

Table S4

Analysis of single-subject study (k = 1) using criteria of the Quality Indicators assessment

Criteria	Slack et al. (2015)
1.0. Context and setting. The study provides sufficient information regarding the critical features of the context or setting.	
1.1 The study describes critical features of the context or setting relevant to the review, for example, type of program or classroom, type of school (e.g., public, private, charter, preschool), curriculum, geographic location, community setting, socioeconomic status, physical layout.	☑
2.0. Participants. The study provides sufficient information to identify the population of participants to which results may be generalized and to determine or confirm whether the participants demonstrated the disability or difficulty of focus.	
2.1 The study describes participant demographics relevant to the review (e.g., gender, age/grade, race/ethnicity, socioeconomic status, language status).	☑
2.2 The study describes disability or risk status of the participants (e.g., specific learning disability, autism spectrum disorder, behavior problem, at risk for reading failure) and method for determining status (e.g., identified by school using state IDEA criteria, teacher nomination, standardized intelligence test, curriculum-based measurement probes, rating scale).	NA
3.0. Intervention agent. The study provides sufficient information regarding the critical features of the intervention agent.	
3.1 The study describes the role of the intervention agent (e.g., teacher, researcher, paraprofessional, parent, volunteer, peer tutor, sibling, technological device/computer) and, as relevant to the review, background variables (e.g., race/ethnicity, educational background/licensure).	☑
3.2 The study describes any specific training (e.g., amount of training, training to a criterion) or qualifications (e.g., professional credential) required to implement the intervention and indicates that the interventionist has achieved them.	☑
4.0. Description of practice. The study provides sufficient information regarding the critical features of the practice (intervention), such that the practice is clearly understood and can be reasonably replicated.	
4.1 The study describes detailed intervention procedures (e.g., intervention components, instructional behaviors, critical or active elements, manualized or scripted procedures, dosage) and intervention agents' actions (e.g., prompts, verbalizations, physical behaviors, proximity) or cites one or more accessible sources that provide this information.	☑
4.2 When relevant, the study describes materials (e.g., manipulatives, worksheets, timers, cues, toys) or cites one or more accessible sources providing this information.	☑
5.0. Implementation fidelity. The practice is implemented with fidelity.	
5.1 The study assesses and reports implementation fidelity related to adherence using direct, reliable measures (e.g., observations using a checklist of critical elements of the practice).	☑
5.2 The study assesses and reports implementation fidelity related to dosage or exposure using direct, reliable measures (e.g., observations or self-report of the duration, frequency, curriculum coverage of implementation).	☑
5.3 As appropriate, the study assesses and reports implementation fidelity (a) regularly throughout implementation of the intervention (e.g., beginning, middle, end of the intervention period), and (b) for each interventionist, each setting, and each participant or other unit of analysis. If either adherence or dosage is assessed and reported, this item applies to the type of fidelity assessed. If neither adherence nor dosage is assessed and reported, this item is not applicable.	☑
6.0. Internal validity. The independent variable is under the control of the experimenter. The study describes the services provided in control and comparison conditions and phases. The research design provides sufficient evidence that the independent variable causes change in the dependent variable or variables. Participants stayed with the study, so attrition is not a significant threat to internal validity.	
6.1 The researcher controls and systematically manipulates the independent variable.	☑
6.2 The study describes baseline (single-subject studies) or control/comparison (group comparison studies) conditions, such as the curriculum, instruction, and interventions (e.g., definition, duration, length, frequency, learner:instructor ratio).	☑
6.3 Control/comparison-condition or baseline-condition participants have no or extremely limited access to the treatment intervention.	☑
6.5 The design provides at least three demonstrations of experimental effects at three different times.	☑
6.6 For single-subject research designs with a baseline phase (alternating treatment designs do not require a baseline), all baseline phases include at least three data points (except when fewer are justified by study author due to reasons such as measuring severe or dangerous problem behaviors and zero-baseline behaviors with no likelihood of improvement without intervention) and establish a pattern that predicts undesirable future performance (e.g., increasing trend in problem behavior, consistently infrequent exhibition of appropriate behavior, highly variable behavior).	☑
6.7 The design controls for common threats to internal validity (e.g., ambiguous temporal precedence, history, maturation, diffusion) so plausible, alternative explanations for findings can be reasonably ruled out. Commonly accepted designs such as reversal (ABAB), multiple-baseline, changing criterion, and alternating treatment address this quality indicator when properly designed and executed, although other approaches can be accepted if study authors justify how they ruled out alternative explanations for findings or control for common threats to internal validity.	☑
7.0. Outcome measures/dependent variables. Outcome measures are applied appropriately to gauge the effect of the practice on study outcomes. Outcome measures demonstrate adequate psychometrics.	
7.1 Outcomes are socially important (e.g., they constitute or are theoretically or empirically linked to improved quality of life, an important developmental/learning outcome, or both).	☑
7.2 The study clearly defines and describes measurement of the dependent variables.	☑
7.3 The study reports the effects of the intervention on all measures of the outcome targeted by the review (p levels and effect sizes or data from which effect sizes can be calculated for group comparison studies; graphed data for single-subject studies), not just those for which a positive effect is found.	☑
7.4 Frequency and timing of outcome measures are appropriate. For most single-subject studies, a minimum of three data points per phase is necessary if a given phase is to be considered as part of a possible demonstration of experimental effect (except when fewer are justified by the study author due to reasons such as measuring severe or dangerous problem behaviors and zero baseline behaviors with no likelihood of improvement without intervention). For alternating treatment designs, at least four repetitions of the alternating sequence are required (e.g., ABABABAB; see Kratochwill et al., 2013).	☒
7.5 The study provides evidence of adequate internal reliability, interobserver reliability, test-retest reliability, or parallel-form reliability, as relevant (e.g., score reliability coefficient $\geq .80$, interobserver agreement $\geq 80\%$, kappa $\geq 60\%$).	☑
8.0. Data Analysis. Data analysis is conducted appropriately. The study reports information on effect size.	
8.2 The study provides a single-subject graph clearly representing outcome data across all study phases for each unit of analysis (e.g., individual, classroom, other group of individuals) to enable determination of the effects of the practice. Regardless of whether the study report includes visual or other analyses of data, graphs depicting all relevant dependent variables targeted by the review should be clear enough for reviewers to draw basic conclusions about the experimental control using traditional visual analysis techniques (i.e., analysis of mean, level, trend, overlap, consistency of data patterns across phases).	☑
<i>Note.</i> NA, Not applicable.	