Article

Teacher Management Practices for First Graders With Attention Problems

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Abstract

Objective: To examine whether teacher reports of accommodations and interventions for inattentive first graders are consistent with best practice guidelines. **Method:** A total of 36 teachers completed the Teacher Management Questionnaire (TMQ) for 92 students in five predominantly low-income, minority schools. The TMQ is a newly developed measure designed to assess the frequency with which teachers implement a variety of accommodations and interventions with individual students. Additional teacher and student background data were collected on the inattentive sample, including behavior ratings and academic testing. **Results:** Teachers reported variable implementation of different management strategies, with more frequent use of class-wide structure and organizational interventions, and less frequent assignment modifications and individual behavior plans. Greater use of some strategies was reported for inattentive students and those with additional risk characteristics such as oppositional behavior and school-based referrals. **Conclusion:** Teachers appear to differentiate some management strategies based on the presence of attention problems, although their self-reported implementation is not well aligned with best practice guidelines. (*J. of Att. Dis. 2011; 15(8) 638-645*)

Keywords

classroom practices, classroom management, inattention

Attention problems are extremely common among elementary school children, with up to 16% identified as displaying frequent inattention and/or poor concentration (Wolraich, Hannah, Baumgaertel, & Feurer, 1998). Approximately 5% to 8% of children whose attention problems are pervasive, persistent, and developmentally inappropriate meet criteria for ADHD (American Psychiatric Association [APA], 2000). Up to 80% of students with ADHD exhibit academic performance problems (Cantwell & Baker, 1991) and experience substantially higher rates of grade retention, placement in special education, and drop out of school than their peers (Barkley, Fischer, Smallish, & Fletcher, 2006; Murphy, Barkley, & Bush, 2002).

Regardless of the etiology of attention difficulties, the effect of attention problems on early academic achievement is profound. For example, Merrell and Tymms (2001, 2005) reported that teacher ratings of attention problems at the beginning of formal schooling predicted academic difficulties over the next year, whereas Rabiner, Malone, and Conduct Problems Prevention Research Group (2004) found that teacher-rated attention problems were strongly associated with below grade level academic achievement in first graders. Similarly, Rabiner, Coie, and Conduct Problems Prevention Research Group (2000) demonstrated that first grade inattentive behavior predicted reading difficulties even after controlling for IQ, other behavioral problems, and earlier reading achievement.

Given the prevalence and negative educational impact of attention problems, it is surprising how little is known about teachers' management of such difficulties in their classrooms. Best practice guidelines for attention problems (DuPaul, Stoner, & O'Reilly, 2002) have identified several effective instructional and behavior management techniques for preventing academic and behavioral problems and improving student performance in elementary children, including (a) task and instructional modifications, (b) contingency management, (c) peer tutoring, (d) computer-assisted instruction, and (e) proactive structuring of the classroom environment. These are similar to school-based academic approaches with evidence of support for young children with ADHD: class-wide peer tutoring, task and instructional modifications including computer-assisted instruction, use of functional assessment, and homework management programs (Raggi & Chronis, 2006). In general, effective

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academic interventions for inattentive students appear to involve active engagement on the part of the student, reduced distractions, immediate positive reinforcement, and 1:1 instruction. However, this body of knowledge is based primarily on small intervention samples, and does not address what teachers are actually doing to manage inattentive students in their classes. Indeed, general education teachers report a lack confidence in their ability to implement evidence-based strategies for students identified as having ADHD (Arcia, Frank, Sánchez-LaCay, & Fernández, 2000; Reid, Maag, Vasa, & Wright, 1994), suggesting that further examination of teacher classroom management practices for inattentive students is needed.

