Educating Urban African American Children Placed At Risk: A Comparison of Two Types of Catholic Middle Schools

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Although the number of urban Catholic schools has declined in recent years, Nativity model middle schools, first developed by the Jesuits over 35 years ago, have appeared throughout the nation to address the need for effective alternative education for urban children placed at risk. The present study compares the effectiveness of two types of high-poverty Catholic schools for 322 African American middle school students. Results show that Nativity schools are more successful than traditional Catholic schools in effecting student gains in standardized test score performance. Results also suggest that features such as small school and class size, small student-teacher ratios, and an extended academic day contribute to these gains. The quality of the school and classroom environment, as perceived by students, that contributed to the amount of engaged learning time also may have contributed to their stronger academic performance. Implications for urban schooling for African American middle school children placed at risk are discussed.

Two related themes that dominate the literature on urban middle schools are, first, that these schools have failed to educate their children adequately (e.g., Noguera, 2003) and, second, that children of color consistently lag behind majority White children in measures of academic performance (U.S. Department of Education, 2004a, 2004b). Other research has shown that urban schools have been particularly ineffective at educating African American children (Gardner & Miranda, 2001; Greene & Forster, 2003; Hale, 2001). In addition, Noguera (2003) and others (Dicintio & Gee 1999; Greene & Forster, 2003) have cited low student achievement and attendance and unmotivated students and teachers among the problems faced by these schools and have called for reform efforts in the public and private domains.

The present study examines the experience of urban African American children placed at risk in two types of urban Catholic middle school programs: small Nativity middle schools, the vast majority of which are operated by Catholic religious communities, and more traditional diocesan Catholic schools with middle school programs housed within a larger Pre-K through Grade 8 school. In this study, between-school type differences in students' academic achievement levels and their self-perceptions and perceptions of the climates of the two types of schools are examined. In addition, predictors of student achievement are examined in order to provide a better understanding of which school-related factors explain individual differences in student achievement.

Urban Education for African American Children

Two decades ago, the Carnegie Council on Adolescent Development (1989), in its landmark document *Turning Points*, sounded the alarm that far too many young adolescents were being left behind and ill prepared for a productive future. The council estimated that one-quarter of American adolescents were in "serious jeopardy" with respect to the risks of school failure and reported that the critical reasoning skills of large numbers of young adolescents were "extremely deficient" (p. 27). It declared that a serious mismatch existed between middle school programs and the developmental needs of their students and that risks faced by young adolescents are greater for those who are economically poor and members of minority groups, in part because these students generally attend the weakest schools. Some research has shown that African American children attend schools that teach a watered-down curriculum by teachers who are inexperienced and poorly prepared (Hale, 2001; Prince, 2002).

Despite the ills of urban public schooling and the risks faced by students who live with social and economic disadvantage, several recent efforts have shown that children and adolescents of color who attend some urban public and private schools, including schools with high concentrations of low-income students, can and do experience educational success. As some studies have shown, elements that support success for students of color placed at risk include a supportive and caring environment that facilitates students' abilities to learn and perform at a high level (Swaminathan, 2004; Towns, Cole-Henderson, & Serpell, 2001; Waxman, Huang, Anderson, & Weinstein, 1997). In particular, research by Towns et al. (2001) showed that effective urban schools possess common factors, such as strong administrative leadership; high expectations for achievement; careful monitoring of student

progress; consistent discipline and order; an emphasis on skill development, homework, and teamwork; and high levels of parental involvement. Effective principals encourage their faculty and maintain positive personal relationships with students. In addition, teachers in effective urban schools communicate high expectations for themselves and their students and create a high-energy classroom climate. These characteristics are consistent with the research literature on effective middle schools (e.g., Lipsitz, 1984; Norton & Lewis, 2000).

Similarly, research by Waxman et al. (1997) found that students in effective urban schools reported more positive learning environments, perceived their teachers as more supportive, and reported more order and organization in their classrooms than did students in ineffective urban schools. In addition, Trimble (2004) addressed the importance of middle school teachers providing students with the assistance they need to achieve at the high levels they expect and promoting student engagement in the learning process.

