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RATES AND TYPES OF TEACHER PRAISE: A REVIEW AND FUTURE DIRECTIONS

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The use of teacher praise in the classroom has been the subject of empirical research since the 1970s, but despite more than four decades of research on the use of teacher praise, large gaps continue to exist in the literature. Clarifying the role and benefit of teacher praise is particularly important because the use of positive, proactive strategies is promoted by large-scale behavior initiatives (e.g., Positive Behavior Interventions and Support). The goal of this review is to summarize the existing research on teacher praise, including rates of praise, types of praise, and the association between praise and student behavior. In addition to summarizing the extant literature, future directions for research are highlighted. This review reveals that there is a need for current, large-scale studies with consistent operational definitions that measure the rate of different types of praise across different grades and instructional activities, while simultaneously measuring student behavioral outcomes.
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The use of teacher praise in the classroom has been the subject of empirical research since the 1970s (Brophy, 1981; White, 1975). Praise is a feasible, nonintrusive classroom strategy that can be readily used by teachers across all grade levels. Yet, despite more than four decades of research on the use of teacher praise in the classroom, there are large gaps in the literature, such as typical rates of praise across grade levels, rates of various types of praise (i.e., general or behavior-specific praise), and a lack of research on rates of praise in general education versus special education classrooms. Additionally, the praise literature continually cites a handful of articles as evidence that behavior-specific praise is superior to general praise in terms of effectiveness in promoting appropriate behaviors (e.g., Anderson, Evertson, & Brophy, 1979; Brophy, 1981). However, closer examination of these studies indicates that more empirical work is needed to be able to determine whether behavior-specific praise is, in fact, "superior." Clarifying the role and benefit of praise in the classroom is particularly important because the use of positive, proactive strategies is promoted by large-scale initiatives, such as Positive Behavior Interventions and Support (PBIS).

PBIS and other school-based preventative behavioral interventions and supports emphasize the need for increasing the use of praise in the classroom and other school settings. Empirical research to document typical rates and types of praise that are most effective in supporting the successful behavior of students could improve professional development and preservice teacher training, assist school psychologists in consultative relationships with educators, and increase the use of praise as part of school-wide PBIS strategies. Therefore, the primary goals of this article are to review the literature regarding rates of praise, discuss research regarding general versus behavior-specific praise, and offer suggestions for future study that may benefit contemporary schools.

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Definition of Praise

Although operational definitions of praise vary from study to study, the majority of the definitions include favorable verbal or nonverbal attention directed toward a behavior or characteristic of the target children. Operational definitions of praise in the literature include the following: "To commend the worth of or to express approval or admiration" (Brophy, 1981, p. 5); "Verbal or physical behaviors indicating the positive quality of a behavior over and above the evaluation of accuracy" (Kalis, Vannest, & Parker, 2007, p. 22); and "Any verbal statement or gesture indicating teacher approval of a desired student behavior. The statement or gesture needs to be beyond confirmations of correct academic responses" (Reinke, Lewis-Palmer, & Merrell, 2008, p. 319). Praise is usually subdivided into two categories: general praise and behavior-specific praise. General praise is any praise statement (in accordance with the operational definitions provided previously), whereas behavior-specific praise is a praise statement that specifically indicates the desired student behavior (e.g., *I like the way Michael is sitting quietly in his chair*).

Methods

One goal of this review was to summarize the existing literature on teachers' use of general and behavior-specific praise. To do this, a systematic literature search was conducted to find pertinent articles. Articles included in the review were selected based on literature searches conducted using PsycINFO, PsycARTICLES, ERIC, MasterFILE Premier, and Google Scholar, as well as manual searching of the reference sections of articles. The authors were aware of formative praise articles prior to engaging in the more thorough literature searches. The following search terms were used during literature searches: *praise*, *teacher praise*, *type of praise*, *behavior-specific praise*, *labeled praise*, *general praise*, *unlabeled praise*, *frequency of praise*, *classroom praise*, *praise and behavior*, *praise and disruptive behavior*, *praise and special education*, *praise and PBS*, *praise and Positive Behavior Supports*, *preservice teacher and classroom management*, *preservice teacher training and classroom management*, and *teacher and classroom management training*. The "related articles" feature of the search engines was also used to identify articles with similar foci. A publication year restriction was not used.

Search engine results were screened by the authors. Potential papers for download or retrieval were identified by reading titles and abstracts and examining the relevance of the topic. Restrictions based on location of the study (e.g., studies within and outside of the United States), grade level of teacher or students, type of classroom (e.g., general education or special education), and sample size were not used. When manually searching reference sections, the titles of the articles were examined. If the article seemed pertinent, the abstract was obtained to determine relevance.

