A systematic review of teacher self-monitoring on implementation of behavioral practices

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HIGHLIGHTS

- We conducted a systematic review of teacher self-monitoring on fidelity of behavior practices in the classroom.
- Current evidence suggest teacher self-monitoring may be a potentially effective means of improving teacher and student outcomes.
- Seven of 17 studies met all quality indicators, highlighting the need for continued rigorous research in this area.

ARTICLE INFO

ABSTRACT

Behavioral intervention success relies in part on the accuracy with which interventions are implemented. Self-monitoring may be effective for improving teacher implementation fidelity of behavioral interventions. The purpose of this systematic review was to summarize the research on teacher self-monitoring of behavioral interventions and to summarize the quality of the research according to the Council for Exceptional Children quality indicators. A total of 17 studies were reviewed. Of these, seven met all research quality indicators. Studies are summarized according to: (a) teacher participants, (b) self-monitoring training, (c) self-monitoring practices, and (d) effects of teacher self-monitoring on teacher and student outcomes.

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1. Introduction

The success of behavioral practices and interventions relies, in part, on the fidelity with which the intervention is implemented (e.g. Gresham, 1989). New teachers report that challenging behavior/classroom management is their top professional development need (e.g. Monroe, Blackwell, & Pepper, 2010; Sugai & Horner, 2002). Unfortunately, in-service professional development on behavior management for teachers is also scarce (Westling, 2010). In-service professional development typically consists of one-day workshops (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). Such professional development workshops are time and resource efficient, but are not associated with sustained changes in teacher practices in the classroom (e.g., Joyce & Showers, 2002). Changes to teacher practices require a more systematic approach in which teachers are provided with coaching and performance feedback in the classroom (Powell & Diamond, 2013).

Performance feedback, as part of coaching and behavioral consultation, is a commonly researched approach for improving teacher practices (Bechtel, McGee, Huitema, & Dickinson, 2015). General features of performance feedback involve direct observation of the teacher, collecting data on the teacher's practices, reviewing those data, and action planning (Noell et al., 2005). Despite the effectiveness of performance feedback, the approach requires a substantive amount of technical assistance from external

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personnel (e.g., behavior specialists, school psychologists) (e.g., Arco, 2002). Such intensive consultation practices are often not feasible given the time and personnel limitations faced by schools. It is therefore critical to identify innovative and effective approaches of providing feedback to teachers on their behavioral practices that is both effective and resource efficient.

1.1. Self-monitoring

Self-monitoring, sometimes referred to as self-evaluation, is a component of self-assessment (Eva & Regehr, 2011), and represents a low-cost intervention, frequently used with students who have disabilities (e.g. Webber, Scheuermann, McCall, & Coleman, 1993). Self-monitoring involves observing one's own behavior, recording those observations, and analyzing those data to make decisions regarding how to improve one's performance (Bruhn, McDaniel, & Kreigh, 2015). Though primarily used as a student centered intervention, self-monitoring has emerged as a means for teachers to improve their own teaching behaviors while minimizing reliance on outside personnel (Mouzakitis, Codding, & Tyron, 2015). Teachers have been taught self-monitoring to (a) increase their use of instructional practices (Bingham, Spooner, & Browder, 2007), (b) decrease their use of ineffective practices (Szykula, & Hector; 1978), and (c) evaluate the degree to which they implement practices with fidelity (Reinke, Lewis-Palmer, & Merrell, 2008).

When teachers do not have access to observational data regarding their teaching, most teachers tend to either underestimate or overestimate the fidelity of their instructional practices (McFarland, Saudners, & Allen, 2009). Self-monitoring allows teachers to more accurately evaluate and refine their instructional practices (Wright, Ellis, & Baxter, 2012). Further, research has shown that teachers who self-monitor may improve not only their teaching practices, but also student outcomes. For example, Allinder, Bolling, Oats, and Gagnon (2000) evaluated the effects of teacher self-monitoring on mathematics instruction and student performance. Thirty-one teachers of students with disabilities were assigned to either a control group, a curriculum-based measurement (CBM) group, or CBM with teacher self-monitoring group. They found that teachers in the CBM with self-monitoring group revised student instructional plans in significantly different ways than did teachers who did not self-monitor. Results also showed that students in the teacher self-monitoring group demonstrated significantly greater improvements in math as compared to students of teachers in the control or CBM without self-monitoring groups.

