This study explored differences in test anxiety on high-stakes standardized achievement testing and low-stakes testing among elementary school children. This is the first study to directly examine differences in young students’ reported test anxiety between No Child Left Behind (NCLB) achievement testing and classroom testing. Three hundred thirty-five students in Grades 3 through 5 participated in the study. Students completed assessments of test anxiety following NCLB testing and typical classroom testing. Students reported significantly more overall test anxiety in relation to high-stakes testing versus classroom testing on two measures of test anxiety, effect sizes $r = -0.21$ and $r = -0.10$. Students also reported significantly more cognitive ($r = -0.20$) and physiological ($r = -0.24$) symptoms of test anxiety in relation to high-stakes testing. This study adds to the test anxiety literature by demonstrating that students experience heightened anxiety in response to NCLB testing. © 2013 Wiley Periodicals, Inc.

A half-century ago, Seymour Sarason wrote that “we live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance” (1959, p. 26). Since that time, the educational accountability movement in the United States has greatly increased the importance that testing has on the educational and occupational outcomes of children. Most recently, the No Child Left Behind Act of 2001 (NCLB; U.S. Congress, 2002) dramatically increased the prevalence and stakes of standardized testing for public school children in elementary, middle, and high school by requiring annual testing of statewide academic achievement assessments in the areas of reading and mathematics during Grades 3 through 8 and once in high school. NCLB test scores are publicly reported and linked to rewards and sanctions, such as school funding, administration, and employment decisions, making this testing high-stakes in nature for educators and communities. However, little research has been conducted that examines how individual students perceive these annual high-stakes tests and whether or not students experience heightened anxiety/distress in relation to them.

Test anxiety comprises psychological, physiological, and behavioral reactions that occur in association with concern about the negative outcomes resulting from failure or poor performance in evaluative situations (Zeidner, 1998). Lowe and colleagues (2008) have proposed a biopsychosocial model of test anxiety that highlights three different processes involved in the expression of test anxiety, including the individual’s behavior, cognition, and physiology. Behaviors include both task-relevant (e.g., focusing attention on task) and task-irrelevant behavior (e.g., skimming through items). Physiological reactions include emotional arousal (e.g., increased heart rate or muscle tightness).

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Cognitions include worry that interferes with the task (e.g., thoughts about social humiliation or the consequences of failure).

**Prevalence Rates of Test Anxiety**

Estimates on the prevalence rate of test anxiety among school-aged children have varied widely (Zeidner, 1998). Traditional measures of test anxiety have not included norms with specific cut-points for diagnosing clinical levels of test anxiety (Friedman & Bendas-Jacobs, 1997), resulting in researchers using different criteria to define clinical levels of test anxiety. For example, King and Ollendick (1989) reported that the prevalence of test anxiety among school-aged children may range from as little as 10% to as much as 30%. They estimate, however, that the rate of children who experience clinically significant impairment is likely to be on the lower end of this spectrum. Similarly, Hill and Wigfield (1984) suggested that between two and three children in typical classrooms, or approximately 10% of children, are highly test-anxious and experience impairments in test performance as a result. Alternatively, Turner, Beidel, Hughes, and Turner (1993) found that the prevalence of high test anxiety among African American elementary school children may be as high as 41%. Given these widely varying estimates of test anxiety prevalence rates among young children, there is a need for further research that directly examines rates of elevated test anxiety among contemporary public school children who are now universally tested through NCLB legislation.

**Test Anxiety in a High-Stakes Context**

Relatively little research has been conducted that directly examines the relationship between student test anxiety and federally mandated NCLB achievement assessments. A number of researchers have examined the perceptions that teachers, parents, and school administrators have about the impact of large-scale testing programs on students. These studies suggest that state testing programs have resulted in increased student anxiety, increased stress, lowered motivation, increased focus on test preparation, and increased job stress and lowered job satisfaction for teachers (Abrams, Pedulla, & Madaus, 2003; Barksdale-Ladd & Thomas, 2000; Jones & Egley, 2004, 2006; Jones et al., 1999). However, these studies are indirect assessments that may have been influenced by the respondents’ beliefs, concerns, or worries about high-stakes assessments. Thus, although these studies provide important data about how these stakeholders perceive the impact of statewide testing programs, there is a need to study the impact of testing programs on children directly.

