Parents' Perceptions of Standardized Testing: Its Relationship And Effect on Student Achievement

Monica Z. Osburn
University of North Carolina at Pembroke

Charles Stegman, Laura D. Suitt, & Gary Ritter
University of Arkansas

Abstract
Questions regarding the value of standardized testing have been raised by community and school leaders, as well as parents and members of the media. Some have expressed concern that children today are placed under such pressure to perform well on standardized tests that the anxiety adversely affects performance outcomes. This study examined the attitudes and perceptions of parents with respect to the importance of tests, the responsibility shared by parents and teachers for student performance on these tests, the testing climate surrounding these tests, and the stress and anxiety that may accompany these tests. Furthermore, the study investigated the relationship between parental views and children's performance on the exams. The sample of students examined here attend school in a high-achieving district in Northwest Arkansas. Parents of fifth-graders, who had just completed the SAT-9 test week, were surveyed. Overall, parents' responded that standardized testing is important to them and that it is not overly stressful for their children. They did, however, report a concern that the teachers are under pressure. With respect to student performance on the exams, the parents of students who did poorly on the exams did feel pressure to help their children do well.

Standardized testing has been placed under significant scrutiny in recent years. For the better part of the past two decades, schools have implemented large scale standardized testing programs as a way to measure academic accountability (Bernauer & Cress, 1997). In addition, the No Child Left Behind legislation has increased the importance of standardized testing and accountability for schools and teachers. In response, administrators, teachers, and parents have questioned the value and worth of tests as a measure of academic achievement (Bernauer & Cress, 1997; Paris, 1992). Murray (1998) highlighted the unreasonable emphasis placed on standardized tests by "the gatekeepers of American Higher Education."

In another case for support against testing, Howard Gardner, famous for his work on multiple intelligences, stated he was unconcerned that American children were ranked last among the major industrial nations in the Third International Mathematics and Science Study (Murray, 1998). He reported that tests measure exposure to facts and skills not whether or not kids can think (Murray, 1998).

In many cases, test results are used to make decisions about teacher pay, school funding, and the promotion of children to higher grades (Kubiszyn & Borich, 2000). Given the "high stakes" that are put on these tests, and the vast amount of backlash surrounding standardized testing, it is not unlikely that a high level of concern and debate exists. The common concerns highlighted in the literature are that (a) teachers will teach "to the test" instead of focusing on established curricula (Jones, Jones, & Hardin, 1999); (b) students who do not respond well to standardized tests will be penalized (Etsey, 1997); and that (c) parents, teachers, and administrators can "influence" a child's performance through anxiety, pressure, and involvement. These concerns are compounded further when popular press articles, such as Testing Testing Testing, featured in Good Housekeeping (Cool, 2002), highlight standardized testing as stressful for parents, teachers, administrators, and students.

Climate and Pressure

The concerns raised regarding testing and achievement often are linked back to not only the validity of the measure, but also its effect on individuals involved with testing. Some researchers have examined overall school climate, including teacher anxiety, student pressure to succeed, and administrator's use of testing results, as possible predictors of academic achievement. In a study conducted by Campbell and Mandel (1990), lower levels of help, pressure, and

monitoring, together with higher levels of psychological support from parents was associated with higher academic achievement. Pang's (1991) study included a variable of parental support as part of climate and found that, when students perceived their parents as supportive, mathematics achievement increased. The literature, however, also supported the claim that testing environments were high anxiety and extremely stressful for students.

In North Carolina, one survey found that 61% of teachers perceived that their students felt more anxiety and less confidence due to testing (Jones et al., 1999). Some researchers have found that test anxiety starts as early as kindergarten and continues throughout the testing process (Fleege, Charlesworth, Burts, & Hart, 1992; Hill & Wingfield, 1984). This anxiety is often compounded with successive low-performing testing results (Crocker, Schmitt, & Tang, 1988). As anxiety increases, students may look to parents for increased support.

A recent survey sponsored by the Association for Supervision and Curriculum Development found that many parents are confused about standardized testing, do not feel informed about assessment procedures and do not believe they are equipped to assist their child in preparing for testing (Gleason, 2000). Dounay (2000) stated that parents in some states assert that high-stakes tests place undue pressure on young children and these parents have questioned the validity of assessment and accountability systems. Nowhere in the current literature was parental stress actually measured.

Parental Involvement

Research has indicated that parental involvement can be a significant factor in predicting academic success (Christenson, Rounds, & Gorney, 1992; Epstein, 1987; Keith, Troutman, Bickley, Trivette, & Singh, 1993). However, the construct of parental involvement has been measured in several different ways. Some early studies such as Morrison (1978), conceived parental involvement as the extent to which parents were involved in school activities.

More recent studies, however, have expanded the scope of the construct. Milne, Myers, Rosenthal, and Ginsburg (1986) used measures of whether parents helped with homework or attended parent-teacher conferences as variables to measure parental involvement. Fehrmann, Keith, and Reimers (1987) conceptualized a measure of parental involvement that included whether parents knew where their children were and what they were doing, whether parents influenced their children's plans after high school, and whether parents closely monitored how well their children were achieving in school.