With respect to the role that psychosocial factors related to student self-perceptions play in student academic achievement, Powell and Jacob Arriola (2003) suggested that academic achievement was related to student motivation, positive self-regard, and a sense of internal control, particularly among African American and Hispanic students. However, other research has shown that such self-perceptions are not necessarily predictive of academic success for minority students placed at risk (Finn & Rock, 1997). Given these findings, the present study will attempt to shed some light on the role that self-perceptions play in the academic success of African American students in urban Catholic schools, in addition to the influence of school climate factors.

Urban Catholic Schooling

Catholic and other religiously affiliated schools have long provided a valuable educational alternative for urban children and adolescents placed at risk (Cattaro, 2002). Despite the decline in the number of Catholic schools in the United States over the past three decades, they continue to have a strong presence in urban areas educating children placed at risk. Catholic schools also constitute the largest group of non public schools in the United States and educate a large percentage of non-Catholic children and adolescents (Johnson, 1999; U. S. Department of Education, 2008). Although not without some controversy, much research has shown that Catholic school students outperform their public school counterparts on standardized tests at various grade levels (Braun, Jenkins, & Gregg, 2006; Cattaro, 2002; Johnson, 1999; Perie, Vanneman, & Goldstein, 2005). With respect to middle school performance,

an advantage favoring students in Catholic and Lutheran schools over public schools has been shown consistently for reading and to a lesser extent for mathematics achievement among eighth graders, depending upon the student, family, and school characteristics used as covariates (Braun et al., 2006; Peterson & Llaudet, 2006). Although earlier work suggested that this difference could be explained largely by characteristics of the students themselves and their families (Wenglinsky, 2004), more recent research suggests that Catholic high schools operated by religious orders possess organizational characteristics that account for more positive academic outcomes than do other Catholic high schools (Wenglinsky, 2007). This study examines the characteristics of one type of alternative Catholic middle school, the Nativity model school, that has demonstrated outstanding academic results in comparison to more traditional Catholic diocesan and public schools (Fenzel, 2009; Fenzel & Monteith, 2008; Fenzel, Peyrot, & Premoshis, 1997; Podsiadlo & Philliber, 2003).

Nativity Schools

The first Nativity model middle school opened in New York City more than 35 years ago by the Catholic order of Jesuit priests to provide economically disadvantaged Latino boys from the area with an educational program that would improve their academic skills and prepare them for a successful high school experience (Podsiadlo & Philliber, 2003). Nativity schools, with more than 40 in operation today throughout the United States,[1] have sought to provide inner-city youth placed at risk with the kind of educational program, free or nearly free of charge, that is typically available only to children from advantaged homes. The model incorporates many of the characteristics of effective middle schools, beginning with a competent instructional leader and a dedicated and talented teaching staff. Among the other characteristics are small classes for instruction, small advisory groups, close monitoring of student progress, and the involvement of parents. Nativity schools also provide an extended academic day with afternoon and evening tutorials and homework assistance, as well as summer programs that attend to students' continued academic and social development (Fenzel, 2009; Fenzel & Monteith, 2008; Podsiadlo & Philliber, 2003). This additional time devoted to academics has been shown to boost the academic achievement levels of minority

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1   In July 2006, the NativityMiguel Network of Schools was formed to bring together Nativity schools and San Miguel schools, which follow the same Nativity model of middle school education for urban children placed at risk. The model is based on the one established by the Jesuits' Nativity Mission Middle School that opened in 1971. The religious order of Christian Brothers later developed a network of San Miguel schools that followed the Nativity model. As both networks expanded to over 60 schools in all, leaders decided to combine their efforts in a single network.

children (Wenglinsky, 2004). In contrast to Nativity middle schools, most diocesan Catholic schools house their middle school programs within a K-8 school structure with most of their middle school students having attended the school prior to sixth grade.

