The purposes of this study were to examine (a) the effect of an observation-feedback intervention on the rate of a teacher's behavior-specific praise of students with emotional and behavioral disorders (EBD) and (b) the effect of increased rates of a teacher's behavior-specific praise on the on-task behavior of a class of students with EBD. Participants were a special education teacher and nine fifth-grade students in a self-contained classroom for students with EBD. Using an ABAB withdrawal design, the rate of the teacher's behavior-specific praise was increased to a criterion level during each intervention phase. Results indicate that the students' on-task behavior increased when the teacher's behavior-specific praise increased, and they decreased during the brief withdrawal phase. Implications for research and practice are discussed.

**Teacher Praise Rates in Classrooms for Students with EBD**
Although the effectiveness of praise in managing and improving the behavior of students with EBD has not been conducted.

In addition to its effectiveness and nonintrusiveness, other benefits of teacher praise have been noted. For example, the increase in appropriate behavior of disruptive students allowed more for the availability of classroom instructional time (Hall, Lund, & Jackson, 1968). Praise has been shown to increase the intrinsic motivation of students (Cameron & Pierce, 1994) and help the learner develop a feeling of competence (Brophy, 1981; Gottfried, 1983; Swann & Pittman, 1977).
students has been demonstrated, teachers of students with EBD rarely use praise in their classrooms. Gable, Hendrickson, Young, Shores, and Stowitschek (1983) found that the rate of teacher praise in classrooms for students with learning disabilities and EBD was 4.4 praise statements per hour. In classrooms only for students with EBD, the rate of praise was even lower: Shores et al. (1993) found rates as low as one praise statement per hour. Welby et al. (1995) recorded rates between .02 and .04 praise statements per hour for students identified as low and high aggressors in classrooms for students with EBD. These results—from a total of 379 hours of direct observational data from 67 classrooms across four states (Florida, Kansas, Missouri, and Tennessee) representing urban, suburban, and rural demographics—suggest that praise rates in classrooms for students with EBD are alarmingly low.

**Behavior-Specific and Non-Behavior-Specific Praise**

In a review of the literature, Brophy (1981) determined that teacher praise was most effective when it was behavior specific. Through the use of praise, the teacher specifies to the student the behavior being reinforced. Research has shown, however, that as little as 5% of teacher praise statements were behavior specific (Anderson, Evertson, & Brophy, 1979). Although the effect of behavior-specific praise on the performance of students with EBD has not been thoroughly investigated, use of praise statements that identify the performed behavior is cited as an important characteristic of effective praise (e.g., Smith & Rivera, 1993; Walker, 1979).

**Methods for Increasing Teacher Praise**

Recent research has shown that students with developmental disabilities (Craft, Alber, & Heward, 1998) and students with learning disabilities (Alber, Heward, & Hippler, 1999) in general education classrooms can be taught to recruit teacher praise. Craft et al. found not only increased rates of teacher praise for the four students in their study, but also increased academic productivity and accuracy. Alber et al. also found increased rates of teacher praise and academic accuracy, in addition to finding increased instructional feedback. Although these results are promising, the research question involved the effect of increased rates of behavior-specific praise on the on-task behavior of students with EBD.

It has been suggested that the use of praise could be increased through direct intervention in the field (Gable et al., 1983; Gunter et al., 1993; Gunter & Reed, 1996; Lago-Delello, 1998; Sikorski, Niemiec, & Walberg, 1996). Peer coaching using observation and feedback, for example, is an intervention that has been shown to (a) promote positive change in classroom management strategies (Hasbrouck & Christen, 1997), (b) be effective for increasing desired teacher behaviors while decreasing undesired teacher behaviors (Pierce & Miller, 1994), and (c) enhance the accuracy with which teachers implement curriculum-based measurement (Fuchs & Fuchs, 1993).

In summary, although praise has been shown to increase the rate of on-task behavior of students in general education classrooms—and students with EBD often demonstrate off-task behaviors—teachers of students with EBD rarely use praise. Furthermore, although behavior-specific praise has been cited as the most effective form of praise, it makes up only a small percentage of the total amount of praise students receive. Therefore, given the success of the observation—feedback intervention at increasing desired teacher behaviors, the purposes of the study were to examine (a) the effect of an observation—feedback intervention on the rate of a teacher’s behavior-specific praise of students with EBD and (b) the effect of increased rate of a teacher’s behavior-specific praise on the on-task behavior of students with EBD.