Astone and McLanahan's (1991) study included a measure of general supervision and measures of whether the parents had high aspirations for their children, monitored school progress, and talked regularly with their children. Miller and Green (1992) used a structural equation model with parental involvement represented by measures of whether parents helped with homework, rewarded good grades, and communicated with teachers about school matters. Madigan (1994) examined the effects of 10 indicators of parental involvement associated with whether parents encourage and reward work on mathematics at home. Most of the previous studies employed multivariate regression analysis and estimated effects over and above family background factors such as socioeconomic status.

Not all studies on parental involvement indicated relationships that were positive. Milne et al. (1986) found a negative relationship between achievement and parental help with homework and suggested that this was attributable to the fact that parents helped more if their children were not doing well at school. Madigan (1994) found negative associations between parents helping with homework, insisting that their children do their homework, or rewarding their children for good grades and academic success. Nonetheless, both Milne et al. (1986) and Madigan (1994) found a positive relationship between parents' high expectations for their children and academic performance. Muller (1993) also reported negative relationships to achievement with parents monitoring their eighth graders' homework or providing more after school supervision. Significant negative effects for parents' frequent contact with school or participation in parent-teacher conferences were also found. Muller (1993) reported a link between parents discussing school experiences with their children and increased school performance. Astone and McLanahan (1991) found a positive correlation between parents' aspirations, monitoring their child's progress, and general supervision, with academic achievement. Fehrmann et al. (1987) found positive relationships with his parent involvement construct consisting of monitoring and supervision.

In summary, studies found that parents' high expectations for and general monitoring of their children's performance were positively related to academic achievement, whereas helping with homework and attending parent-teacher conferences have negative associations or no association with academic achievement. What this review suggests is that parent involvement is a multi-dimensional construct that can have many components. Some types of

involvement may well lend to better outcomes, while other types of involvement may well arise due to poor performance. Rarely in the literature was parent's perceptions of test value evaluated nor was the test climate factored into the research.

Test Value

Little research to date has studied parents' perceptions of achievement testing. Barber, Paris, Evans and Gadsden (1992) indicated that parents support achievement testing. However, too often parents are not informed of results, the results are not explained adequately, and the results are often difficult to interpret without assistance. Paris (1992) found that most states do not have formal policies for communicating test results to parents, and when surveyed, many teachers and administrators admitted being unable to interpret results.

If parents do not understand achievement testing, this may undermine their support. It is unclear if parents understand academic testing and it is also unknown whether this lack of understanding affects student performance. A parent may be involved, but if that involvement is negative toward achievement tests or promotes an unhealthy environment for test taking, how might that impact academic performance? The literature highlights types of parental involvement and perceptions of a stressful academic environment, but it has not systematically examined parents' perceptions of standardized testing as it relates to student achievement.

This study will help address questions related to parental perceptions of test value, their perceived role in testing, and how that is related to students' academic achievement. It is hypothesized that parental attitudes toward standardized tests and test climate are related to student academic performance. According to Astone and McLanahan (1991), a child's failure in school is partly the result of inadequate or ineffective parenting styles. Specifically, a child may be influenced through the parent's perceptions, and thus may or may not succeed academically. Astone and McLanahan (1991) found that several parental practices (such as parents' aspirations toward school, monitoring academic progress, general supervision, and talking with children) had significant effects on student grades, attitude toward school, and graduation rate. This paper seeks to add the factor of climate to the variables studied by Astone and McLanahan as well as focus on standardized assessments as a dependent variable. The questions guiding this study are the following: (a) Do parents believe that standardized testing is valuable and are parents interested in the performance

of their children on standardized tests ?; (b) Is there an "unhealthy" school climate due to testing ?; (c) Are parents concerned that standardized testing is overly stressful for their children or for the teachers of their children and do they feel pressure related to the performance of their children ?; and (d) Is there a relationship between student performance on standardized tests and any of the above attitudes and perceptions of the parents?

Methods

Participants

Parents of children attending fifth-grade classes in a high-performing school district of Northwest Arkansas were selected to participate. This particular district ranked in the top 10% of all the districts in the state on most achievement tests. Further, the Northwest region of Arkansas is one of the most affluent in the state. The district has nine schools that serve fifth grade. Each school was similar with respect to diversity (predominately Caucasian). The individual schools exhibited some variability in socio-economic status and family structure. All parents were provided with a packet that contained an explanation of the study, a consent form, and a parent survey. A total of approximately 500 parents received surveys and 250 parents returned completed surveys. Of the 250 surveys returned, 190 could be matched with student achievement data.[1] These 190 surveys were from 9 different schools and 23 total classrooms. The drop off in matching was due to errors in test reporting and incomplete testing data, and there is no reason to believe that the respondents are systematically different from the non-respondents.

Measures

Data for this analysis were collected by means of a self-report survey completed by the parents and the student Stanford Achievement Test, Version 9 (SAT-9) scores. The SAT-9 tests were taken the same week the parent surveys were distributed and returned. The authors designed the self-report survey, Parent's Survey of Standardized Achievement Tests (see Appendix A). The survey consisted 19 items relating to perceptions of standardized testing,

[1]With a sample of 190, the authors will be able to detect, with statistical significance, a difference of approximately .4 effect sizes (using a 95 percent confidence level and 80 percent power). For example, on the Math portion of the SAT-9 exam, this design will allow for us to detect differences of approximately 15 scale points.

specifically, overall stress and anxiety, climate, and parental involvement. A five-point Likert-type scale was used to rate responses ranging from not at all (1) to an extreme amount (5). Survey items were categorized into three scales or constructs: Parental Involvement and Interest in Testing, Testing Climate, and Overall Stress and Anxiety.