In work that begins to address this issue, several studies have examined strategies that teachers report using with students who struggle academically. Thus, in a qualitative study based on of reports of more than 200 elementary teachers, teachers reported that their efforts to assist such students included adjusting performance expectations (e.g., reducing number of tasks), demonstrating difficult tasks, presenting information in a different way, using alternative or supplementary instructional materials, and providing additional practice (Johnson & Pugach, 1990). In a related study, responses to hypothetical vignettes about students with three different types of difficulties were obtained from 98 elementary teachers. For inattentive and distractible students, changing the physical environment, providing instructional supports, and giving nonverbal redirection were described as appropriate strategies. For students with a history of academic failure and lack of confidence, providing clear expectations, frequent monitoring, encouraging good work habits, and praising were suggested. Finally, the use of incentives or contracts and modifications of the environment such as preferential seating were identified as indicated for disruptive students (Brophy & McCaslin,1992).

Although these studies provide initial information on teachers' efforts to assist struggling students, there has been little focus on how teachers work with inattentive students specifically. In addition, the strategies that teachers report using with specific inattentive students—as opposed to their response to hypothetical vignettes—has not been examined. This is an important omission because the strategies teachers implement with specific students may differ substantially from responses to more general assessments. And, knowledge of how teachers work with specific students is required to better understand whether inattentive students are receiving the types of classroom supports that are known to be beneficial.

The primary purpose of this study was to provide initial descriptive information on strategies that teachers implement to assist young students with attention difficulties. This was done by examining teachers' reports of the accommodations and interventions they use with specific inattentive students in their classroom. To determine whether inattentive students were receiving more accommodations and interventions than their peers, the strategies teachers reported using with inattentive students were compared to what they reported for "normative" peers matched on race and gender. In addition, we examined how oppositional behavior, low-reading achievement, and school-service referrals were related to teacher report of strategy use among inattentive students to learn whether these additional risk characteristics influenced teachers' behavior. We expected that report of additional strategy use would be associated with comorbid difficulties such as oppositional behavior and poor reading achievement. More specifically, we anticipated that teachers would report using more behavior modification with oppositional students and more instructional modifications for students with reading difficulties.

Method

Participants

A total of 36 teachers from 5 public elementary schools in a medium-sized Southeastern school district were recruited over 2 years to participate in an intervention study for inattentive first graders (Rabiner, Murray, Skinner, & Malone, 2010). Study schools were similar in size, with students ranging from 635 to 763 in numbers. The percentage of minority students at these schools ranged from 57% to 91% and between 40% and 76% of students at each school received free or reduced-priced lunch. Thus, the sample was predominantly low income and minority.

As seen in Table 1, 26% of teachers had advanced degrees, which is consistent with the North Caroline state-wide average. Teaching experience ranged from 1 to 29 years, with an average of 12 years. The average first-grade class size was 22 students (range = 18-25). A total of 67% of teachers identified themselves as Whites, 28% as African American, and 5% as multiracial; all but one were women. Written consent to participate was obtained from all eligible teachers.

The student sample for the present analyses was comprised of 92 first graders, half of whom were participating in an after-school computerized attention training study (Rabiner et al., 2010) and half of whom were randomly selected by their teachers as comparison students.

Intervention students (also referred to as "at risk") met the following inclusion criteria: (a) above-average levels of inattention defined by teacher ratings of one standard deviation above the norm on the *DSM-IV* Inattentive Scale of the Conners' Teacher Rating Scale, Revised: Long Version (CTRS-R: L; Conners, 1997) and (b) full-scale IQ score above 70 as estimated by the Kaufman Brief Intelligence

Table 1. Sample Characteristics of Teachers

	Teachers[a]	
Variable	*N* (%)	*M* (*SD*)
Race		
African American	10 (28)	
White	24 (67)	
Multiracial	2 (5)	
Years of experience		11.83 (9.92)
Class size		21.92 (1.36)

[a] $n = 36$.

Test, Second Edition (K-BIT2; Kaufman & Kaufman, 2004). Comparison students were identified by having teachers select a child of the same sex and race as the "at-risk" student who he or she felt displayed "typical" behavior for students in the class. The total sample was 72% male, 61% African American, 15% Hispanic, 13% Whites, and 6% multiracial or other.