The few studies that directly examine how students are affected by high-stakes testing are equivocal. One projective study found that students overwhelmingly felt stress, anxiety, worry, and isolation as a result of testing (Tripplett & Barksdale, 2005). Alternatively, Mulvenon and colleagues (Mulvenon, Connors, & Lenares, 2001; Mulvenon, Stegman, & Ritter, 2005) found that most students felt positively about testing based on a brief, researcher-designed questionnaire. Most recently, Putwain (2008) found that secondary students in the United Kingdom reported higher levels of test anxiety in relation to low- versus medium- and high-stakes examinations. These contradictory findings highlight the need for further examination of the relationship between test anxiety and high-stakes testing among students.

The current study examined how children in Grades 3 through 5 perceived high-stakes standardized state achievement testing. This population was selected because NCLB requires that annual achievement testing begin in Grade 3, and research on test anxiety in this population is limited (Hembree, 1988). The researchers hypothesized that test anxiety among students would be significantly greater for high-stakes testing than for classroom testing. The researchers also hypothesized that teachers would report that both they and students had more test anxiety about high-stakes testing than classroom testing. Thus, this study expanded on the existing literature by directly assessing
Table 1
Demographic Characteristics of Student Participants

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
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<tr>
<td><strong>Grade</strong></td>
<td></td>
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<tr>
<td>3</td>
<td>119</td>
</tr>
<tr>
<td>4</td>
<td>124</td>
</tr>
<tr>
<td>5</td>
<td>92</td>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>151</td>
</tr>
<tr>
<td>Female</td>
<td>180</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>275</td>
</tr>
<tr>
<td>African American</td>
<td>15</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>24</td>
</tr>
<tr>
<td>Asian</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
</tr>
<tr>
<td><strong>Educational Classification</strong></td>
<td></td>
</tr>
<tr>
<td>General Education</td>
<td>289</td>
</tr>
<tr>
<td>Special Education</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total N</strong></td>
<td>335</td>
</tr>
</tbody>
</table>

students, as well as teachers, to clarify the nature of the relationship between NCLB testing and test anxiety among elementary school students.

**METHOD**

**Subjects**

School children in Grades 3 through 5 in three elementary schools in a Midwestern state were invited to participate in the study. A total of 617 children from 25 classrooms were invited to participate in the study though a written letter sent home with all students. Parental consent was obtained from 335 children who participated in the study. The majority of the children were Caucasian (82%), followed by Latino/Hispanic (7.2%) and African American (4.5%). Ten percent of the students were identified as receiving special education services. Among the 25 teachers invited to complete teacher questionnaires, 22 (88%) participated in the first questionnaire, and 15 (60%) participated in the second questionnaire. Table 1 summarizes the demographic characteristics of student participants; teacher demographics were not assessed. In some cases, the sample N does not total to 335, indicating that some demographic information was unavailable for participants.

**Measures**

**Test Anxiety Ratings.** Test anxiety was measured using two scales. The first scale was the Children’s Test Anxiety Scale (CTAS), a 30-item self-report scale designed to measure test anxiety in children in Grades 3 through 6 (Wren & Benson, 2004). The scale includes items that assess children’s thoughts, off-task behaviors, and physiological reactions to testing. Each item is scored on a 4-point Likert scale that ranges from *almost never* to *almost always*. Scores on the CTAS range from 30 to 120. On the standardization sample, means (standard deviations) for the total sample were 61.97 (16.49) on the overall scale, 16.89 (5.14) on the off-task behavior subscale, 15.96
(5.63) on the physiological reactions subscale, and 29.12 (8.79) on the thoughts subscale. Internal consistency estimates for the CTAS were satisfactory for the overall scale (0.92) and for the off-task behavior (0.76), physiological reactions (0.82), and thoughts (0.89) subscales. The second scale was the test anxiety content subscale of the Behavior Assessment Scale for Children, Second Edition (BASC-2-TA), which is made up of seven items on the child self-report (Reynolds & Kamphaus, 2004). The subscale measures a child’s irrational worry and fear regarding test-taking, with scores ranging from 0 to 18. The test anxiety subscale has an internal consistency of 0.81. Normative data on BASC-2-TA scores for children under the age of 12 were not available.