**METHOD**

**Participants**

The teacher-participant in this study was a male teacher of students with EBD with 3 years experience teaching. The student-participants were two girls and seven boys ranging in age from 10 to 11 at the beginning of the study. Six students (two girls and four boys) were African American; three students (all boys) were Caucasian.

**Setting and Measurement**

**Setting.** The setting was a fifth-grade self-contained classroom for students with EBD. The classroom was located in a middle school in a large southeastern U.S. city. Students in the classroom were taught by the teacher-participant and a female teacher-assistant. The classroom consisted of four parallel rows of student desks, two teacher desks, two study carrels, a small group-instruction area (round table and chairs), a reading center, and two computers.

Direct observations took place three times a week (Wednesday, Thursday, and Friday, 9:45 A.M. to 10:00 A.M.) during teacher-led social skills instruction. During this time, the teacher would typically lead discussion on a topic (e.g., sharing, making friends, exhibiting self-control), and the students were encouraged to participate by raising a hand to speak. The teacher did this by asking open-ended questions (e.g., “How do you start a conversation?”). These questions were followed by a discussion of the topic, and the teacher would list the students’ responses to the initial question on the chalkboard. Next, student volunteers would role play scenarios where one student would attempt to start a conversation with another student. After these activities (usually lasting 10 to 12 minutes), students would work on worksheets, do creative writing, or work in small groups on projects related to the day’s topic. This social skills instruction was not a structured curriculum but, rather, was put together by the teacher on the basis of his informal assessment of the students’ needs. During this time...
the teacher-assistant was in the classroom grading papers or running clerical errands.

**Measurement.** Prior to data collection, the observer (author) spent time in the classroom on six different occasions in order to familiarize the students with his presence. The observer used a paper-and-pencil data sheet to record a frequency count of the dependent variables during the first 15 minutes of each lesson. The observer and secondary observer (during interobserver agreement checks) sat at the rear of the class and did not interact with the teacher, the teacher-assistant, or the students during the observation sessions.

**Dependent Variables**

**Non-Behavior-Specific Praise.** A non-behavior-specific praise statement (NBSPS) was recorded using a frequency count when the teacher gave verbal praise that did not specify the desired behavior for which the student was being praised. Examples of an NBSPS included "Good job," "Nice," and "That's good."

**Behavior-Specific Praise.** A behavior-specific praise statement (BSPS) was recorded using a frequency count when the teacher gave verbal praise for a desired student behavior specified in the praise statement. This praise could be directed to the whole class, but it had to be behaviorally specific. See Table 1 for examples of student behaviors and corresponding BSPSs.

**On-Task.** A momentary time-sampling procedure with 1-minute intervals was used to record students' on-task behavior. The classroom was divided into four quadrants, with each row of students representing a quadrant. The order of quadrants was randomly assigned for each observation session at the beginning of the study. During each time sample (a beep on a headphone), the observer would record the behavior of the students in the quadrant being observed. During the next time sample, the next quadrant would be observed, and so forth. At the end of each observation session, three of the quadrants would have been observed and recorded four times, and the fourth quadrant would have been observed and recorded three times, for a total of 15 intervals.

An on-task behavior was recorded for the observed quadrant if all students in the quadrant were observed to be on-task when the time sample occurred. On-task behavior was defined as orientation by the target student(s) toward the appropriate object or person. This behavior included following directions given by the teacher, paying attention to the speaker (peer or adult), and working on assigned tasks. If any of the students in the quadrant being observed during the time sample did not meet the criteria for on-task behavior, the observer recorded "off-task" for that interval.

**Interobserver Agreement**

In 32% of the observation sessions (across all phases), interobserver agreement was assessed for the occurrence or nonoccurrence of BSPSs, NBSPSs, and on-task behaviors. Interobserver agreement measures were collected by a secondary observer at the same time as the observer. Interobserver agreement estimates for each category were calculated by dividing agreements by agreements plus disagreements and multiplying by 100%. The mean agreement was 92.5% for the occurrence of BSPSs (range, 73.3% to 100%), 82.5% for NBSPSs (range, 66.7% to 100%), and 82.5% for on-task behavior (range, 60% to 100%).