As part of the intervention study, measures of participants' IQ, reading achievement, and behavioral/emotional functioning were collected (see below). The mean IQ estimate of the 46 at-risk participants was 87.9 ($SD = 12.13$), in the low-average range, consistent with the mean math skills (Woodcock-Johnson, Third Edition [WJ-III; Woodcock, McGrew, & Mather, 2001] Basic Math = 90.8, $SD = 17.23$). Reading skills (WJ-III Basic Reading) were somewhat higher, averaging 98.1 ($SD = 16.28$). On the CTRS-R: L, sample scores were above average for *DSM-IV* inattention ($M = 64.0$, $SD = 8.71$), oppositional behavior ($M = 60.7$, $SD = 16.38$) and anxious-shy behavior ($M = 60.0$, $SD = 11.77$). These additional data were not collected on comparison students because of resource constraints and to minimize the time demands imposed on teachers. According to parental report on a background questionnaire, 8 of the 46 at-risk students had been diagnosed with ADHD.

Procedures

Over the 2-year study, 36 teachers completed the Teacher Management Questionnaire (TMQ, described below) on one randomly selected intervention student in their class (referred to as "at risk") and one comparison peer. Teachers with more than one study student in their class were assigned only one to rate to minimize response burden and because we anticipated that teachers would use similar management strategies for all at-risk students in their class. This assignment was made randomly by the investigators. This resulted in a total student sample of 92 students, with 10 teachers rating students 2 years in a row. All data were collected during the spring of first grade, reflecting teachers' work with students over almost a full school year.

Measures

Teacher Management Questionnaire (TMQ). The TMQ (Murray, Rabiner, & Hardy, 2009) is a 22-item self-report measure developed to assess the frequency with which teachers implement a variety of accommodations and interventions with individual students. Responses to each item are rated on a 0 to 3 scale reflecting the frequency with which teachers report using different strategies with a specific student (0 = *not at all*, 1 = *sometimes*, 2 = *often*, and 3 = *always*). The TMQ consists of five theoretically derived scales: (a) environmental modifications such as preferential seating and use of a quiet work area; (b) structure and organization including a daily homework check system and posting of behavior rules; (c) instructional modifications including provision of visual or written instructions, computer learning, and task choices; (d) assignment modifications such as extended time, breaking long assignments into smaller parts, and reduced assignments; and (e) behavior modification techniques such as individual reward plans, token systems, and daily behavior notes. Specific items are presented in Table 2. Internal consistency as indicated by Cronbach's alpha was moderate to high for all scales (.81, .64, .80, .89, .74, respectively). This measure was completed on all students in the sample.

The development of the TMQ included piloting 40 items generated by two psychologists with expertise in classroom management with 24 elementary teachers (K-5) in four schools (Murray, Rabiner, Schulte, & Newitt, 2007). Several items demonstrated little variability, reflecting high levels of endorsement by most teachers, and some items were either rarely endorsed or indicated by teachers to not be relevant. These items were deleted or reworded, and additional items were generated on the basis of strategies that teachers in the consultation intervention reported using; the resulting measure contained 25 items. Descriptive data on all items and subscales from the present study were reviewed; no outliers were identified, and item responses from all but the structure and organization subscale were normally distributed. Two of the subscales (structure and organization and assignment modification) initially appeared to be skewed; deletion of 3 items with little variability resulted in the final 22-item measure used for the present analyses.

The measures below were completed on the at-risk students only and were used to identify risk factors in addition to attention difficulties that may influence strategies teachers report using with specific students.

Conners' Teacher Rating Scale, Revised: Long Version (CTRS-R: L; Conners, 1997). The CTRS-R: L is a standardized and nationally normed behavior rating scale that assesses teacher perception of student functioning in a range of areas. All scales have an average *T*-score of 50 and a standard