Typical Rates of Praise in Classrooms

There is a limited literature base regarding typical rates of praise in classrooms. Rates of praise have been examined in three contexts: general education classrooms (Anderson et al., 1979; Brophy, 1981; Burnett & Mandell, 2010; Reinke, Herman, & Stormont, 2013; White, 1975), special education classrooms (Gable, Hendrickson, Young, Shores, & Stowitscheck, 1983; Shores et al., 1993), and training/intervention studies targeted at increasing teachers' use of praise (e.g., Hawkins & Heflin, 2011; Haydon & Musti-Rao, 2011; Kalis et al., 2007; Myers, Simonsen, & Sugai, 2011; Reinke, Lewis-Palmer, & Martin, 2007; Reinke et al., 2008; Sutherland, Wehby, & Copeland, 2000; Thompson, Marchant, Anderson, Prater, & Gibb, 2012). Studies involving praise in general education classrooms are thoroughly reviewed next, followed by a more succinct description of the special education and intervention studies.

Rates of Praise in General Education

In 1975, White published the first study that summarized natural rates of teacher verbal approval in Grades 1 through 12. More than 35 years later, there is still relatively little information about naturalistic, or typical, rates of teacher praise. White summarized the rate of total teacher approval statements (defined as "verbal praise or encouragement," p. 368) from 16 studies, comprising 104 teachers and 8,340 observation minutes. Most notably, White found a decreasing trend in teachers' use of praise from early elementary to high school.

Brophy (1981) argued that teacher praise is not equivalent to reinforcement because praise is often used in a nonstrategic manner and often not intended to reinforce student behavior. Brophy believed that because teachers use praise so infrequently, it is unlikely that they systematically try to reinforce student behavior. Brophy cited a series of six studies using the Brophy–Good dyadic interaction coding system (Brophy & Good, 1970), which coded teachers' responses to academic performance and classroom conduct. Brophy's definition of praise was "to commend the worth of or to express approval or admiration. . . . [praise] goes beyond mere affirmation or correctness of response" (Brophy, 1981, p. 5).

Overall, Brophy found that teachers' use of praise was astoundingly low. With the exception of one study (Study 4), teachers used less than five praises per hour. However, the six studies were not systematically consistent in terms of grade level, class size, teacher characteristics, and academic subject. Three of the studies reviewed by Brophy examined naturalistic total group rates, one study examined differences in praise between a treatment reading group and control group, another study examined praise differences between teachers considered low and high in producing learning gains in student mathematic scores, and a final study examined naturalistic praise differences between math and English classes. Studies examined teachers in first- through eighth-grade classrooms, but rates of praise for specific grade levels were not described. Brophy's studies are dated and may not reflect teachers' use of praise today.

More recently, Burnett and Mandel (2010) reported rates of general and specific academic praise (i.e., ability and effort feedback) in four general education classrooms (Grades 1–6) in Australia. An operational definition was not provided; however, the authors gave examples of each type of praise. Praise frequency data were collected via direct classroom observations that occurred twice per week for 4 weeks, resulting in 4 hours of observation time per classroom, with a total of 16 hours of observation. The article did not specify the grade level taught by each of the four general education teachers; therefore, praise rate data are aggregated across all four classrooms. Burnett and Mandel (2010) reported an average rate of general praise of 29 praises per hour and average rate of specific praise (i.e., positive feedback regarding ability and effort) of 1.75 praises per hour. Although the authors collected a large amount of observational data, there are some noteworthy pieces of information missing that limit the utility of the study. First, the data were collected from a single, rural school in Australia; thus, caution should be used when generalizing to teachers' use of praise within U.S. classrooms. Additionally, the grade level of teacher participants was not disclosed; thus, comparisons in praise rate based on grade level could not be made. Third, although 4 hours of observations occurred, it is not clear whether whole-group instruction, independent work, transition periods, or small-group work was observed.

Reinke et al. (2013) reported rates of general and behavior-specific praise as part of a larger study assessing PBIS implementation at three elementary schools in an urban area of the U.S. Midwest. Thirty-three general education teachers of kindergarten to third-grade students participated in the study. Direct observations of praise in the classroom were guided by the following definitions. General praise was defined as "any verbal statement or gesture that indicates approval and does not name a specific behavior," and behavior-specific praise was defined as "any verbal statement or

gesture that indicates approval and names a specific behavior" (p. 43). Class observations averaged 47 minutes (ranging from 20–80 minutes), but the total amount of time observed was not clear. Across all kindergarten to third-grade classrooms, teachers used general praise 25.8 times per hour and specific praise 7.8 times per hour. The authors did not disclose the number of teachers at each grade level or the rate of praise at each of the four grade levels.

Floress and Jenkins (in press) examined rates of teacher praise across four general education kindergarten classrooms. Type of teacher praise (i.e., behavior-specific and general) and praise delivery (i.e., individual, small-group, large-group) were analyzed. Results indicated that total praise rates among kindergarten teachers were similar, and teachers praised students frequently (i.e., 47.3 praises per hour). Results also indicated that kindergarten teachers used general praise (i.e., 38.5 praises per hour) more frequently than behavior-specific praise (i.e., 8.8 praises per hour). In terms of praise delivery, teachers praised individual students (i.e., 24.7 praises per hour) and large groups of students (i.e., 21.6 praises per hour) most frequently.