Previous research, which compared student achievement and school climate qualities of Nativity schools to urban public middle schools, has shown clear differences that favor Nativity schools (Fenzel & Hessler, 2002; Fenzel et al., 1997; Podsiadlo & Philliber, 2003). Public middle schools are not included in the present study.

In the present study, then, informed by previous research on the success of Nativity schools and other schools operated by religious orders in advancing student achievement, we expected to find differences in academic performance, self-perceptions, and perceptions of the school and classroom learning and social environments of African American students in high-poverty urban Catholic schools that favored students in Nativity middle schools. We expected to find higher levels of standardized test score performance and greater gains in standardized test scores for Nativity school students even when school gender structure (single-sex versus coeducational) and student sex were controlled. In addition, we examined predictors of academic performance to ascertain which structural, environmental, and psychosocial factors contributed to higher levels of student achievement, regardless of school type. We also examined qualitative data to provide more information about aspects of the Nativity schools that may contribute to between-school differences in student academic achievement.

Method

Schools and Student Participants

The present study was part of a larger investigation of the effectiveness of 11 Nativity model schools in seven urban centers that educated boys and girls in single-sex and coeducational structures. Criteria for selecting and contacting these schools are described at length elsewhere (Fenzel, 2009). Schools included in the present study include 4 Nativity model schools that served a high percentage of African American students (several other schools in the Nativity network educated children from Hispanic families). These 4 schools enrolled a total of 233 African American children, including 130 boys and 103 girls, in Grades 6 through 8. The mean age of the Nativity school students was 12.2 years ($SD = 1.0$) and 94% qualified for the federal free- or reduced-meal program. In addition, 54.8% of respondents reported that their mothers and 44.0% that their fathers were educated beyond high school.

With respect to student gender structure, one school in Baltimore educated boys only ($N = 66$), two (in Baltimore and Boston) were coeducational ($N = 64$ boys and 64 girls), and one in Washington, DC educated only girls ($N = 39$). Two of the schools enrolled fifth graders who were not included in the study. Student-teacher ratios in Nativity schools averaged 5.6 to 1, the median class size for instruction was 12, and students attended school for a mean of 10 hours per day. Three of the schools were operated by Catholic religious communities and one was supported by the Episcopal diocese of Boston. All four schools operated independent of diocesan education offices.

The two comparison Catholic diocesan schools, which housed middle school programs within a larger Pre-K through Grade 8 coeducational structure, located in Baltimore, enrolled 69 boys and 88 girls in Grades 6 through 8 who self-identified as African American. These schools were chosen because their students lived in the same part of the city as many of the students who attended the 2 Baltimore Nativity schools and their middle school programs operated separately from the elementary school programs. For these comparison schools, known among local Catholic educators for their strong instructional leadership and academic programs, the student-teacher ratio was 20.7 to 1, the median class size for instruction was 22, and students attended school a mean of 7 hours per day. The mean age of the students was 12.6 years ($SD = 1.0$) and 90% qualified for federal free or reduced meals. In addition, 68.5% of students reported that their mothers and 52.1% that their fathers were educated beyond high school. There were no significant differences in the educational attainment of mothers or fathers of students in the two types of schools.

For the present study, complete survey data were collected from 167 Nativity school students (94 boys and 73 girls; 72% of initial sample) and 155 comparison school students (68 boys and 87 girls; 99% of initial sample). The percentage of boys was significantly greater for the Nativity school sample than for the comparison school sample, $\chi^2(1, N = 322) = 4.76$, $p = .029$.

Materials

Student surveys. Students at each of the four Nativity schools and two comparison schools completed surveys during the month of October in their homeroom classes that assessed students' self-perceptions and perceptions of the school climate. With respect to self-perceptions, students indicated the extent to which they disagreed or agreed on a 4-point scale with items that addressed levels of self-esteem (6 items, alpha = .76; based on Harter's [1985] Self-Perception Profile for Children), and intrinsic motivation, or tendency to

persist even when tasks are difficult (7 items, alpha = .80; based on Harter's [1981] Scale of Intrinsic versus Extrinsic Orientation in the Classroom). Students also reported on a 5-point scale (from *Never*, coded 0, to *About once a week*, coded 2, to *Everyday*, coded 4) the extent to which they had trouble since the start of the school year getting along with teachers and students, paying attention, following rules, and completing homework assignments (School Adjustment Difficulty; 5 items, alpha = .90).