The Parental Involvement and Interest in Testing construct included the following items: (a) The standardized testing program is important for the educational progress of my child; (b) I believe that standardized testing is a waste of time (This question is reverse coded to fit in with the construct); (c) I am interested in the results of my child's tests; and (d) I believe that parents have a responsibility to work with their children to improve their performance on standardized tests.

The Testing Climate construct included the following items: (a) The climate surrounding testing in this school is healthy; (b) I think the teachers genuinely want my child to do well on the test; (c)The principal works hard to help make the testing week as pleasant as possible for the students; and (d) The principal works hard to help make the testing week a positive experience for the students.

The Overall Stress and Anxiety construct items were: (a) The standardized testing program is stressful for my child; (b) The standardized testing program is stressful for teachers; (c) Teachers seem threatened by the testing program; and (d) I feel pressure to help my child score well on standardized tests.

For the construct of Parental Involvement and Interest in Testing, the item reliability was .70; the Testing Climate construct yielded a .79 item reliability; and the Overall Stress and Anxiety construct yielded a .71 item reliability. For each construct a mean score resulted between one and five, in which a score near one suggests a low score and a score near five means they scored high on that construct (for example, on the Testing climate construct, a score of one means that the parent felt the climate was not positive at all and a score of five means they felt the climate was extremely positive). To make sense of the construct scores, the authors grouped them into three categories such that the lowest grouping included scores nearest to one; the middle grouping included scores closest to two and three; and the highest grouping included scores nearest to four and five. The mean score for each construct was then used to classify each respondent as a low scorer (0 to 1.49 = did not agree at all), middle scorer (1.50 to 3.49 = some or moderate

agreement), or high scorer (3.5 to 5 = significant or extreme agreement) on that particular construct. The authors chose to categorize the scores into three groups instead of five so they would be easier to understand. This in no way changed the results. For example, if the results were significant on the 1 to 5 scale they were also significant when the scores were categorized and vice versa. The Stanford Achievement Test version 9 (SAT-9) was part of the standardized testing program required by the Arkansas Department of Education when this study was completed. The SAT-9 battery used consisted of three content areas, mathematics, reading, and language.

Procedures

Elementary school principals in the district were approached at the beginning of the academic year of 2000-2001 and approval was given to administer the survey to students, teachers, and parents in this district. The week prior to the administration of the SAT-9, all fifth-grade teachers were instructed to send home a permission slip for children to participate in a study on standardized tests. Attached to that permission slip was an informed consent as well as the Parent's Survey of Standardized Achievement Tests for parents to complete for participation in the study. Either parent could complete the survey, but the one who actually responded, needed to give informed consent and sign the permission slip for themselves and their child. The completed surveys, informed consent, and permission slips were then returned to the fifth grade teachers who then gave them to one of the researchers. All parents were given the same amount of time to complete the survey.

The teachers, counselors, and administrators of the school district administered the SAT-9 in the Fall of 2000. Each student's SAT-9 scores were matched to the parent's questionnaire by a unique number identifier. A further data check was also conducted by name of teacher and grade of student. All identifying data must have matched exactly to have been used in the study.

To address the research questions, several different procedures were used. First, the authors examined the item response by percentage of respondents to accurately address the scope of the problem. Next, to assess the relationship between the items and constructs and student achievement, a series of analyses of variance (ANOVA) were conducted.

Results

Parental Involvement and Interest in Testing

The vast majority of parents reported to be involved in and interested in their child's testing with a mean construct score of 3.94 on a five point scale (5 = extremely involved and 1 = not involved at all). Now using the categories described in the methods section, 83% of parents reported significant or extreme involvement and interest in their child's testing (see Figure 1).

The individual items do suggest that the parents surveyed reported that standardized testing is important. Fewer than 5% reported that it was not at all important, while 55% responded that it is significantly or extremely important. For a related survey question "I believe standardized testing is a waste of time," two out of three parents felt that testing was not a waste of time.

An overwhelming majority of parents surveyed were interested in the results of their child's test scores. Out of the 190 parent responses, 88% reported being significantly or extremely interested in their child's results. Only three parents reported not being interested at all in the results of the test. Parents surveyed also felt a responsibility to help their children. In response to the survey item "I believe that parents have a responsibility to work with their children to improve their performance on standardized tests," approximately 50% of the parents