As previously stated, the current literature is limited in terms of teacher rate of praise in general education. Table 1 provides a comparison of teachers' praise rates in general education, based on the studies described previously. In summary, White (1975) appears to be the first to have contributed to the literature in reporting rates of verbal approval among teachers in first grade through 12th grade. In addition, White reported a descending approval rate, from 44 verbal approvals per hour in early elementary school to only eight verbal approvals per hour in high school. These findings have not been replicated, and further study could provide insight into the relationship between teacher–child interaction and student achievement.

Brophy (1981) reviewed six studies (varying in comparison groups) that examined first- through eighth-grade teachers' use of praise. Results differed from White (1975) in that fewer than five praises per hour were found consistently across the studies. Therefore, no descending rate of teacher praise was found, and overall praise rates were much lower than rates reported by White. More recently, Burnett and Mandel (2010) reported rates of praise across first-through sixth-grade teachers in Australia. Rates were aggregated, so findings could not be compared with those of White (1975). However, rates were much higher than those reported by Brophy (1981). General praise rates were 29 praises per hour, and specific praise was 1.75 praises per hour.

Reinke et al. (2013) examined rates of teacher praise in kindergarten through third-grade classrooms and found general praise rates (approximately 26 praises per hour) similar to Burnett and Mandell (2010); however, they found higher behavior-specific praise rates (7.8 praises per hour). As with Burnett and Mandell's (2010) study, rates were aggregated across grade levels, so a decreasing trend in rate of praise could not be evaluated. Floress and Jenkins (in press) found that praise rates among kindergarten teachers were approximately 47 praises per hour. These findings were most similar to verbal approval rates reported by White (1975) among early elementary teachers (i.e., 44 per hour). Floress and Jenkins also reported a rate of 38.5 general praises per hour and 8.8 behavior-specific praises per hour. General praise rates were much higher than those reported by Reinke et al. (2013; 38.5 per hour vs. 26 per hour), however behavior-specific rates (8.8 per hour vs. 7.8 per hour) were very similar. Further research among general education teachers' use of praise is needed to clarify and replicate previous findings.

Rates of Praise in Special Education

Gable et al. (1983) examined the rate at which special education teachers delivered approval and disapproval statements to students with exceptionalities. Participants included 97 special education teachers who either taught students with intellectual disabilities, multiple handicaps, or learning disabilities and/or behavior disorders. Teacher observations took place in public and private special

Table 1
Summary of General Education and Special Education Teacher Rates of Praise

Study	Grade	Total Praise Rate per Hour	General Praise Rate per Hour	Specific Praise Rate per Hour	Notes
General Education					
White (1975)	Early elementary	43.7			
White (1975)	Late elementary	20.8			
White (1975)	Middle school	17.1			
White (1975)	High school	8.4			
Anderson et al. (1979)	1st grade				Cannot be determined Did not provide observation min
Brophy (1981)	1st–8th grades	<5			1 exception where total praise = 16.15
Burnett & Mandel (2010)	1st–6th grades		29	1.75	
Reinke et al. (2013)	K–3rd grades		25.8	7.8	
Floress & Jenkins (in press)	Kindergarten	47.3	38.5	8.8	
Special Education					
Sutherland et al. (2000)	5th grade		13.4	5.2	EBD students
Gable et al. (1983)		9.78			ID, MH, & LD/EBD students
Shores et al. (1993)		<5			EBD students Positive conse-quences
Wehby et al. (1995)	6–12 yrs	<3			EBD students

Note. ID = x; MH = x; LD = x. Grey areas indicate that information was not provided.

education centers, residential classrooms, and regular elementary schools. Approval statements were defined as "the teacher praising or rewarding the child or children's behavior" (p. 17). Ten-minute observations of approval/disapproval statements took place during preacademic, direct instruction, for a total of 970 observation minutes across all 97 teachers. The mean rate of approval statements across teachers was low (9.78 per hour). Mean rate of approval statements was lowest for teachers teaching students with learning disabilities and/or behavior disorders (4.4 per hour). Mean rates of approval statements for teachers of students with multiple handicaps (13.5 per hour) and intellectual disabilities (11.4 per hour) were higher. Although this study included a large sample size, the results are dated and may not reflect current special education teachers' use of praise. Additional research should replicate these findings.

Shores et al. (1993) examined social interactions in the classroom to identify social stimuli (antecedents and consequences) that may control behavior of students with severe emotional and behavior disorders (EBD). Participants included 20 students (10 aggressive and 10 nonaggressive)

from 10 general education (i.e., integrated) classrooms and 18 students (nine aggressive and nine nonaggressive) from nine self-contained classrooms for students with EBD. Two students were selected from each classroom, one with a history of aggression and one without, creating four participant groups: 1) Self-contained, aggressive; 2) Self-contained, nonaggressive; 3) General education, aggressive; 4) General education, nonaggressive.