Teacher Perceptions of Testing. Teachers reported on their perceptions of students’ anxiety before and during testing, as well as their own anxiety related to students’ expected performance. Surveys were altered to name either classroom tests or the NCLB assessment. Questions included: 1) How anxious were your students about _________ before they took them? 2) How anxious were your students about _________ during the tests? and 3) How anxious were you about how well your students would do on _________? Anxiety was rated on a 4-point Likert scale, ranging from not at all to very anxious, with higher scores indicating greater anxiety. Teachers also reported on their perceptions of how well students performed on a 5-point Likert scale, ranging from very much below their ability to very much above their ability, with higher scores indicating higher performance. Specifically, teachers were asked, How well do you think your students performed on _________?

Test Anxiety Classification. Students were classified as having low, moderate, or high test anxiety based on the recommended classification system for the CTAS. The CTAS was used to classify students, as it is the only test anxiety measure that has normative data for students in elementary school. Students were classified as having high test anxiety if their CTAS score was 1 SD above the mean of the standardization sample (78.46) and as having low test anxiety if their CTAS score was 1 SD below the mean (45.48; D. Wren, personal communication, March 14, 2008). Students whose test anxiety scores fell within 1 SD of the mean were classified as having moderate test anxiety. Classifications were conducted to examine rates of students reporting clinically significant test anxiety.

Data Collection

The researchers administered the CTAS and BASC-2-TA to students immediately following their completion of the NCLB achievement assessment, which occurred over a 2-week period. Students were asked to think about their NCLB testing experience while answering questions. One month later, the CTAS and BASC-2-TA were re-administered to the students who were asked to think about all classroom tests they had taken over the past 2 weeks while answering questions. The delay between surveys was designed to help students differentiate between the NCLB testing experience and the classroom testing experiences. Retrospective reports on test anxiety regarding NCLB testing and classroom testing were used to assess overall test anxiety across the multiple days of test administration and due to district concerns that prospective survey completion could induce student anxiety. During each session, researchers read a set of standardized instructions explaining how the students should complete the measures, and during the second administration, the researchers reminded students about the names of all classroom tests administered during the past 2 weeks. Teachers completed surveys at the same time that students did.

Data Analysis

Descriptive statistics of reported test anxiety were examined, and nonparametric statistics were conducted because the distributions of test anxiety scores were not normally distributed. The distributions of all test anxiety measures were positively skewed. Wilcoxon signed-rank tests were
Table 2
Test Anxiety Scores on the NCLB Assessment and Classroom Testing

<table>
<thead>
<tr>
<th>Measure</th>
<th>MEAP Test</th>
<th>Classroom Tests</th>
<th>z</th>
<th>p</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Md</td>
<td>M</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td>CTAS Total</td>
<td>305</td>
<td>52</td>
<td>55.97</td>
<td>16.33</td>
<td>318</td>
</tr>
<tr>
<td>Thoughts</td>
<td>307</td>
<td>24</td>
<td>25.36</td>
<td>8.12</td>
<td>320</td>
</tr>
<tr>
<td>Off-task</td>
<td>306</td>
<td>14</td>
<td>15.31</td>
<td>5.25</td>
<td>324</td>
</tr>
<tr>
<td>Autonomic</td>
<td>307</td>
<td>14</td>
<td>15.35</td>
<td>5.96</td>
<td>322</td>
</tr>
<tr>
<td>BASC-2-TA</td>
<td>309</td>
<td>4</td>
<td>4.99</td>
<td>4.06</td>
<td>322</td>
</tr>
</tbody>
</table>

Note. NCLB = No Child Left Behind; MEAP = Michigan Educational Assessment Program; CTAS = Children’s Test Anxiety Scale; BASC-2-TA = Behavioral Assessment Scale for Children, Second Edition, Test Anxiety Subscale.