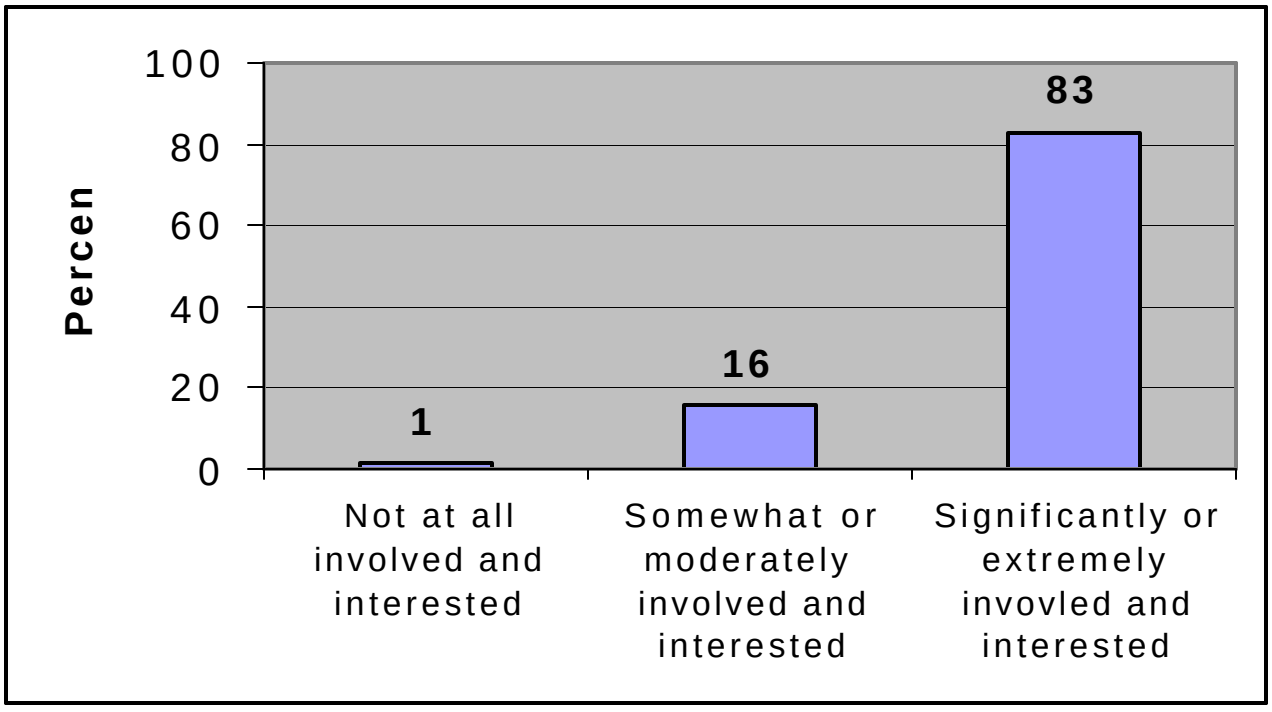

Figure 1. How Involved and Interested are the Parents? These figures are based on the four items from the Parental Involvement and Interest in Testing construct.

agreed strongly (significantly or extremely). In fact, fewer than 7% of the parents reported to have no responsibility for the child's performance.

Although these items were not included in the formal construct, there were some indications of negative outcomes related to parents and the testing process. One concern lies with the lack of communication between parents and school staff regarding test results. Supporting the findings of Barber et al. (1992), half of the parents reported that they had received only some or no explanation of the test score results by their child's teacher. One possibility was that the school counselor had undertaken the task of explaining these results. More than 90% of the parents, however, reported that they have received only some or no explanation of the test score results by the school counselor.

Testing Climate

Most parents reported the testing climate as being relatively positive (M = 3.84 on a five point scale, 5 = extremely positive and 1 = not positive at all). In fact, based on the construct, 75% of parents reported that they felt their child's testing environment was significantly or extremely positive (see Figure 2).

With respect to the individual items, a majority (59%) of the parents reported that the climate surrounding testing was healthy. Fewer than 4% of the parents reported that the testing climate was not at all healthy for their children. Likewise, approximately 86% of parents think that teachers want their child to