A positive consequence was considered one behavior observed. "Positive consequence" was defined as a verbal statement or gesture that indicated approval of behavior or a verbal statement that specified which positive consequence would follow the behavior or a tangible event or activity that would be considered rewarding. Each target student was observed an average of 312 minutes over 11 to 20 days. Results indicated that teachers used positive consequences infrequently (i.e., as low as one positive consequence per hour). Teachers of aggressive students in self-contained classrooms delivered positive consequences at a rate of 3.99 per hour. Rates of positive consequences with students who were considered nonaggressive and receiving instruction in a self-contained classroom were slightly higher, at 4.49 per hour. Teachers working with aggressive students in general education delivered positive consequences at a rate of 1.2 per hour. Rates of positive consequences with students who were considered nonaggressive but receiving instruction within the general education were the lowest, at 0.42 per hour. Overall results suggest low rates of positive consequences; however, due to the participant groups, these results cannot be directly compared with other studies.

Wehby, Symons, and Shores (1995) extended the Shores et al. (1993) research. Participants included 28 students identified with EBD, ranging from 6 to 12 years of age. Students were selected from 14 self-contained special education classrooms, but information regarding number of teacher participants was not clear. A behavior coding system with 28 codes was used to describe interaction patterns. Approximately 8 to 10 hours of observation data were collected for each participant. Verbal praise was defined as "verbal statements or gestures indicating approval that is provided to the learner upon correct responding" (p. 90). Results indicated that rates for both high aggressor students (2.35 per hour) and low aggressor students (1.35 per hour) were extremely low.

Sutherland et al. (2000) examined the effect of an observation-feedback intervention on the rates of teacher behavior-specific praise and the effect of increasing teacher praise on on-task behavior of children with EBD. Participants in the study included 1 male teacher and 9 students (2 female, 7 male), 10 to 11 years of age in a fifth-grade self-contained classroom. Behavior-specific praise statements were defined as "verbal praise for a desired student behavior specified in the praise statement" (p. 4). Non–behavior-specific praise was defined as "verbal praise that did not specify the desired behavior for which the student was being praised" (p. 4). Praise frequency counts were observed during the first 15 minutes of observed lessons. Based on 10 baseline sessions (it is assumed that the total observation included 150 min; however, this was not explicitly stated), mean baseline rates of teacher's general praise included 13.4 praises per hour and 5.2 praises per hour for behavior-specific praise. An obvious limitation of this study is that the rate of teacher praise was derived from only one teacher. Furthermore, because the other intent of this study was to increase the teacher's use of praise, the teacher may have been selected due to exhibiting a low rate of praise, which does not (necessarily) provide an accurate representation of most special education teachers' use of praise.

Overall, few studies have examined praise rates among special education teachers. Table 1 provides a comparison of teachers' praise rates in special education (based on the studies described previously). Sutherland et al. (2000) found low baseline rates of teacher praise in a self-contained EBD classroom (13 general praises per hour and five behavior-specific praises per hour). Gable et al. (1983) reported similarly low rates of teacher praise across teachers of students with exceptionalities (about 10 approval statements per hour across all exceptionalities). Rates were lowest among teachers who taught students with learning disability and/or behavior disorders (approximately four approval statements per hour). Shores et al. (1993) examined positive consequences delivered to four

groups of students (self-contained aggressive and nonaggressive and general education aggressive and nonaggressive). Rates of positive consequences were low across all four groups (ranging from approximately 0.42–4.49 positive consequences per hour) and lower than rates reported by Sutherland et al. (2000) and Gable et al. (1983). Wehby et al. (1995) reported praise rates most similar to Shores et al. (1993) for students rated for high and low aggression (i.e., less than three praises per hour).

Rates of Praise in Intervention Studies

There is a subset of studies in the literature with a primary goal of training teachers to increase their rate of general and/or behavior-specific praise, for example, Hawkins and Heflin, 2001, Haydon and Musti-Rao, 2011, Kalis et al., 2001, Myers et al., 2011, Reinke et al., 2007, 2008, Thompson et al., 2012. Although not the original intent, "typical" rates of praise could be gleaned from the baseline phase of these studies. However, there are flaws with the practice of taking data out of context. First, teachers undergoing training to increase their use of praise presumably had initially low rate of praise, which may underestimate "typical" rates of praise. Second, these studies typically did not have a long baseline period. To generalize rates of praise to other teachers of the same grade level, more observation time is needed to ensure that the estimated rate of praise is reliable and valid. Third, training studies typically have a very small sample of teachers, so the generalizability of one or two teachers' rate of praise may be limited. Although intervention studies may not be able to offer data regarding typical rates of teacher praise, these studies have documented that teachers can be trained to increase their use of general and behavior-specific praise.