Bonferroni correction of p ≤ .01 for multiple comparisons.

used to determine whether or not students reported significantly different levels of test anxiety across conditions, with a Bonferroni correction of p ≤ .01 used to correct for multiple comparisons. Mann–Whitney U tests were used to examine differences in test anxiety resulting from differences in student demographic variables, including sex, ethnicity, and educational classification. Effect sizes of scores that differed significantly across test types were calculated, \( r = \frac{z}{\sqrt{2n}} \). Chi-square goodness of fit analyses were conducted to examine whether students’ test anxiety classifications (low, moderate, high) differed significantly by testing condition, with a Bonferroni correction of p ≤ .01. These analyses were conducted to examine whether or not more students reported clinically significant test anxiety regarding the NCLB assessment. T tests were conducted to examine differences in teacher perceptions. When Levene’s test for equality of variances indicated a violation of the assumption of equal variance, t tests without the assumption of equal variance were examined.

**RESULTS**

**Test Anxiety Levels**

Differences in test anxiety between the high-stakes and classroom testing conditions were analyzed using both the CTAS and BASC-2-TA scales. Differences are first reported for the total scale scores, and then differences in CTAS subscales are examined. First, there was a statistically significant difference between students’ reported CTAS-Total test anxiety scores across the high-stakes testing and classroom tests conditions, \( z = -5.04, p < .0005 \), with a small effect size \( (r = -0.20) \). Students reported significantly greater CTAS-Total test anxiety on the high-stakes assessment than on classroom tests. There was also a statistically significant difference in students’ BASC-2-TA test anxiety scores between conditions, \( z = -2.47, p = .01 \), with a small effect size \( (r = -0.10) \). Students reported significantly greater BASC-2-TA test anxiety on the high-stakes assessment than on classroom tests.

Next, on the CTAS subscales, there was a statistically significant difference in students’ CTAS-Thought scores between conditions, \( z = -4.87, p < .0005 \), with a small effect size \( (r = -0.19) \). Students reported significantly greater test anxiety on the CTAS-Thought subscale for the high-stakes testing than for classroom testing. Similarly, there was a significant difference in students’ CTAS-Autonomic scores between conditions, \( z = -5.87, p < .0005 \), with a small effect size \( (r = -0.23) \). Students reported significantly greater test anxiety on the CTAS-Autonomic subscale for the high-stakes testing than on classroom testing. There was no difference in students’ CTAS-Off-task scores between conditions, \( z = -0.08, p = .93, r = -.003 \). Table 2 summarizes the differences identified between reported test anxiety on the NCLB assessment and on classroom tests.
Student test anxiety on both the NCLB assessment and classroom test conditions were examined by student demographic variables to explore whether or not there were differences in text anxiety among students with different demographics. On the NCLB assessment, girls reported more CTAS-Total test anxiety, \( z = -4.35, p < .0005 \), and more BASC-2-TA test anxiety, \( z = -4.09, p < .0005 \), than did boys. The effect sizes of these differences were small, \( r = -0.25 \) and \( r = -0.23 \), respectively. Similarly, on classroom tests, girls reported more CTAS-Total test anxiety, \( z = -3.64, p < .0005 \), and more BASC-2-TA test anxiety, \( z = -4.59, p < .0005 \), than did boys. The effect sizes of these differences were small, \( r = -0.21 \) and \( r = -0.26 \), respectively. CTAS-Total and BASC-2-TA scores did not differ by ethnicity or special education status in either testing condition. Table 3 summarizes the differences identified between test anxiety and demographic variables.

### Test Anxiety Classifications

Using the CTAS-Total scale score to classify students as having low, moderate, or high test anxiety, we examined the clinical significance of the differences of reported test anxiety across conditions. There was a significant difference in the proportions of students with low, moderate, and high levels of test anxiety in the classroom test condition compared with the high-stakes testing condition, \( \chi^2(2, n = 318) = 27.90, p < .0005 \). As expected, significantly more students reported low anxiety and fewer students reported moderate test anxiety in the classroom testing condition. Contrary to our expectations, similar numbers of students reported high test anxiety about the classroom testing condition and the NCLB assessment. Figure 1 illustrates the differences in prevalence rates of test anxiety across high-stakes (NCLB) testing and classroom testing using the CTAS-Total scores.