Table 2. Strategy Use Reported for Inattentive[a] and Comparison[a] Students

Strategy use by subscale	Inattentive *M (SD)*	Comparison *M (SD)*	Full sample *M (SD)*
EM*	1.75 (0.61)	1.28 (0.86)	1.52 (0.78)
Preferential seating (away from distractions)	1.78 (0.93)	1.13 (1.1)	1.45 (1.06)
Use of designated quiet work area	1.44 (0.87)	0.98 (0.95)	1.21 (0.94)
Provide individualized attention	1.87 (0.83)	1.52 (0.96)	1.70 (0.91)
Opportunities provided for appropriate movement	1.96 (0.89)	1.52 (1.07)	1.74 (1.00)
SO	2.73 (0.44)	2.73 (0.50)	2.73 (0.47)
Daily homework check system in place	2.63 (0.74)	2.61 (0.83)	2.62 (0.78)
Behavior rules are posted	2.89 (0.38)	2.89 (.38)	2.89 (0.38)
Following rules is rewarded	2.67 (0.60)	2.70 (0.63)	2.68 (0.61)
IM	2.06 (0.53)	1.98 (0.62)	2.02 (0.58)
Visual/written instructions paired with verbal	2.37 (0.68)	2.24 (0.77)	2.30 (0.72)
Use of hands-on learning activities	2.52 (0.59)	2.43 (.65)	2.48 (0.62)
Use of computer learning activities	1.91 (0.78)	1.83 (0.83)	1.87 (0.80)
Task choices provided to students	1.93 (0.80)	1.93 (0.83)	1.93 (0.81)
Peer tutoring	1.62 (0.86)	1.48 (0.94)	1.55 (0.90)
AM*	1.45 (0.73)	0.98 (0.90)	1.22 (0.85)
Long assignments broken down into smaller pieces	1.76 (0.85)	1.30 (1.17)	1.53 (1.04)
Length of in-class assignments reduced	1.28 (.81)	0.80 (1.03)	1.04 (0.95)
Extra time provided for longer assignments	2.00 (0.82)	1.32 (1.10)	1.67 (1.02)
Alternate forms of assignments allowed, for example, oral report, poster	1.25 (1.04)	1.09 (1.01)	0.63 (1.0)
Homework assignments modified or reduced	.84 (1.02)	0.42 (0.94)	0.62 (1.03)
BM*	1.65 (0.86)	1.38 (0.77)	1.52 (0.82)
Individual reward plan used	1.24 (1.13)	0.89 (1.16)	1.07 (1.15)
Daily behavior note sent home	1.24 (1.30)	0.91 (1.23)	1.08 (1.27)
Token or point system used where student earns privileges or prizes	1.43 (1.28)	1.36 (1.28)	1.40 (1.27)
Time out used for inappropriate behaviors	2.20 (1.03)	1.89 (1.16)	2.04 (1.10)
Loss of classroom privileges used for inappropriate behavior	2.15 (1.01)	1.85 (1.12)	2.00 (1.07)

Unadjusted means are presented to aid interpretability. EM = environmental modifications; SO = structure and organization; IM = instructional modifications; AM = assignment modifications; BM = behavior modifications.
[a]$n = 46$.
*$p < .05$.

deviation of 10. Teachers rate items using a 0 to 3 scale to indicate how problematic each behavior had been in the past month. The internal reliability coefficient for this scale for this age group is .91, with item loadings on this factor ranging from .30 to .50 and evidence of discriminant validity for clinical versus nonclinical samples (Conners, 1997).

Woodcock-Johnson, Third Edition (Woodcock et al. 2001). The WJ-III is an extensively validated individually administered achievement test that provides an estimate of an individual's achievement level in different academic areas in relation to same-aged peers. Achievement scores have a mean of 100 and a standard deviation of 15. The standard score on the basic reading composite (comprised of word attack and letter-word identification) was used as the measure of children's reading skills. For children of the same age as of those in the present sample, test-retest reliability for 1 year is .92 and the correlation with the WIAT Basic Reading Scale is .82.

Dynamic indicators of basic early literacy skills (DIBELS; Good, Gruba, & Kaminski, 2002). The DIBELS is an oral reading fluency test that assesses children's accuracy and fluency skills for reading written passages. Children read three grade-appropriate passages, and the average number of words per minute read correctly is calculated. Concurrent validity has been demonstrated with teacher ratings of achievement and standardized measures of phonological awareness and reading (Elliott, Lee, & Tollefson, 2001; Hintze, Ryan, & Stoner, 2003).