Two studies that have demonstrated that teachers can be trained to increase their use of behavior-specific praise are Hawkins and Heflin (2011) and Kalis et al. (2007). Hawkins and Heflin found that teachers of students with EBD can be taught to increase their use of behavior-specific praise after using video-self monitoring and visual performance feedback. A multiple baseline design across three teachers was used to examine increases in behavior-specific praise. Baseline rates across the three teachers were very low (8.4 per hour, 0.6 per hour, and 1.8 per hour). During the first intervention phase, behavior-specific praise rates increased to 34.8 per hour, 24 per hour, and 14.4 per hour, respectively. In another intervention study, Kalis et al. (2007) examined a self-monitoring intervention to increase a teachers' use of praise with EBD high school students. The teacher's baseline data was 10.5 per hour and increased to a mean rate of 126 praises per hour throughout the intervention phase.

Rates of General Versus Behavior-Specific Praise

Anderson et al. (1979) is frequently cited as evidence that teachers use behavior-specific praise less often than general praise. The Anderson et al. study set out to verify the effectiveness of several instructional techniques to determine whether they promoted change in teachers' behaviors in the classroom. The instructional techniques consisted of 22 principles believed to promote effective instruction in small groups among early grades. Principle 21 specifically addressed praise and stated, "Praise should be used in moderation. The teacher should praise thinking and effort more than just getting the answer. Praise should be as specific and individual as possible" (Anderson et al., 1979, p. 198).

Participants included 17 first-grade teachers who received manuals describing the 22 effective instruction principles. The model was presented as a set of guidelines for teacher management of reading group instruction. However, the content did not focus on teaching reading. The model focused on how teachers can use behavioral skills to manage whole-group or individual students. Ten other teachers served as a control group. Ten of the treatment teachers and all 10 of the control

teachers were observed about once a week from November to April to obtain information on the implementation of the principles. No information was provided on total observation minutes.

The authors also examined the relationship between classroom variables and class mean adjusted achievement scores to indicate whether classroom behaviors predicted students' achievement. The authors reported a significant negative relationship between achievement and praise ($\beta = -.35$, $p = .04$). They explained that this upheld the principle that praise should be used sparingly (as emphasized in the manual). Authors also reported that academic praise was positively related to achievement ($\beta = .37$, $p = .04$) and concluded that the effective use of praise is selective and behavior-specific. Despite these findings, the evidence to support that teacher praise is associated with greater achievement is weak. First, the study used a very small sample size for a large number of regression analyses without adjusting the p value, increasing the likelihood of type 1 error. These concerns are ultimately related to the common concern that has been mentioned throughout this article, in that the research is dated and not backed by rigorous analyses. Future research should seek to confirm the relationship between teacher praise and academic achievement.

To determine how effective the treatment was in influencing certain instructional techniques, comparisons were made between the treatment and control groups. The mean scores of the control group were considered baseline rates of the behaviors in the larger population of first-grade teachers. The authors argued that praise should be specific and used minimally (to ensure meaningfulness) and concluded that their results demonstrated this because teachers in the treatment group had less total praise than the control group (7% and 14%, respectively) but more behavior-specific praise (6% and 3%, respectively). It is difficult to determine whether the Anderson et al. (1979) findings support the argument that praise should be behavior-specific and minimal or whether teachers in the treatment group provided praise in this way because they were trained to do so.

Based on the current review, the Anderson et al. (1979) study is the only study to support the claim that teachers' natural rate of behavior-specific praise is infrequent. Additional studies that examine relations between student outcome measures and various praise characteristics (i.e., minimal vs. frequent or behavior-specific vs. general) are needed, as well as studies that provide evidence for the infrequent use of behavior-specific praise. Further praise research is also called for because the Anderson et al. sample was limited (e.g., 10 treatment-group first-grade teachers and 10 control-group first-grade teachers) and may not generalize to natural rates of teacher praise among other first-grade teachers, across teachers who teach other grade levels, differences among other first-grade teachers' use of behavior-specific and general praise, or differences among teachers' use of behavior-specific and general praise across grade levels.

More recent studies have found that teachers use general praise more frequently than behavior-specific praise. For example, Reinke et al. (2007) and Reinke et al. (2008) reported higher rates of general praise compared with behavior-specific praise. Reinke et al. (2008) reported baseline rates of behavior-specific praise ranging from 0.18 to 2.4 per hour and general praise ranging from 0.54 to 4.68 per hour across four classrooms. In addition, Floress and Jenkins (in press) found that kindergarten teachers' natural rates of general praise (38 per hour) were more frequent than behavior-specific (eight per hour).

Future Directions for Rate of Praise Research

There are a few major concerns with the existing literature on typical rates of praise in classrooms. First, some of the more comprehensive studies, such as White (1975) are quite dated. Two generations of students have entered elementary school since this article was published. Second, other than White, many studies do not report rates of praise at different grade levels. White found a trend that the rate of teacher praise is most frequent in the early elementary grades and declines

during late elementary school, with a significant decrease after eighth grade that continues through high school. Individual studies seem to support this trend, but there has not been a comprehensive examination of rates of praise across grade levels since White's study.