**Experimental Design**

An ABAB withdrawal design (Kazdin, 1982) was used to analyze the effect of intervention on the teacher's BSPS rate and the effect of increased rates of BSPSs on the students' on-task behavior. During the baseline phase, the teacher's BSPS rate was allowed to occur naturally. During intervention phases, an independent variable was introduced to increase the rate of BSPSs to a criterion level.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Examples of Student Behavior and Corresponding Behavior-Specific Praise Statement (BSPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>BSPS</td>
</tr>
<tr>
<td>Mark has been sitting quietly, listening to the teacher.</td>
<td>&quot;Mark, I like the way you are looking at me.&quot;</td>
</tr>
<tr>
<td>Lisa gives an example of how she would approach a group of children to join a game.</td>
<td>&quot;Lisa, that is a wonderful example of how to enter a group.&quot;</td>
</tr>
<tr>
<td>Louis and Jameel come to a consensus on a topic for their poster assignment.</td>
<td>&quot;I really like the way you two are working together!&quot;</td>
</tr>
<tr>
<td>Christine completes her independent practice.</td>
<td>&quot;You did a super job completing your work today, Christine.&quot;</td>
</tr>
<tr>
<td>The class is sitting quietly.</td>
<td>&quot;Wow, you all are doing a great job sitting quietly.&quot;</td>
</tr>
</tbody>
</table>
Procedure

**Baseline.** During the baseline phase, no changes in teacher behavior were made. The sessions typically consisted of teacher-led social skills lessons during which the students were encouraged to actively participate through discussion and role play. Direct observation data were collected on BSPSs, NBSPSs, and on-task behavior for quadrants of students.

**Intervention.** The intervention consisted of the observer providing the teacher with verbal feedback on the observed rate of behavior-specific praise recorded during the social skills lesson. Prior to the first observation, the observer met with the teacher to report the rate of behavior-specific praise observed during the baseline phase, and examples of behavior-specific praise were provided. The teacher was informed of the benefits of behavior-specific praise on the on-task behavior of the students, and a criterion level of six BSPSs per observation session was agreed upon. This goal was chosen because of the recorded baseline rate of BSPSs and the teacher’s belief that this criterion level was attainable. Prior to each observation session, the observer met briefly with the teacher to remind him of the goal and to provide him with an example of a BSPS. Immediately following the conclusion of the lesson, the observer again met with the teacher and provided feedback on his use of BSPSs. The teacher was praised for using BSPSs, and specific examples of his use of them were provided.

**Withdrawal.** During this phase, the teacher was told that he could return to his normal use of praise, and feedback from the observer—both prior to and immediately following the lesson—was withdrawn.

**Reintroduction of Intervention.** During this phase, the intervention was reintroduced. Prior to each observation session, the observer met briefly with the teacher to remind him of the goal and to provide him with an example of a BSPS. Immediately following the conclusion of the lesson the observer again met with the teacher and provided feedback on his rate of BSPSs. The teacher was praised for using BSPSs, and specific examples of his use of them were provided.

**RESULTS**

**Non-Behavior-Specific Praise Statements**

The number of NBSPs per session given by the teacher is shown in Figure 1. The mean rate of NBSPs during the baseline phase was 3.3, and the rate increased to 3.7 during the first intervention phase. During the withdrawal phase the teacher’s mean rate of NBSPs decreased to 1.7, and during the reintroduction phase the rate increased to 4.7.

**Behavior-Specific Praise Statements**

The number of BSPs per session given by the teacher is shown in Figure 2. The mean rate of BSPs during the baseline phase was 1.3, and the rate increased to 6.7 during the first intervention phase. During the withdrawal phase the teacher’s mean rate of BSPs decreased to 1.7, and during the reintroduction phase the rate increased to 7.8.

**Percentage of On-Task Intervals**

The percentage of on-task intervals for quadrants of students was calculated by dividing the total number of intervals per session observed as on-task by 15 (the total number of intervals per session). The percentage of on-task intervals for quadrants of students is shown in Figure 3. During the baseline phase, the mean percentage of on-task intervals was 48.7; this increased to 85.6 during the intervention phase. During the withdrawal phase, the mean percentage of on-task intervals decreased to 62.2; during the reintroduction phase, it increased to 83.3.

