

- (19) Implementation of the independent variable was described by author as practical and cost effective.
- (20) Social validity is enhanced by implementation of the independent variable over extended time periods, by typical intervention agents, in typical physical and social contexts.

Decision Rules for the Presence of Single-Subject Quality Indicators

1. Age, disability, gender reported and the description provided allows for possible replication of the study. Participants were operationally described.
2. The process by which students were selected for participation is replicable. Participant selection was operationally described (or if description of participants thorough enough that selection for future researchers clear).
3. Operational descriptions of the setting were provided. Another researcher should be able to use the description of participants and setting to recruit similar participants who inhabit similar settings.
4. What is being measured in the study was operationally defined. Each dependent variable is described for valid consistent assessment of the variable.
5. Measure of the dependent variable is quantifiable (e.g., frequency, time) or observable.
6. The assessment process for each dependent variable can be replicated, based on the description of measurement provided.
7. The dependent variable is measured repeatedly to allow for observation of patterns prior to intervention and comparison of performance across conditions or phases.
8. Interobserver reliability data were collected repeatedly throughout various phases of the study (e.g., not only in baseline).
9. The independent variable was operationally defined to allow both valid interpretation of the results and accurate replication of the procedures. May include descriptions of materials and specific actions and should avoid only generic descriptions (e.g., cooperative play) that are prone to high variability in implementation.
10. The independent variable was systematically manipulated (actively manipulated) by the researcher (not a naturally occurring event). The researcher determined when and how the independent variable would change.
11. Documentation of procedural fidelity measures were provided, either through a continuous direct measure of the independent variable's implementation or some other measure that is reported.
12. The dependent variable was observed until a pattern of responding is consistent to allow for prediction of future responses (5 or more are recommended, fewer are acceptable if pattern established).
13. Baseline conditions/ procedures described with replicable procedures. Baseline should be described to the same level of detail as a treatment phase to allow for comparisons and replication of the study.
14. At least three demonstrations of effect of the intervention were demonstrated at three different points in time with one participant, or across at least three different participants. A demonstration of effect is an increase (desired increase), decrease (desired decrease), or desired reversal in direction of the anticipated pattern of data, with the introduction of the independent variable. Look at graphs for this evidence. A functional relationship is compromised when (a) there is a long latency between manipulation of the IV and a change in the DV, (b) mean changes across conditions are similar to changes within conditions, or (c) trends do not follow those predicted by introduction of the IV.

15. Experimental control demonstrated through (a) introduction and withdrawal of the independent variable, (b) staggered introduction of the independent variable, or (c) manipulation of levels of the independent variable across observation periods
16. Within one study external validity is enhanced through replicable descriptions of (a) participants, (b) study context, and (c) factors influencing behavior prior to intervention. Also enhanced through use of multiple participants or settings and multiple measures of the DV in one study. Weakened by selection and attrition bias. Demonstrated through systematic replications of studies across multiple locations and multiple researchers.
17. The dependent variable selected was important for the individual(s) included in the study. A measure (interview, survey) strengthens the quality of the study – without a measure, only acceptable.
18. The amount of change in performance (dependent variable) has social significance, according to the author's analysis of the DV measure. The amount of increase or decrease in a behavior as a result of the manipulation of the IV matters.
19. Costs reported and the procedures associated with the IV were determined by the author (or stakeholders) to be practical and cost efficient. Consider number of people required to implement the intervention, time allocated for the intervention, required manipulation of the setting, required materials.
20. Typical intervention agents reported the procedures to be acceptable, feasible, effective, and choose to continue to the intervention after the study. This is enhanced by studies that demonstrate use of the IV with typical intervention agents (e.g., parents, teachers), in contexts that are not overly disruptive to regular class or home routines.