Scores on five subscales that assessed students' perceptions of various aspects of the school and classroom climate were also compared in the present study. Items for the subscales were taken from the Classroom Environment Scale (Moos & Trickett, 1987) and the Talent Development Student Survey developed by the Center for the Social Organization of Schools (2003). These subscales included measures of students' perceptions of the care and support provided by their principal (3 items, alpha = .71), the extent to which students get along and make friends (Peer Social Climate, 4 items, alpha = .68), the climate of the school as enjoyable and its rules fair (5 items, alpha = .78), and the climate of their math class and language arts class as being academically engaging, task oriented, and supportive (12 items, 6 for each class; alpha = .86). For each of the items in the five scales, students selected a response on a 4-point scale (scored 1 through 4) indicating the extent to which they disagreed or agreed with a particular statement. In addition, a 4-item scale (5-point response format, alpha = .78) assessing students' perceptions of the level of their parents' involvement in their school and in monitoring their academic progress was used. Additional information on these scales is available elsewhere (Fenzel, 2009), and means and standard deviations of the student perception variables are shown in Table 1 for Nativity and comparison schools. To compare Nativity and comparison students' self-perceptions and perceptions of the school environment, a series of independent *t* tests were conducted followed by analyses of covariance that controlled for student gender.

Students were also given the opportunity to respond to an open response item on the survey. Responses to the item: *What are the most difficult one or two things for you about attending this school?* were content-analyzed and categorized according to type of difficulty (e.g., with teachers, peers, or rules). Between-school-type differences in students' perceptions were then examined using a chi-square analysis.

Administrator reports. An administrator at each school included in the study provided academic and attendance data for each student in Grades 6 through 8 on forms provided. Standardized test scores in reading and mathematics and students' previous school year's final report card grades in core

Table 1

Comparison of Student Self-Perception and Perceptions of Environments of 6 Nativity and 2 Traditional Parochial Schools and Students' Grade Point Average

Student Perceptions	Nativity School Mean (*SD*) (*N* = 167)	Comparison School Mean (*SD*) (*N* = 155)	*t*	*d*	Partial *F*[1]
Self-Esteem	3.41 (.*49*)	3.50 (.*60*)	-1.50	.17	2.11
Intrinsic Motivation	2.98 (.*60*)	3.10 (.*57*)	-1.73+	.19	2.96+
School Adjustment Difficulty	2.97 (*1.13*)	3.06 (*1.16*)	-0.70	.08	0.55
Principal Caring and Supportive	3.37 (.*55*)	3.61 (.*57*)	-3.74***	.42	14.35***
Peer Social Climate	3.13 (.*55*)	2.95 (.*54*)	2.86**	.32	7.20**
School is Enjoyable and Fair	2.99 (.*62*)	2.87 (.*60*)	1.79+	.20	2.77+
Class Climate	3.03 (.*41*)	2.89 (.*43*)	3.09**	.35	10.76**
Parent Involvement	3.25 (.*49*)	2.96 (.*56*)	4.93***	.55	25.74***
Grade Point Average (*N* = 268)	81.1 (*7.6*)	80.9 (*8.4*)			

Two-tailed values: $+ p \leq .10$, $* p \leq .05$, $** p \leq .01$, $*** p \leq .001$
Note: [1] Controlling for sex of student.