Teacher self-monitoring may also improve teachers' behavioral intervention practices. Recently, research has begun to explore the use of teacher self-monitoring to increase fidelity of teacher implemented behavioral interventions and practices. For example, Briere, Simonsen, Sugai, and Myers (2015) evaluated the effects of a consultation model of teacher self-monitoring and performance feedback the three elementary teachers' use of specific praise. The consultation package involved weekly meetings between the teacher and her mentor. Through these meetings, teachers were taught to set goals for delivering praise, to self-monitor their specific praise rates, and to create improvement plans and new goals based on the teachers' data. With the consultation package, all three teachers increased their rates of specific praise.

1.2. Study purpose

The purpose of this systematic review was to summarize literature on teacher self-monitoring of behavioral practices. This review aimed to summarize study characteristics pertaining to (a) teacher participants, (b) teacher self-monitoring training, (c) teacher self-monitoring practices, and (d) effects of teacher self-monitoring on teacher and student outcomes. The second aim of this review was to summarize the quality of the research using the quality indicators developed by the Council for Exceptional Children (CEC) (Cook et al., 2015).

2. Method

2.1. Search procedures

Systematic searches of peer-reviewed publications were conducted within ERIC, PsychINFO, and Academic Search Complete electronic databases. All combinations of the terms 'self-monitor*', 'self-evaluat*', or 'self-manage*' were combined with the terms 'teacher', "practitioner,' 'therapist,' "educator,' 'assistant,' or 'paraprofessional' in the keywords field. This search yielded 1289 articles. The titles and abstracts of the resulting articles were then screened based on the mention behavioral interventions and teacher self-monitoring, or related terms such as self-evaluation. This systematic search occurred during January, and February, and was updated in September 2015. A total of 26 titles and abstracts met initial inclusion criteria. These studies were then read and reviewed in full using the criteria below.

2.2. Inclusion and exclusion criteria

Each of the 26 studies identified in the initial search was evaluated to determine if it met the inclusion criteria for this review. Articles were included if the independent variable included teacher self-monitoring as a component of a teacher practice targeting student challenging behavior. Such practices included behavior assessment, prevention strategies, or intervention strategies. Teacher self-monitoring was defined as teachers recording data on their own implementation of a specific behavioral practice. Data recording could involve rating scales, frequency counts, rate of teacher behavior, or checklists. Narrative teacher reflections, such as journal entries, of teaching practices were excluded in this review. Studies that did not include baseline data prior to intervention were also excluded. Teacher and student demographics, age, or disability status were not restricted. Of the 26 studies found using the initial search procedures, 16 articles met inclusion criteria for this review. The reference lists of these 15 articles were reviewed to identify additional studies meeting inclusion criteria. From this ancestry search, one additional article met inclusion criteria, bringing the total number of included studies to 17. These included studies consisted of 15 single case design studies and two group design studies. A second rater independently evaluated the 17 studies against the inclusion criteria. In the case of disagreements on inclusion of a study, the study was re-read by both raters and discussed until an agreement was obtained.

2.3. Data extraction

Included studies were summarized in terms of the following features: (a) participant characteristics of both teachers and students (if applicable), (b) behavior practice to be monitored, (c) teacher self-monitoring intervention features, (d) teacher training procedures, (e) teacher outcomes, and (f) student outcomes. Participant characteristics were coded according to age, gender, student diagnosis, educational setting (preschool, elementary, middle, secondary school), and professional role (e.g. general education teacher, special education teacher, paraprofessional). Behavioral practices were coded for the type of intervention or strategy employed with the aim of improving appropriate student classroom behavior and/or decreasing inappropriate student