### Teacher Perceptions of Testing

Teacher questionnaire data were analyzed to examine differences in teachers’ perceptions of student and teacher anxiety, as well as student performance based on the testing condition. There was a significant difference in teachers’ perceptions of students’ anticipatory test anxiety, \( t(34.85) = 2.21, p = .03 \), with teachers reporting students had more anxiety about the NCLB assessment than classroom testing. There was no difference in teachers’ perceptions of students’ test anxiety during the test-taking, \( t(35) = 1.57, p = .13 \). There was also a significant difference in teachers’ perceptions of their own anxiety about student performance, \( t(35) = 3.15, p = .003 \), with teachers...
reporting significantly more anxiety about the NCLB assessment. Finally, there was no difference in teachers’ perceptions of students’ performance across the test conditions, \( t(34.90) = -1.93, p = .06 \), although there was a trend toward rating students as performing better on classroom tests than on the NCLB assessment.

**DISCUSSION**

The purpose of this study was to critically examine how elementary school children perceive high-stakes testing situations to enhance our understanding of the impact of test anxiety on young children. Previous research suggests that test anxiety is associated with impaired test performance and impaired knowledge acquisition in academic skill areas (Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960; Zeidner, 1998). In the current study, students reported significantly more test anxiety in relation to the high-stakes NCLB assessment than to classroom tests. There were small, but significant, differences between students’ self-reported test anxiety regarding NCLB and classroom testing for both the CTAS-Total scale and the BASC-2-TA scale, effect sizes \( r = -.21 \) and \( r = -.10 \), respectively. These results are consistent with the hypothesis that students perceive high-stakes testing situations as more stressful and anxiety-provoking than typical testing situations that occur as part of the curriculum. Similarly, students reported significantly more cognitive and physiological symptoms of test anxiety about the NCLB assessment. When considered within the context of previous research that suggests worry is more strongly related to impaired test performance than emotionality in both laboratory and applied-testing situations (Hembree, 1988; Holroy, Westbrook, Wolf, & Badhorn, 1978; Liebert & Morris, 1967), it is possible that students experiencing greater cognitive symptoms of test anxiety also experience associated impairments in test performance. Interestingly, in contrast to a previous study by Turner and colleagues (1993), we did not find an association between reported test anxiety and student ethnicity on either the testing condition.

This is the first study to establish that elementary school children experience greater test anxiety about NCLB testing than about typical classroom testing. No previous study has directly compared test anxiety across both high-stakes and typical testing conditions among young children. The only study that offers some data for comparison is a study comparing a mock high-stakes examination taken as test preparation for an actual high-stakes terminal high-school examination (Putwain, 2008). In contrast to the current study, Putwain (2008) found that students taking the mock or “low-stakes”
examination experienced more test anxiety than students taking the actual terminal examination. One possible explanation for the difference in the findings may be that students in the current study had more experience with classroom testing situations compared with the novel experience of the high-stakes test, whereas participants who completed the mock examination in the Putwain study were having a completely novel experience. Although it is not possible to identify a causal mechanism for the differences in reported test anxiety in either the current study or the Putwain study, young students may experience greater test anxiety in NCLB testing situations due to the novelty of the task and the emphasis placed on the test by teachers and administrators.

In addition to examining student self-reported test anxiety, this study also examined teacher perceptions of student test anxiety, enabling comparisons to be made between teachers’ perceptions of student test anxiety and students’ self-reported test anxiety. Teachers reported that students experienced significantly more anticipatory anxiety regarding the high-stakes assessment. This finding is consistent with multiple studies examining teachers’ perceptions of the impact of high-stakes testing on children. Specifically, teachers reported that students experience heightened anxiety, stress, pressure, and worry due to high-stakes testing programs (Abrams et al., 2003; Barksdale-Ladd & Thomas, 2000; Jones & Egley, 2004, 2006; Jones et al., 1999). In the current study, teacher perceptions were also consistent with the significantly greater test anxiety reported by students in relation to the high-stakes testing condition versus the classroom testing condition.

Teachers also reported that they experienced significantly more anxiety about their students’ performance on the NCLB assessment than on classroom testing. Specifically, teachers were more likely to worry about how well their students would perform on high-stakes tests compared with regular classroom tests. This difference may have important implications for teacher training, because research has shown that when teachers experience increased anxiety, stress, and pressure, they change their instructional patterns to focus on test preparation (Abrams et al., 2003; Barksdale-Ladd & Thomas, 2000; Jones & Egley, 2004; Jones et al., 1999). Moreover, teacher anxiety may indirectly influence the manifestation of student test anxiety (Doyal & Forsyth, 1973). Future studies specifically examining the effect of teacher anxiety about NCLB testing on student test anxiety and performance are warranted.