School services information form. Information was collected from schools by guidance counselors on the nature of services students were receiving from the school. This included (a) whether the student had been referred to either the Student Assistance Program (a prereferral intervention team) or for evaluation for special educational services; (b) the nature of the referral, that is, academic or behavioral; and (c) whether the student had an individualized educational

plan (IEP), which was considered to be evidence of the student's qualification for special education services.

Results

Analysis Overview

Initially, teacher report of strategy use on the TMQ was examined at the item and subscale level to obtain as much information as possible on what teachers report doing to support inattentive first graders in their classrooms. Next, we tested for differences in teachers' reported use of specific strategies with at-risk and comparison students. In these analyses, TMQ subscale scores were used rather than individual items to minimize the number of comparisons conducted. Finally, we examined how oppositional behavior, reading difficulties, academic referrals, and receipt of special education were related to teachers' use of different strategies within the at-risk group of inattentive students. Behavior referrals were not examined due to their low frequency ($n = 4$).

To account for the nesting of students within teachers and avoid over-estimating variance across students, structural equation models with Mplus v.5.0 (Muthén & Muthén, 2007) were used to evaluate the effects of child-risk status (e.g., inattentive vs. comparison), oppositional behavior, reading achievement, and service referrals/receipt on TMQ subscales (examined in separate models). This model uses full information maximum likelihood estimation to account for data missing in endogenous variables, assuming missing at random (MAR). We initially included child race and gender and teacher race and years of experience in our models, but because no demographic effects were found these variables were excluded from subsequent analyses.

Descriptive Characteristics

Table 2 shows strategies teachers reported using with inattentive and comparison students, separately and together. As noted earlier, this information is presented for descriptive purposes only, and item-level statistical comparisons of at-risk and normative students were not conducted. As can be seen, the average response across most subscales indicates that strategies are reportedly used *sometimes* to *often*, with a higher score for structure and organization than the other subscales. This is not surprising given that items composing this scale reflect strategies that are typically implemented for the whole class rather than with individual students (e.g., "behavior rules are posted"). Apart from strategies on this scale, those with average ratings >2 (*often*) were time-out and loss of privileges, hands-on learning activities, and pairing of visual and written instructions with verbal instructions. Strategies least likely to be reported included modifications of homework assignments, allowing alternate forms of assignments ($M < 1$), reducing length of in-class assignments, individual reward plans, and daily behavior notes ($M = 1$).

Teacher Strategy Use for Inattentive Versus Comparison Students

Consistent with the hypothesis that management strategies would be reported more frequently for inattentive students than for comparison students, significant effects of child-risk status were found on three of the five TMQ subscales. More specifically, covariance estimations were significant for environmental modification (*Est.* = 0.444, *SE* = 0.116, *Est./SE* = 3.829, $p < .001$), behavior modification (*Est.* = 0.239, *SE* = 0.100, *Est./SE* = 2.385, $p < .05$), and assignment modification (*Est.* = 0.440, *SE* = 0.116, *Est./SE* = 3.794, $p < .001$), corresponding to partial correlations of .285, .146, and .261, respectively. Unadjusted means for the two groups are presented in Table 2.

Teacher Strategy Use for Inattentive Students With Additional Risk Characteristics

Among the inattentive students, subgroups of students with additional risk characteristics were identified, that is, clinically significant oppositional behavior (CTRS-R: L oppositional subscale $T > 65$), below-average reading skills on the WJ-III (basic reading SS < 90), below average reading fluency on the DIBELS (<20 words per minute), educational referral for academic difficulties or the presence of an IEP. The effect of child-risk status was then examined using a similar multilevel modeling analysis for each of these risk characteristics separately. Elevated oppositional behavior was associated with higher use of environmental modifications (*Est.* = 0.492, *SE* = 0.151, *Est./SE* = 3.265, $p = .001$) and behavior modifications (*Est.* = 0.724, *SE* = 0.260, *Est./SE* = 2.780, $p < .01$). Referral due to academic concerns predicted more frequent instructional modifications (*Est.* = 0.348, *SE* = 0.160, *Est./SE* = 2.178, $p < .05$) and having an IEP in place predicted more frequent assignment modifications (*Est.* = 0.568, *SE* = 0.197, *Est./SE* = 2.876, $p < .01$). No differences in teacher report of management strategies were identified based on reading skills as measured by the WJ-III; however, greater use of structure and organizational strategies was related to lower reading rates on the DIBELS (*Est.* = –0.396, *SE* = 0.180, *Est./SE* = –2.195, $p < .05$). Table 3 shows unadjusted group means for these subgroup comparisons.