**DISCUSSION**

This study examined (a) the effect of an observation–feedback intervention on the rate of a teacher’s BSPs in a classroom for students with EBD and (b) the effect of increased rates of a teacher’s behavior-specific praise on the on-task behavior of students with EBD. Results from this study are consistent with previous findings on the effect of teacher praise on the on-task behavior of students in general education classrooms (Broden et al., 1970; Ferguson & Houghton, 1992; Hall, Lund, & Jackson, 1968; Hall, Panyan, et al., 1968). The percentage of on-task intervals for quadrants of students increased when the rate of BSPs was increased and decreased when the rate of BSPs was decreased. Data collected on the rate of the teacher’s BSPs had more overlap across phases than the data on NBSPs, which would support the effectiveness of the increased rate of BSPs on the on-task behavior of students with EBD in this classroom.

Although the teacher in this study had baseline praise rates that exceeded the rates found by Shores et al. (1993) and Webby et al. (1995), increases in BSPs were not maintained during the withdrawal phase. Given that our question deals with the effect of an increased rate of behavior-specific praise on on-task behavior, we were prepared to encourage the teacher to reduce his rate of BSPs if he maintained high rates during the withdrawal phase. Because the rates were not maintained during withdrawal, even though the benefits of the increased rate of BSPs were noted, it suggests that the long-term benefits of the observation–feedback intervention were minimal.

A sharp increase in the teacher’s BSPs was recorded during Session 5. The teacher reported a high level of student aggression prior to the start of this session and proceeded to use eight BSPs. Although behavior-specific praise had been neither introduced to nor used by him prior to this point, the teacher seemed to recognize its value as a behavior management tool.

Increasing the on-task behavior of students is a goal of all teachers, as task engagement is critical to academic success in school (Council for Exceptional Children, 1987; Rich & Ross, 1989).
Levels of task engagement considered typical in general education classrooms as recorded in direct observations ranged from 75% to 85% (Rich & Ross, 1989; Walker & Severson, 1990). During the first intervention phase, the mean percentage of intervals in which the student quadrants were observed to be on-task was 85.6%; during the second intervention phase, the mean was 83.3%. It is important to note that this study collected data during social skills instruction as opposed to previous studies that collected data during academic instruction. Although these results are promis-
FIGURE 3. Percentage of intervals that quadrants of students were on-task per session.

LIMITATIONS OF THE PRESENT STUDY

Several limitations of the present study are evident. First, although the rate of BSPSs increased greatly from baseline to intervention, a slight increase in NBSPSs also occurred that contributed to an overall increase in praise. Therefore, attributing the increase in on-task behavior solely to the increased rate of BSPSs is problematic. Second, the validity of the rates of teacher praise and the task engagement of students may be questioned, given the low number of observations per session. Third, the use of a single, self-contained classroom (and teacher) and observations during a single instructional period limits the generality of the results. Thus, although the teacher did increase his rates of BSPSs during the two intervention phases, attributing these increases to the observation–feedback intervention is tenuous.

SUMMARY AND FUTURE RESEARCH

Future research should exhibit more control over the rate of NBSPSs in order to more accurately examine the effect of behavior-specific praise. Furthermore, future research including more observations per session would provide a clearer and more valid indication of the rates of BSPSs and NBSPSs and their relationship to the task engagement of students with EBD. In addition, future research should investigate setting events that both limit and contribute to the use of behavior-specific praise. Finally, data collection during academic instruction would provide information on task engagement for participants that might be more aversive to students with EBD than social skills instruction.

Although the teacher’s rate of BSPSs did not generalize when the intervention was withdrawn, it is important to note that the observation–feedback procedure used is only one of several methods that can be employed to change teacher behavior. Perhaps interventions such as a peer-coaching intervention or self-monitoring using audio- or videotaped samples of instructional delivery that have been recommended to improve the effective practices of teachers (e.g., Gable et al., 1983; Gunter & Reed, 1996; Lago-Delelo, 1998) would result in increased rates of teacher praise that maintain over time. We are currently designing future studies to examine these interventions. Finally, the promising work of Alber et al. (1999) and Craft et al. (1998), which taught students to recruit teacher praise, needs to be replicated, both in self-contained classrooms for students with EBD and general education classrooms where students with EBD are mainstreamed.

In summary, the results of this investigation contribute to the studies of (a) inservice training of teachers of students with EBD and (b) behavioral interventions for students with EBD. The findings reported here provide some understanding of a possible relationship between behavior-specific praise and the on-task behavior of students with EBD. Praise is a naturalistic, nonintrusive strategy that all teachers have at their disposal; teachers, researchers, and teacher-trainers must develop tactics to increase the rates of praise and, in particular, behavior-specific praise in classrooms for students with EBD.
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