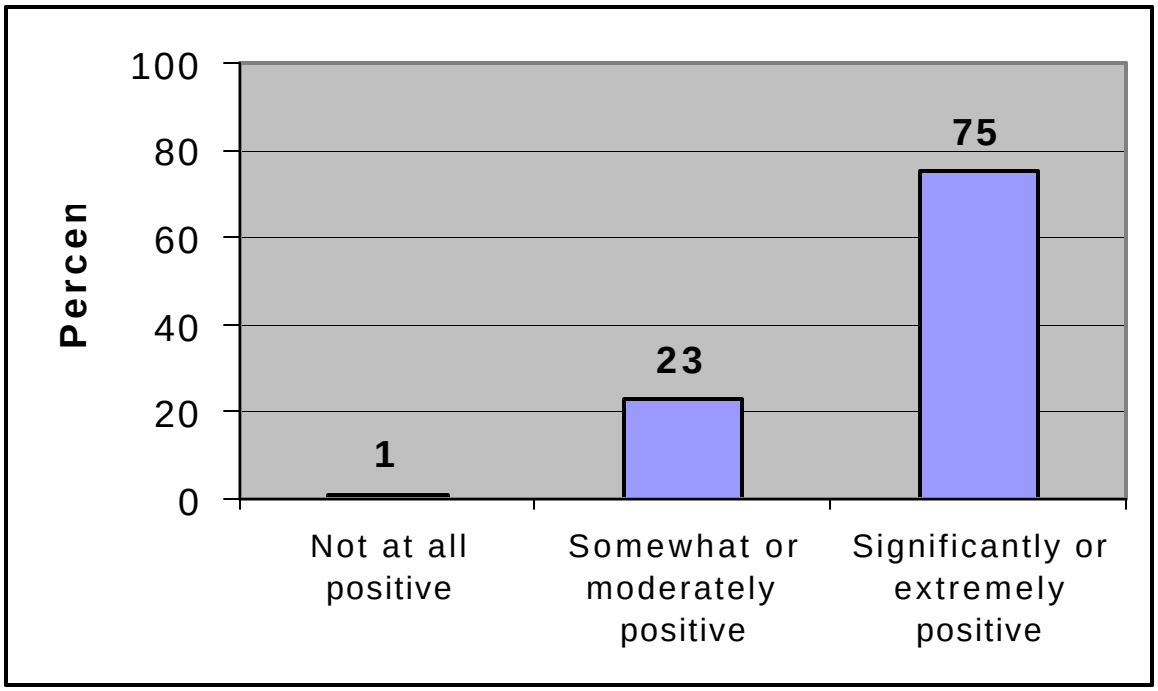

Figure 2. How Positive Is the Testing Climate? These figures are based on the four items from the Testing Climate construct. Two percent of the responses for this construct were reported as missing data.

do well on standardized tests. Moreover, the majority of parents (64%) reported that the principal of the school (in each of nine different schools) works hard to make the testing week a pleasant and positive experience for the students.

Overall Stress and Anxiety

Most parents reported that stress and anxiety was somewhat or moderately present (*M* = 2.41 on a five point scale, 5 = extremely stressful and 1 = not stressful at all). Approximately 73% of parents reported the stress and anxiety level to be moderate (see Figure 3).

Regarding the individual items, the majority of parents expressed the belief that the testing program at the school is not overly stressful for their children. In response to the survey item "The standardized testing program is stressful for my child," only 24% responded that it is significantly or extremely stressful. In fact, 22% of the parents reported that it was not at all stressful for their children. With respect to the teachers, a roughly similar proportion of the parents believed that teachers are concerned about the pressure due to the standardized tests.

Just as most of the parents did not believe that the testing program is overly stressful for their children, the majority of parents reported that they did not feel pressure to help their children score well on the exams. In respect to the survey item "I feel pressure to help my child score well on standardized tests," only 13% reported significant or extreme pressure. In fact, 43% of the parents claimed to have felt no pressure at all.

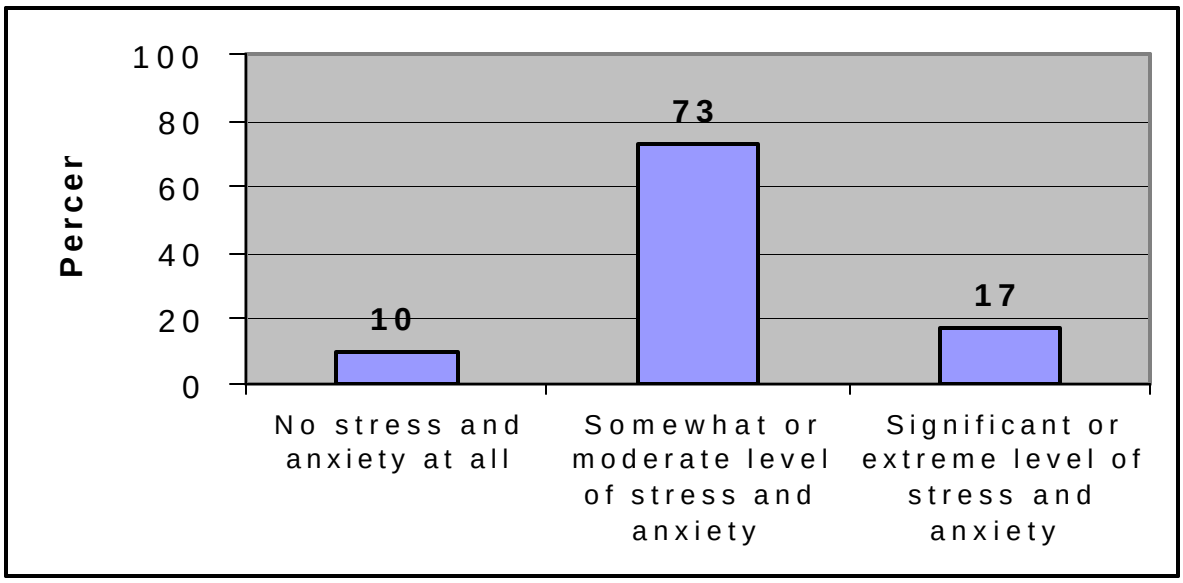

Figure 3. What is the Overall Stress and Anxiety Level? These figures are based on the four items from the Overall Stress and Anxiety Construct.

Relationship Between Parental Attitudes and Student Achievement

Not only did this study seek to understand the attitudes of parents toward standardized testing, but also to examine the relationship between parental attitudes and student performance on standardized tests. Relationships between each of the construct scores and student achievement were examined. Several specific items for relationships between parent responses and student achievement scores were also examined. An alpha level of 0.05 was used for all univariate analyses.

Results for the Parental Involvement construct indicated no significant difference in student achievement based on mathematics [$F(2,187) = 1.00, p < 0.37$] or reading [$F(2,187) = 1.98, p < 0.14$], but there was a significant difference for language [$F(2,183) = 3.23, p < 0.04$]. Students of parents who were not interested or involved at all scored the highest on language with a mean score of 665 and parents who were moderately involved and interested had students who scored the lowest in language with a mean score of 636 (in the state of Arkansas the range of mean scores for language was 508 to 773, see Appendix D for more information). For the parents who were significantly or extremely involved and interested, their students had scores that fell in the middle range for the language section of the test with a mean score of 653.