Table 3. Strategy Use Reported for Inattentive Students[a] With Additional Risk Factors

	Risk present		Risk absent	
Subscale	*N*	*M (SD)*	*N*	*M (SD)*
EM				
Oppositional behavior*	16	2.08 (.41)	30	1.62 (.68)
WJ-III reading skill	14	1.71 (.51)	31	1.77 (.66)
DIBELS reading fluency	16	1.80 (.60)	29	1.72 (.63)
Academic referral	14	1.75 (.64)	26	1.78 (.54)
IEP (special education)	10	1.87 (.60)	29	1.74 (.58)
SO				
Oppositional behavior	16	2.73 (.41)	30	2.73 (.46)
WJ-III reading skill	14	2.58 (.58)	31	2.81 (.33)
DIBELS reading fluency*	17	2.53 (.57)	29	2.85 (.29)
Academic referral	14	2.64 (.48)	27	2.77 (.42)
IEP (special education)	11	2.85 (.35)	29	2.68 (.48)
IM				
Oppositional behavior	16	2.18 (.48)	30	2.03 (.57)
WJ-III reading skill	14	1.99 (.60)	31	2.09 (.50)
DIBELS reading fluency	16	2.08 (.67)	29	2.04 (.45)
Academic referral*	14	2.31 (.57)	26	1.94 (.49)
IEP (special education)	10	2.18 (.50)	29	2.06 (.56)
AM				
Oppositional behavior	16	1.48 (.59)	30	1.47 (.84)
WJ-III reading skill	14	1.77 (.78)	29	1.30 (.67)
DIBELS reading fluency	16	1.64 (.80)	27	1.34 (.68)
Academic referral	13	1.65 (.74)	25	1.38 (.76)
IEP (special education)*	11	1.91 (.66)	27	1.31 (.74)
BM				
Oppositional behavior*	16	2.11 (.72)	30	1.51 (1.05)
WJ-III reading skill	15	1.57 (.81)	30	1.69 (.90)
DIBELS reading fluency	17	1.56 (.88)	28	1.70 (.87)
Academic referral	14	1.56 (.98)	26	1.72 (.80)
IEP (special education)	11	1.76 (.70)	29	1.63 (.92)

Unadjusted means are presented to aid interpretability. Subsample sizes vary slightly due to missing data. EM = environmental modifications; SO = structure and organization; IM = instructional modifications; AM = assignment modifications; BM = behavior modifications WJ-III = Woodcock-Johnson, Third Edition; DIBELS = Dynamic indicators of basic early literacy skills; IEP = individualized education plan.
[a]$n = 46$.
*$p < .05$.

Discussion

The present study provides descriptive information on management strategies teachers report using for inattentive first graders and examines how these strategies vary in relation to additional academic and behavioral-risk factors. As hypothesized, teachers reported using environmental modifications, assignment modifications, and behavior modification strategies more frequently with inattentive students than with comparison students. In addition, environmental and behavior modifications were reportedly used more frequently with inattentive students who were highly oppositional, and more frequent assignment modifications were reported for inattentive students who qualified for special education services. Teachers also reported more frequent use of structure and organizational strategies for inattentive students with lower reading rates. Finally, more frequent instructional modifications were reported for inattentive students with academic referrals.

To our knowledge, this is the first study to examine how teachers work with specific inattentive students in their classroom. Our findings document that they report employing different strategies with these students. It is encouraging that teachers reported utilizing some strategies that are consistent with best-practice guidelines for students with attention difficulties. For example, behavior management strategies such as reward systems and time out (reported as used more by teachers in the present study for inattentive vs. comparison students and for inattentive students who were also oppositional) are considered evidence-based treatments for children with ADHD (Pelham & Fabiano, 2008). Environmental modifications (such as preferential seating) and assignment modifications (such as reducing work, breaking down tasks, and providing additional time) are commonly recommended by school psychologists and listed on individualized educational plans when students have difficulties with attention and task completion, although the extent to which these are effective strategies is unknown. Thus, according to teacher report, they did recognize inattentive students' needs for additional help even though only 17% (8 of 46) had been diagnosed with ADHD.