Third, the type of instructional activity (e.g., whole-group instruction, independent seat work, transition periods, centers, small-group instruction) is not specified in these studies. It is not clear whether there are potential differences in the use and rate of praise during different instructional activities, but clarification of this point would be beneficial. If teachers tend to have a specific rate of praise that is consistent regardless of the instructional activity, then it would not matter when school psychologists observed/assessed teachers' rate of praise or during what instructional activity school psychologists provided intervention. However, if praise was universally lower during certain instructional activities, teachers could be trained to specifically increase their praise during these instructional periods. If teachers' rates of praise tend to be consistent across instructional periods, it could save time for school psychologists because they would not need to extensively assess teachers' rate of praise across different instructional periods.

Fourth, the amount of observation time is not consistently reported, but widely varying times have been noted, ranging from 10 minutes per classroom (Gable et al., 1983) to 240 minutes per classroom (Mandell & Burnett, 2010). It may not be that "more is better," but to have confidence in determining a typical rate of praise, it is necessary to ensure that error introduced by reactivity, social desirability, and interobserver reliability is minimized to be able to generalize these rates to other classrooms. Knowing the number of observation minutes necessary to obtain an accurate assessment of teachers' rates of praise would also be helpful for school psychologists. Obtaining the minimum, but accurate, number of observation minutes would be time-efficient, while leading school psychologists to accurately link assessment data to effective intervention. Additionally, rates of praise in settings other than general education classrooms would allow for a more comprehensive understanding of the use of praise in schools.

Finally, although researchers have cited that behavior-specific praise is related to better behavioral outcomes compared with general praise, the rates of these types of praise have not been studied systematically. Existing research suggests that behavior-specific praise is used at a much lower rate than general praise. For example, Anderson et al. (1979) found that only 3% of praise statements by 10 first-grade teachers were behavior-specific, but Floress and Jenkins (in press) found that 18.5% of four general education kindergarten teachers' praise statements were behavior-specific. Other intervention studies have found baseline proportions of behavior-specific praise of individual teachers to fall anywhere within that range (e.g., Reinke et al., 2007, 2008). In addition to examining the rates of these types of praise, it should be verified that behavior-specific praise is in fact preferred.

The next section reviews the literature claiming that behavior-specific praise is better than general praise. Overall, there is a need for current, large-scale studies with consistent operational definitions that measure the rate of different types of praise across different grades and instructional activities, while simultaneously measuring student behavioral outcomes.

Types of Praise in Classrooms and Student Behavior

General praise is any praise statement (in accordance with the operational definition), whereas behavior-specific praise is "verbal praise for the desired student behavior specified in the praise statement" (Kalis et al., 2007, p. 22). Previous studies have found that general praise is used more often than behavior-specific praise (Anderson et al., 1979; Floress & Jenkins, in press; Reinke et al., 2007, 2008). A quick literature search reveals numerous studies citing that behavior-specific praise is better than general praise, sometimes referred to as labeled and unlabeled praise, respectively. Although the argument and logic for these statements are sound, a closer examination reveals that

there has been little empirical work definitively supporting the conclusion. Brophy (1981) is the most frequently cited article by authors claiming that behavior-specific praise is better than general praise statements. The Brophy (1981) article is a review of studies conducted by Brophy and others in the 1970s; however, he does not empirically determine that behavior-specific praise is superior. In fact, he says, "most of the data reviewed are correlational, and inferences often were drawn about teachers' and students' thoughts and behavior from general trends rather than direct evidence. Thus, this has been essentially a logical analysis based on integration of a broad range of indirect data" (p. 25).

Brophy (1981) cites O'Leary and O'Leary (1977) when saying that praise should be contingent, specific, and sincere for it to be reinforcing. Brophy also indicates that previous studies have not found a correlational relationship between praise and student achievement because most praise in classrooms does not function as a reinforcer and lacks contingency, specificity, and sincerity. However, Brophy does not review studies that specifically correlated praise with behavioral outcomes. The bottom line of the Brophy (1981) article is that praise could serve as a reinforcer if it were used strategically and with greater specificity. He concludes the article with a list of suggestions for teachers to make praise more reinforcing for students, but again, these suggestions were based on inferences and were not individually investigated empirically.

Although Brophy's recommendations are based on the literature and theoretical underpinnings of behavioral psychology, there was limited empirical support that teacher's use of behavior-specific praise was related to less disruptive classroom behavior at that time. Brophy did not include correlations between praise and disruptive behaviors in the review. Despite this, Brophy is commonly cited as support for this relationship, for example, in studies such as Beaman and Wheldall, 2000; Burnett and Mandell, 2010; Kalis et al., 2007; Reinke et al., 2007, 2008; Sutherland et al., 2000. Since Brophy's 1981 article, several authors have conducted intervention studies with classroom teachers to train them to use more behavior-specific praise while also measuring disruptive behaviors in the classroom. Several of the more recent studies are summarized next.

Reinke et al. (2007) evaluated the effects of visual performance feedback on teachers' use of behavior-specific praise among three general education teachers using a multiple-baseline design. They found that teachers increased their use of behavior-specific praise and that disruptive behaviors of the six target students decreased during the intervention phase. Myers et al. (2011) engaged four classroom teachers in consultation and individualized coaching and found that as use of behavior-specific praise statements increased, and there was a downward trend in off-task and disruptive behavior in three randomly selected students in the class. In a replication of the Myers et al. study, Thompson et al. (2012) used video self-monitoring and peer-coaching with three general education teachers, and observed an increase in behavior-specific praise and a decrease in off-task behavior of three target students.