There were no significant differences found on the Testing Climate construct for student achievement based on mathematics [$F(2,183) = 1.11, p < 0.33$], reading [$F(2,183) = 0.87, p < 0.42$] or language [$F(2,179) = 0.39, p < 0.68$]. A significant difference was reported for student achievement based on mathematics [$F(2,187) = 3.66$, $p < 0.03$] on the Overall Stress and Anxiety construct. There were no significant differences for student achievement based on reading [$F(2,187) = 1.40$, $p < 0.25$] and language [$F(2,183) = 2.03$, $p < 0.13$] for the Overall Stress and Anxiety construct. Students of parents who reported no stress or anxiety scored in the middle for mathematics with a mean score of 651 (in the state of Arkansas the range of mean scores for mathematics was 494 to 784, see Appendix D for more information). Parents who reported moderate levels of stress and anxiety had students who scored the highest in mathematics with a mean score of 658. For the parents who reported significant or extreme levels of stress and anxiety, their students had the lowest scores with a mean score of 636 on the mathematics section of the test.

While there were few significant parent results revealed in the construct above, some of the individual items were related to student achievement in interesting ways. For the item "I feel pressure to help my child score well," one-

way univariate ANOVA's indicated that there were significant differences between the parent groups based on responses to the amount of pressure and student achievement in mathematics ($F(2, 186) = 7.39$, $p < 0.00$), reading ($F(2,186) = 9.27$, $p < 0.00$), and language ($F(2,182) = 9.78$, $p < 0.00$). One might have hypothesized that parents of students who performed poorly would feel a higher level of pressure, or that students with more "interested" parents would have performed better on exams. Data gathered suggested that parents who reported feeling pressure to help their children perform well on exams had children with the lowest average scaled scores (see Table 1).

Table 1. ***Relationship between Parents' Pressure and Student Performance***

Parental Reports of "*I feel pressure to help my child score well*"	Math Scaled Score (*M*)	Reading Scaled Score (*M*)	Language Scaled Score (*M*)
Pressure: Not at All (*n*=78)	660	675	656
Pressure: Some or Moderate (*n*=88)	655	667	652
Pressure: Significant or Extreme (*n*=23)	624	634	622
Overall Group Averages	653	666	650
ANOVA *F*-statistic Significance	.001	.000	.000

Note: Authors' analysis of parental survey data and SAT-9 test scores.

As Table 1 indicates, the students whose parents reported no pressure to improve student performance represented the highest scoring group on all three exams. For example, on the mathematics exam, children whose parents reported no pressure had an average score of 660, while students whose parents reported "some or moderate" pressure had an average score of 655 and the students of those parents who reported "significant or extreme" pressure had a much lower average scaled score of 624. This same pattern was evident for the reading and language portions of the SAT-9 exam as well.

No significant differences were found for the item "The standardized testing

program is stressful for my child" between the parent groups based on responses to the amount of pressure and student achievement in student achievement in mathematics [$F(4,184) = 2.33$, $p < 0.06$], reading [$F(4,184) = 1.26$, $p < 0.29$], and language [$F(4,180) = 2.19$, $p < 0.07$]. Students who scored the lowest on the mathematics, reading, and language exams also had parents who reported that the tests were relatively stressful for their students. Whereas the students whose parents reported no stress for their children earned an average mathematics scaled score of 663, their counterparts, whose parents reported "significant or extreme" stress for their children, had an average score of only 635. This difference was somewhat modest and not statistically significant; however, it was still a difference worth noting.

For the item "The standardized testing program is important for the educational progress of my child," there was a difference between the parent groups based on responses to the amount of pressure and student achievement in mathematics [$F(4,185) = 3.30$, $p < 0.01$], but not in relation to reading [$F(4,185) = 2.15$, $p < 0.08$] or language [$F(4,181) = 2.34$, $p < 0.06$]. An interesting pattern appeared in which the students whose parents expressed very strong views - on either the positive or negative side - about the importance of standardized testing were among the lowest performers on exams. Further, the parents of students who perform well did not report strong views on the support for standardized testing (see Table 2).

Discussion

Academic testing is currently controversial in educational systems. The results of this study provide some additional information that should be useful. Despite what the popular press may imply, this study indicated that parents are not overly anxious about standardized testing, nor do they feel their children are. However, the district used in this study is a fairly high-performing district, with only a couple of low-performing schools. Parents from districts with primarily low-achieving schools may respond differently.

One interpretation of this interesting result is that parents of the lowest-performing students react in one of two ways: (1) they reveal a belief that these tests are not meaningful, perhaps because they do not think their children do very well, or, (2) they emphasize the importance of the exam due to the great concern they may have over the performance of their children. These results, however, should be viewed with caution as there is no hint of causation in either direction; that is, there is no evidence as to whether the student performance influenced parental views or vice versa.

Table 2. **Relationship between Parent Test Value and Student Performance**

Parental Reports of *"The standardized testing program is important for the educational progress of my child"*	Math Scaled Score (*M*)	Reading Scaled Score (*M*)	Language Scaled Score (*M*)
Pressure: Not at All (*n*=9)	637	668	648
Pressure: Some (*n*=23)	642	662	640
Pressure: Moderate Amount (*n*=54)	665	674	657
Pressure: Significant Amount (*n*=80)	656	669	652
Pressure: Extreme Amount (*n*=24)	635	645	635
Overall Group Averages (190)	653	666	650
ANOVA *F*-statistic Significance	.012	.076	.057

Note: Author's analysis of parental survey data and SAT-9 test scores.

