A review of interventions to reduce challenging behavior in school settings for students with autism spectrum disorders

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CRD summary
The review concluded that the interventions effectively decreased or eliminated various challenging behaviours for school students with autism spectrum disorders across different age groups. Poor reporting of review methods, the lack of an assessment of validity, and small sample sizes mean that the authors’ conclusions may not be reliable.

Authors’ objectives
To evaluate interventions for the treatment of challenging behaviour for students with autism spectrum disorders (ASD) in school settings.

Searching
ERIC, PsycINFO and MEDLINE were searched; the search terms and search dates were not reported. The reference lists of included studies were screened for additional studies.

Study selection
Studies assessing interventions aimed at reducing challenging behaviour within a school classroom in participants aged between 3 and 21 years with a diagnosis of ASD were eligible for inclusion. Studies also had to be published in a peer-reviewed journal between 1995 and 2005 and be of a single-subject design. Studies that focused exclusively on the assessment of challenging behaviour, or did not include two or more data points for each baseline and treatment phase, were excluded. Contrary to the review’s inclusion criteria, some of the included studies were not of a ‘single-subject’ design.

The included studies used a number of interventions, such as social stories, cue cards, communication systems and reinforcement of other behaviours. The participants were aged from 3 to 17 years and exhibited challenging behaviours such as screaming, yelling, shouting or crying, stereotypy, and noncompliance and aggression.

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors categorised studies according to intervention types: antecedent manipulations (addressing environmental conditions prior to occurrence of challenging behaviour); change in instructional context (making a task easier or modifying the delivery of instruction); procedures that differentially reinforced alternative behaviour or differentially reinforced other behaviour; and self-management (increasing a student’s independent task completion or self-monitoring of challenging behaviour). The findings of the included studies were reported as positive (all participants experienced a decrease from baseline in challenging behaviour), mixed (one or more participants had a decrease or did not experience a decrease in challenging behaviour), or inconclusive (data did not clearly indicate whether the treatment was effective or not).

The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
The studies were grouped according to the intervention and combined in a narrative with an accompanying table.
Results of the review
Twenty-six studies (n=50) were included. The design of the studies was not specified but they appear to have been before-and-after studies. Most of the studies included only a single participant.

Ten studies (n=19) utilised interventions that manipulated antecedent conditions to treat challenging behaviour and reported positive results, although 2 studies (n=7) appeared to report mixed results.

Five studies (n=11) assessed change in challenging behaviour using change in instructional context. Four studies (n=10) reported decreases in challenging behaviour during the intervention and one (n=1) reported inconclusive results, with erratic behaviour being observed throughout the study.

Eight studies (n=17) assessed the use of differential reinforcement of other behaviour to achieve a decrease in challenging behaviour. Seven studies (n=16) reported positive results, while one (n=1) had mixed results.

Three studies (n=3) evaluated the use of a self-management strategy to decrease challenging behaviour. Only one study (n=1) reported positive results using an activity schedule; the remaining 2 studies (n=2) reported mixed results.

Authors’ conclusions
The findings suggest that the interventions used have effectively decreased or eliminated various challenging behaviours across different age groups. In addition, the studies support the feasibility of conducting challenging behaviour intervention research in a classroom setting.

CRD commentary
The review addressed a broad research question encompassing a wide range of intervention types. Inclusion criteria were defined in terms of the participants, outcomes and study designs. Several relevant sources were searched, but the fact that the search terms and dates were not reported means the search is not replicable. No attempts were made to reduce publication bias and it is unclear whether any language restrictions were applied. The methods used to select studies and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer error and bias. In addition, study validity was not assessed, thus the results from these studies and any synthesis might not be reliable. Given the differences in participants and interventions across the studies, the narrative synthesis was appropriate. Incomplete reporting of review methods, lack of an assessment of validity, and small sample sizes mean that the authors’ conclusions may not be reliable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further research is needed to assess the effectiveness of social stories and other interventions when linked with a functional behaviour assessment, and to examine interventions for possible shared characteristics which may contribute to an effective intervention. Further research should evaluate the effectiveness of treatments that do not require a long assessment phase.

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