Most studies have measured disruptive behavior in select students, rather than measuring the behaviors of the classroom as a whole, although a few studies have examined entire classrooms. Sutherland et al. (2000) examined the association between behavior-specific praise and on-task behavior in a self-contained classroom of nine fifth-grade students. During the intervention phases of the study, teachers increased their use of behavior-specific praise and students displayed higher levels of on-task behavior. This trend was reversed during withdrawal phases. Reinke et al. (2008) measured behaviors of four classrooms. They found that individual consultation and visual performance feedback resulted in greater use of behavior-specific praise statements and a corresponding decrease in classroom disruptive behaviors collectively. Although there are many other similar studies, these four recent studies represent the growing literature on the association between behavior-specific praise and disruptive behaviors. Overall, the literature suggests that teachers can be trained to increase their use of behavior-specific praise (e.g., Hawkins & Heflin, 2011;

Haydon & Musti-Rao, 2011; Kalis et al., 2007; Myers et al., 2011; Reinke et al., 2007, 2008; Sutherland et al., 2000; Thompson et al., 2012) and there appears to be a functional (negative) relationship between behavior-specific praise and disruptive classroom behaviors.

Future Directions for Type of Teacher Praise Research

Small scale and single-case design studies (e.g., Myers et al., 2011; Reinke et al., 2007, 2008; Thompson et al., 2012) have validated a functional relationship between behavior-specific praise and appropriate behaviors, but it is not clear whether this functional relationship translates to an entire classroom. Do teachers who use more behavior-specific praise have fewer behavior problems in their classroom as a whole? This question cannot be definitively answered based on the extant literature. Future studies should seek to engage in large-scale investigations that measure the behavior of the classroom collectively. Moreover, it is not clear whether behavior-specific praise is preferred across grade levels from preschool through high school. Many investigations have focused on general praise used by elementary general education teachers; thus, it is important for future studies to elucidate this association at other grade levels. Furthermore, the existing research has not examined other types of praise characteristics that may influence student disruptive behavior.

One reason that a functional relationship has been demonstrated between behavior-specific praise and disruptive behavior may be that behavior-specific praise provides students with discriminable conditions. For instance, use of behavior-specific praise may make children more likely to display teacher-approved behaviors in the future because the specificity of the praise made it easy for the child to discriminate between behaviors. This explanation is similar to the argument Brophy (1981) made in that behavior-specific praise makes a clear (or discriminable) connection between the student behavior demonstrated and teacher approval.

More recently, Partin, Robertson, Maggin, Oliver and Wehby (2010) described characteristics of effective praise. Teacher praise should be contingent on class and student behaviors that need to be increased, provide feedback on the appropriateness of behavior, grant a chance for positive interactions with students, be delivered in accordance with student skill level, and be evaluated for whether the praise statement is actually reinforcing to the child. In other words, praise should be contingent, specific, positive, individualized, and effective, which closely aligns with the views of Anderson et al. (1979) and Brophy (1981). In addition to these characteristics, future research might examine teachers' creative use of praise (e.g., "You are a smart cookie") or the level of enthusiasm teachers use when delivering praise to students. Creativity and enthusiasm might make praise seem more sincere, which Brophy (1981) stated was a requirement for praise to be reinforcing. Empirically testing and delineating the core features of effective praise statements would enhance training and consultation with educators, because school psychologists could focus on the key components of effective praising when working with teachers.

Current Training Practices of Preservice Teachers

Teaching is an incredibly challenging profession, and the need for qualified effective teachers is imperative to student success. However, many teachers are not adequately prepared to manage behavior problems in the classroom; some even enter the workforce without having taken a single course on behavior management (Barrett & Davis, 1995; Evertson & Weinstein, 2006; Houston & Williamson, 1993). Nearly half of new teachers leave the profession within 5 years, many citing student misbehavior as a primary reason for leaving (Ingersoll, 2002). The cost of losing teachers is its negative impact on students. Monies that could be directed to student programs must go to the recruitment of new teachers. It has been estimated that the cost of teacher turnover in public schools is more than $7 billion a year (National Commission on Teaching and America's

Future, 2007). Therefore, providing teachers with the supports and tools they need for effective classroom management, such as training in the use of effective praise, can improve student and teacher outcomes.