With respect to the value of testing, these parents indicated that testing is important but that they are not getting the results explained to them. To make achievement testing more valued and beneficial to all involved, it should be a collaborative process between the school and the family. The results indicated a positive perception of school climate, which should support better communication to assist the student academically. The parents also indicated a sense of responsibility to help their child succeed academically. This can be seen as a willingness to become more involved in the testing process. This district may want to investigate how parent involvement can be beneficial in the testing process.

Overall, this study does not support the concept that parents are overly stressed about their children and standardized testing. To the contrary, it showed support for standardized testing and reaffirmed its value in the academic process. Future research needs to be conducted to assess if these results would be the

same in a district that is experiencing significantly lower testing scores and more pressure to improve current test results. One of the limitations to the study was that it only covered one specific region with a small degree of cultural or socioeconomic variation. The results may not reflect a wider population. For example, schools labeled "academically distressed" in Arkansas would be good sites for similar research in the future. Students in Northwest Arkansas generally score higher in academic performance than other parts of the state, and specifically this school district is under little state pressure to increase test scores. A broader study would examine what if any differences are apparent in other regions of the state.

Another limitation of the study was some of the unknown factors associated with parent involvement and perceptions. It is a highly interpretable concept that may be influenced by factors such as parental age, education level or family status. These variables were not accounted for in the study. The results presented here can be used as a springboard for future testing. Moderate levels of parental involvement coupled with parental interest and knowledge may assist in furthering the benefits of standardized testing.

References

Astone, N. M., & McLanahan, S. S. (1991). Family structure, parental practices and high school completion. *American Sociological Review, 56,* 309-320.

Barber, B. L., Paris, S. G., Evans, M., & Gadsden, V. (1992). Policies for reporting test results to parents. *Educational Measurement: Issues and Practice, 11*,15-20.

Bernauer, J. A., & Cress, K. (1997). How school communities can help redefine accountability assessment. *Phi Delta Kappan, 1*, 71-75.

Campbell, J. R., & Mandel, F. (1990). Connecting math achievement to parental influence. *Contemporary Educational Psychology, 15*, 64-74.

Christenson, S. L., Rounds, T., & Gorney, D. (1992). Family factors and student achievement: An avenue to increase students' success. *School Psychology Quarterly, 7*, 178-206.

Cool, L. C. (2002). Testing testing…testing…: Are standardized exams the strong medicine our schools need? Or will they turn kids off to learning? The bottom line on a raging debate. *Good Housekeeping*, August.

Crocker, L., Schmitt, A., & Tang, L. (1988). Test anxiety and standardized achievement test performance in the middle school years. *Measurement and Evaluation in Counseling and Development, 20*(4), 149-157.

Dounay, J. (2000). High-stakes testing is high-stress too. T*he Education Digest, 65*(9), 9-13.

Epstein, J. L. (1987). Effects on student achievement of teachers' practices of parental involvement. In S. Silver (Ed.), *Literacy through family, community, and school interaction*. Greenwich, CT: JAI Press.

Etsey, Y. K., (1997, March). *Teachers' and school administrators' per spectives and use of standardized achievement tests: A review of published research*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.

Fehrmann, P. G., Keith, T. Z., & Reimers, T. M. (1987). Home influence on school learning: Direct and indirect effects of parental involvement on high school grades. *Journal of Education Research, 806,* 330-337.

Fleege, P. O., Charlesworth, R., Burts, D. C., & Hart, C. H. 1992. Stress begins in Kindergarten: A look at behavior during standardized testing. *Journal of Research in Childhood Education, 7*, 20-26.

Gleason, B. (2000). *National survey gauges parent perceptions of state mandated standardized tests*. Association for Supervision and Curriculum Development: Alexandria, VA.

Hill, K., & Wingfield, A. (1984). Test anxiety: A major educational problem and what can be done about it. *The Elementary School Journal, 85*(1), 105-126.

Jones, M. G., Jones, B., & Hardin, B. (1999). The impact of high-stakes testing on teachers and students in North Carolina. *Phi Delta Kappan, 81*, 199-203.

Keith, T. Z., Troutman, G. C., Bickley, P. G., Trivette, P.S., & Singh, K. (1993). Does parental involvement affect eighth grade student achievement? Structural analysis of national data. *School Psychology Review, 22*, 474-496.

Kubiszyn, T., & Borich, G. (2000). *Educational testing and measurement: Classroom application and practice* (6th ed.). New York: John Wiley.

Madigan, J. (1994). *Parent involvement and school achievement*. Paper presented at the meeting of the American Educational Research Association, New Orleans, LA.

Miller, J. D., & Green, H. (1992). *The impact of parental and home re-sources on student achievement and career choice*. Paper presented at the meeting of the American Association for the Advancement of Science, Chicago, IL.

Milne, A. M., Myers, D. E., Rosenthal, A. S., & Ginsburg, A. (1986). Single parents, working mothers, and the educational achievement of school children. *Sociology of Education, 59*, 125-139.