However, it is noteworthy that teachers' reported strategy use is not entirely aligned with recommendations from the literature. For example, although students with attention difficulties appear to benefit from instructional modifications such as computer-assisted instruction and class wide peer tutoring (Raggi & Chronis, 2006), such strategies were not reported as being used more frequently for inattentive students. Other strategies reported (e.g., greater structure and organization for inattentive students with low-reading rates) do not appear clearly related to student needs. Thus, it appears that there is considerable room for teachers to implement instructional and management strategies more effectively. This is consistent with the most recent survey of school-based practices for ADHD students, which found that only 17% had empirical support of efficacy (Sloan, Jensen, & Kettle, 1999).

Interestingly, there was no indication that teachers were more likely to use instructional modifications with inattentive students unless that student had been referred to school-based committees for academic concerns. Also, little difference was noted in teacher report of structural or organizational strategies for different students except in the subsample of inattentive students whose reading rates were very slow. Our expectation that teachers would report using more instructional modifications for students with reading

difficulties was not supported. Of course, these data are based on a small sample size and represent exploratory analyses; thus, further investigation is clearly needed to better understand teacher management strategies.

There are several limitations to this study that are important to note. Our sample was restricted to first-grade teachers in one public school district with a predominantly minority, low-income student population, which limits the generalizability of these results. For example, teachers in our study might have reported using more strategies than teachers who work with students with fewer academic and behavioral risks. In addition, some frequently reported strategies such as instructional modifications (e.g., hands-on learning activities, pairing of visual with verbal instructions) may be more likely to be used by first grade teachers, and a different pattern of strategy use might be found in teachers working with older children. Finally, it is possible that we were unable to detect small effects given by power limitations. Clearly, additional research on teacher management practices for inattentive students is needed in larger, more demographically and geographically representative samples of students.

As reported earlier, inattentive students in our sample were part of a larger study examining different computer interventions for students with attention difficulties (Rabiner et al., 2010). Although teachers were not involved in delivering these interventions, they were aware of whether 70% of the students were intervention or control participants, and this knowledge could have influenced their strategy use. Importantly, however, this knowledge was not related to teachers' ratings of students' attention difficulties at the end of the intervention. Because attention problems were the focus of the intervention, it seems more likely that teachers' knowledge of condition would have influenced ratings in this domain—which we did not find—than their reported strategy use with these students. However, the latter possibility cannot be ruled out.

Finally, the most significant limitation of the present study is the self-report nature of the data which is subject to teacher bias toward over-reporting and may not correlate with teachers' actual implementation of management strategies. In particular, teachers' knowledge that some students were participating in an afterschool attention intervention may have influenced their responses on the TMQ. It should also be noted that there are limitations to all methods of assessing teacher practices including observations that are vulnerable to teacher reactivity and do not capture low-frequency strategies well. Teacher self-report data such as these collected here have the advantage of providing potentially useful data to clinicians who are interested in assessing existing classroom interventions and accommodations as a way of better understanding children's school functioning and making recommendations for additional strategies that could be implemented. Teacher self-reports are also easier to collect than observational data and can provide a useful complement and/or alternative to more time-consuming and expensive observational methods.

In sum, the present study provides important information about teacher practices with inattentive students and suggests that although teachers did report modifying their instructional practices for students who struggle with attention difficulties, there are many areas where further professional development may be beneficial. In particular, it appears that training in modifying assignments and implementing individualized behavior plans, as well as more systematic use of computerized academic programs, may be useful. It would also be interesting to examine the extent to which specifying certain accommodations in an IEP might influence teachers' use of these as well as other strategies. Given the prevalence of inattention among young children and the strong relationship between inattention and academic problems, such work has the potential for substantial educational effect.

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