Many teachers in the field report a need for more training in classroom management (Reinke, Stormont, Herman, Puri, & Goel, 2011). Therefore, providing preservice teachers with training and support in the use of effective classroom management practices could prevent some of the misgivings of new teachers as they enter the field. There is some evidence that current training of preservice teachers in behavior management is less than optimal. For instance, in a recent study, Oram, Maras, Reinke, & Neier (under review) surveyed 328 preservice teachers about their training. When asked about their training in classroom management, juniors and seniors expressed that training was inadequate in this area compared with their freshman and sophomore counterparts. This is likely tied to the fact that these students are in the field for practicum, thus experiencing challenges related to managing student behavior. Additionally, another study that surveyed faculty members from institutions of higher education with teacher preparation programs found that faculty members reported that their graduates had not mastered skills related to managing students' challenging behaviors or supporting children's social and emotional development (Hemmeter, Santos, & Ostrosky, 2008). The study cited the lack of opportunities to implement practices in field placements and not enough room in their curriculum as potential causes of this lack of skill mastery.

Furthermore, teachers who enter the field feeling unprepared may experience burnout. Teacher burnout has been linked to teacher turnover intentions and job absenteeism (Belcastro & Gold, 1983), as well diminished performance and irritability (Huberman, 1993). Teacher use of praise has been also linked to teacher reports of burnout. For instance, a recent study demonstrated that teachers with lower positive to negative interactions were more likely to score high on a measure of emotional exhaustion, whereas teachers who used more praise reported feeling more efficacious (Reinke et al., 2013). Training and supporting preservice and current teachers in the use of praise could be one simple and feasible tool toward the prevention of teacher burnout.

One potential barrier to preservice training in the use of praise as a simple tool teachers can use in classrooms is that some researchers have claimed that praise (or at least certain types of praise) can be detrimental to students' motivation (Deci, Koestner, & Ryan, 2001). Some people express concern about praising behaviors that students are supposed to be doing, citing the potential for students to lose their intrinsic motivation, or their own interest in performing a task, for doing the task (Deci et al., 2001). Student motivation is more complicated than this. The research suggests that praising or rewarding behavior can increase, decrease, or have no effect on intrinsic motivation (Eisenberg, Pierce, & Cameron, 1999). If praise is provided for ill-defined or minimal performance of a task, students are more likely to reduce intrinsic motivation because this conveys that the task is trivial, whereas if praise or rewards are provided for specific high task performance, this can actually increase intrinsic motivation by conveying the task's personal or social significance. Thus, clarifying and training teachers in the use of effective praise will expand their tools when they enter the field rather than limit them.

Research has demonstrated that teachers are responsive to training and consultation models that provide databased feedback, and they often need such feedback to more systematically use specific strategies (Noell et al., 2005; Reinke et al., 2008; Stormont, Smith, & Lewis, 2007). Further, studies have demonstrated that teachers already in the field can be taught to give more behavior-specific praise (Hawkins & Heflin, 2011; Kalis et al., 2007; Myers et al., 2011; Reinke et al., 2007; Reinke et al., 2008; Sutherland et al., 2000; Thompson et al., 2012). One area of future research would be to investigate options for providing preservice teachers with coaching and supports during their training. For instance, including course work in the use of praise and other effective universal classroom management practices can be useful; these skills may be difficult to learn or generalize

to actual classrooms without having the experiences. Therefore, using consultation models, such as the Classroom Check-up (Reinke, Herman, & Sprick, 2013), that support teachers in developing new skills in classroom management, such as use of behavior-specific praise through feedback and support, could be utilized with preservice teachers. Research on the impact of such preservice supervision/consultation models could help to improve preservice training. If teachers who are provided preservice consultation and feedback on simple supports, such as praise, report feeling better prepared and more efficacious, then this early investment in training supports may be justified. Teachers who are provided these preservice training supports could be followed into the field to determine their rates of retention.

Conclusions

The goal of this review was to describe the current literature regarding the use of teacher praise in classrooms and identify areas for future research. Overall, more data are needed on typical rates of teacher praise, with greater attention to collecting rates of both general and behavior-specific praise across all grade levels and different instructional activities and determining the number of observation minutes needed to reduce error and increase generalizability. Additionally, although teachers use behavior-specific praise less frequently (Anderson et al., 1979; Floress & Jenkins, in press; Reinke et al., 2007, 2008), behavior-specific praise is thought to be a more powerful reinforcer and related to fewer behavioral problems (Hawkins & Heflin, 2011; Kalis et al., 2007; Myers et al., 2011; Reinke et al., 2007, 2008; Sutherland et al., 2000; Thompson et al., 2012).

Future research should seek to clarify the relationship between behavior-specific praise and class-wide behavior problems, because much of the research thus far has focused on the functional relationship between behavior-specific praise and the behavior of a few select students in classrooms. Finally, because training educators to use praise can be a simple but effective strategy, providing preservice training in the systematic use of praise could lead to better prepared teachers, less teacher burn-out, and potentially higher rates of teacher retention. Current and future teachers who are better prepared to deal with students' behavioral challenges may be more satisfied and effective in their profession. Additionally, future studies regarding frequency and type of praise are also important for school psychologists providing consultative services to teachers. When school psychologists are working with classroom teachers, they may focus on specific teacher behaviors, such as increasing the use of praise. When problem solving, goal setting is an important step; therefore, determining typical rates of general and behavior-specific praise can help with setting reasonable and effective goals for teachers to meet.

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