Morrison, G. S. (1978). *Parent involvement in the home, school, and community*. Columbus, OH: Charles E. Merrill.

Muller, C. (1993). Parent involvement and academic achievement: An analysis of family resources available to the child. In B. Schneider & J.S. Coleman (Eds.), *Parents, their children, and schools* (pp. 77-114). Boulder, CO: Westview.

Murray, D. W. (1998). *The war against testing*. Retrieved on March 10, 2004 from http://www.stats.org/record.jsp?type=oped&ID=85

Pang, V. O. (1991). The relationship of test anxiety and math achievement to parental values in Asian-American and European-American middle school students. *Journal of Research and Development in Education*, *24*(4), 1-9.

Paris, S. G. (1992). Four perspectives on educational assessment. *International Journal of Disability, Development, and Education*, *39*(2), 95-105.

Appendix A Parent's Survey of Standardized Achievement Tests

		Not at all	Some	Moderate amount	Significant amount	Extreme amount	Total
1	The Standardized testing program is important for the educational progress of my child.	9	23	54	80	24	190
		4.70%	12.10%	28.40%	42.10%	12.60%	
2	The Standardized testing program is stressful for my child.	41	55	48	28	17	189
		21.70%	29.10%	25.40%	14.80%	9.00%	
3	The standardized testing program is stressful for teachers.	14	56	47	41	13	171
		8.20%	32.70%	27.50%	24.00%	7.60%	
4	Teachers seem threatened by the testing program.	59	49	36	20	4	168
		35.10%	29.20%	21.40%	11.90%	2.40%	
5	I feel pressure to help my child score well on standardized tests.	78	43	35	19	4	179
		43.60%	24.00%	19.60%	10.60%	2.20%	
6	I have had the results of my child's test explained to me by a teacher.	54	38	34	45	14	185
		29.20%	20.50%	18.40%	24.30%	7.60%	

(Appendix A continiues)

Appendix A (continued)

7	I have had the results of my child's test explained to me by a counselor.	164	8	2	5	7	186
		88.20%	4.30%	1.10%	2.70%	3.80%	
8	The climate surrounding testing in this school is healthy.	7	18	49	76	31	181
		3.90%	9.90%	27.10%	42.00%	17.10%	
9	I am interested in the results of my child's tests.	3	3	17	44	123	190
		1.60%	1.60%	8.90%	23.20%	64.70%	
10	I believe that standardized testing is a waste of time.	126	29	21	5	6	187
		67.40%	15.50%	11.20%	2.70%	3.20%	
11	I think the teachers genuinely want my child to do well on the test.	1	6	18	67	93	185
		0.50%	3.20%	9.70%	36.20%	50.30%	
12	I think the teachers are concerned about the test results impacting their job security.	39	44	45	30	18	176
		22.20%	25.00%	25.60%	17.00%	10.20%	
13	I think teachers are concerned about the pressure that could be placed on them by the principal if their classes' test	33	51	38	32	21	175
		18.90%	29.10%	21.70%	18.30%	12.00%	
14	I believe the teacher is responsible for working with my child to improve his/her performance on standardized tests.	14	48	49	58	20	189
		7.40%	25.40%	25.90%	30.70%	10.60%	

(Appendix A continiues)

Appendix A (continued)

15	I believe that parents have a responsibility to work with their children to improve their performance on standardized tests.	13	29	53	52	41	188
		6.90%	15.40%	28.20%	27.70%	21.80%	
16	My child likes the testing week because he/she has less homework and less instruction in the class.	50	41	52	23	20	186
		26.90%	22.00%	28.00%	12.40%	10.80%	
17	My child tries to do well on the tests.	0	4	23	85	77	189
		0.00%	2.10%	12.20%	45.00%	40.70%	
18	The principal works hard to help make the testing week as pleasant as possible for the students.	4	18	48	63	43	176
		2.30%	10.20%	27.30%	35.80%	24.40%	
19	The principal works hard to help make the testing week a positive experience for the students.	4	18	41	70	42	175
		2.30%	10.30%	23.40%	40.00%	24.00%	

Appendix B

Table 3. *Descriptives of the Testing Variables*

Variable Name	*N*	*M*	*SD*	Min.	Max.
SAT-9 Reading scaled score	190	666.37	42.02	546	776
SAT-9 Mathematics scaled score	190	653.52	41.81	508	762
SAT-9 Language scaled score	190	650	34.59	548	750

Appendix C

Table 4. *Descriptives of the Constructs*

Variable Name	*N*	*M*	*SD*	Min.	Max.
Parental Involvement Construct	190	3.36	0.70	1.00	5.00
Testing Climate Construct	186	3.84	0.78	1.00	5.00
Overall Stress and Anxiety Construct	190	2.41	0.88	1.00	4.75

Appendix D

Table 5. *Descriptives of the Testing Variables for the state of Arkansas and Nationally*

Variable Name	*M*	*SD*	Min.	Max.
Arkansas				
SAT-9 Reading scaled score	643.54	43.89	488	799
SAT-9 Mathematics scaled score	629.09	39.53	494	784
SAT-9 Language scaled score	631.37	38.30	508	773
Nationally				
SAT-9 Reading scaled score	648.5	43.8		
SAT-9 Mathematics scaled score	635.7	37.8		
SAT-9 Language scaled score	637.6	37.3		