Finally, this study examined differences in the rates of students who experienced low, moderate, or high test anxiety across the high-stakes and classroom testing conditions. Using students’ CTAS-Total scores, rates of high test anxiety ranged from 9% to 11% across testing conditions, suggesting that there was no clinically significant difference in the overall rate of children identified as being highly test-anxious across conditions. This prevalence rate of high test anxiety aligns closely with King and Ollendick’s (1989) estimate that approximately 10% of students experience clinically impairing test anxiety. Although the rate of high test anxiety did not differ across conditions, there were significant differences in the proportions of students classified as having low or moderate test anxiety. More students reported moderate test anxiety (59% vs. 44%) and fewer students reported low test anxiety (32% vs. 45%) about NCLB testing versus classroom testing. Overall, 25% of students reported increased test anxiety about the NCLB assessment and were reclassified into a higher test anxiety level, with 60% of students remaining stable across testing conditions. The largest shift in test anxiety classification occurred in the number of students ($n = 56$) who reported low test anxiety about classroom testing and were then reclassified as moderately test-anxious in the high-stakes testing condition. It is interesting to note, however, that a subset of students (15%) reported less test anxiety about the NCLB assessment. Future investigation of patterns of changing test anxiety across assessments is warranted, especially in regard to how test anxiety affects performance.
Clinical and Educational Implications

Several clinical and educational implications related to identifying children at risk for impairing test anxiety can be gleaned from this study. Perhaps the most important finding is that students in elementary school report significantly more overall test anxiety and more cognitive and physiological symptoms of test anxiety about high-stakes testing than classroom testing. More students report moderate levels of test anxiety about NCLB testing than about classroom testing. By understanding that students experience more test anxiety about NCLB testing, teachers, educators, and policy makers may more effectively prepare students to cope adaptively with these different types of tests. There is some empirical support for cognitive-behavioral, academic skill-building and biofeedback interventions for test anxiety among older school-aged youth (e.g., Bradley et al., 2010; Egbochuku & Obodo, 2005; Gregor, 2005; Lang & Lang, 2010; Larson, Ramahi, Conn, Estes, & Gibellini, 2010). School psychologists have the skills and training to provide these more intensive, tertiary interventions to individual students or groups to the approximately 10% of students with high test anxiety. In addition, school psychologists also have the expertise in consultation to train teachers in using relaxation techniques in the classroom. Teachers could be empowered to use relaxation strategies in their whole classrooms prior to high-stakes testing or when students express or exhibit negative thoughts, feelings, or anxiety about evaluative situations.

Future Research

Results indicated that elementary school students in the current study experienced significantly more test anxiety about NCLB testing versus classroom testing. However, there are limitations related to the current study sample that confine its generalizability. The current study involved the examination of predominantly Caucasian (82%) students from a Midwestern school district. As such, the results of this study may not generalize to students of different racial or ethnic backgrounds, or other states. Caution must be exercised in using the current study results to draw broad conclusions about the how students respond to NCLB testing in other states. However, the differences found in the current study call for further replication, given the potential implications of these findings for students as well as teachers and educators involved in student preparation for high-stakes tests.

Finally, in an educational accountability climate in which schools face difficult choices about how to use limited resources to maximize student learning, understanding the effect of test anxiety on students’ test performance and psychological well-being is essential. There is a need for further research that examines how heightened test anxiety among students affects student performance on high-stakes tests. Previous research has demonstrated that test anxiety can have a negative impact on grade point average and that children with high levels of test anxiety are more likely to drop out of school (Cizek & Berg 2006; Hembree, 1988; Spielberger, 1966). In addition, research has demonstrated that test anxiety can reduce motivation in students and heighten levels of stress during exams (Cizek & Berg, 2006; Hembree, 1988, Zeidner, 1998). However, this research has not been conducted in the context of NCLB testing. Further examination of the effects of test anxiety on NCLB test performance is essential because these tests can have important implications for students, teachers, schools, and school districts. Similarly, reducing test anxiety prior to high-stakes testing may be an important method for maximizing student performance and minimizing student distress. Thus, there is also a need for future studies that examine the effectiveness of test anxiety interventions for high-stakes examinations among elementary school students.

References