subject areas of math, language arts, and science (on a scale of 0 through 100) for members of the classes of 2004 and 2005 are used in this study. Because schools were likely to use different criteria and standards for assigning grades, student grades were used primarily in analyses as criterion variables to examine predictors of student school performance and not to compare achievement between schools. Two of the Nativity and both of the comparison schools used the Iowa Test of Basic Skills and the remaining schools used the Stanford 9 to assess reading and math achievement. Tests were administered annually at three of the Nativity schools in March or April and in October at the other schools. For each student, two variables were created to code whether (1) or not (0) he or she improved one grade equivalent (GE) or more in reading and math per year of attendance at the school. This approach

to examining gains in standardized test performance is consistent with that of other research (Balfanz & Byrnes, 2006) and provides a mechanism for controlling for the particular nationally normed test used. Similarly, two additional variables indicating whether the student was performing at or above grade level (coded 1) or below grade level (coded 0) for the time of year when the test was administered were used. We then compared the achievement of students from the two types of schools using chi-square analyses. In addition, we used logistic regression analyses to examine between-school-type differences with the contributions of student sex and school gender structure (single-sex or coeducational) controlled. Because the study was conducted in the fall of the year, standardized test scores were not available for the current school year. Also collected from the school administrators was information on specific aspects of the school programs, such as the length of the school day, the presence of after-school and tutorial programs, student-teacher ratios, the certification status and experience levels of teachers, admissions processes, and the administrative structure of the school.

School observations and interviews. The primary purpose of the school visits was to understand better how the Nativity model was implemented and to ascertain student, teacher, and administrator views of how well the model was working. To that end, during the months of October and November in 2003, observations were conducted at least one full day and usually part of a second day at each Nativity school. These observations included observing between four and six classes, attending the daily school assembly, meeting with school personnel and students, and attending one or more afternoon or evening activities. During class observations, notes were taken on class size, teachers' instructional methods, and levels of student engagement. A revised version of the Classroom Environment Scale was completed that assessed elements of student engagement in learning, teacher support, and teacher task orientation (see Fenzel, 2009; Fenzel et al., 1997 for reliability and validity information). In addition, semi structured individual interviews were conducted with faculty and administrators as well as individual or focus group interviews with students in order to inform findings of survey results. Notes were taken during all interviews and the majority were tape recorded. In all, a mean of 4.2 classes were observed, and all of the principals and a mean of 11.3 students per school were interviewed. At the comparison schools, researchers viewed the school facilities, observed two classes, and spoke briefly with teachers and principals. (Because the objective of the larger study was to focus on the characteristics of Nativity model schools that contributed to their success and to compare Nativity schools on their

structures and processes, a similarly comprehensive examination of comparison school programs was not undertaken.) All observation notes were typed into a text file for each school soon after the visit was completed. To analyze interview data, researchers organized data from each source, for example, students, teachers, or administrators, first for each school and then for the set of schools. Predominate themes were then underlined and coded and then reorganized by theme in data files.

Results

Nativity model middle schools and middle school programs in urban Catholic parochial schools were compared, first, with respect to student academic achievement. As expected, results showed that a significantly higher percentage of Nativity students as compared to comparison school students were performing at or above grade level during the Grade 7 administration of the tests in both reading (55.6% vs. 26.7%), $\chi^2(1, N = 228) = 17.61, p < .001$, and math (49.3% vs. 24.0%), $\chi^2(1, N = 229) = 14.39, p < .001$. In addition, a greater percentage of Nativity students gained one or more grade equivalents per year in both reading (70.0% vs. 50.0%), $\chi^2(1, N = 228) = 7.46, p = .006$, and math (63.8% vs. 40.0%), $\chi^2(1, N = 229) = 10.24, p = .001$. Furthermore, when student sex and school gender structure (single-sex vs. coeducational) were controlled, Nativity students' standardized test score gains in reading and math achievement remained significantly greater than those for comparison school students (see Table 2). When these covariates were included in the analyses of whether students performed at or above grade level in reading and math achievement in Grade 7, the effect for school type was significant for math achievement and approached significance for reading achievement (see Table 3).

Expecting to find the environments of Nativity schools to be more conducive to learning and academic performance, we compared the two types of schools with respect to students' self-perceptions, their perceptions of aspects of the school and classroom learning and social environments, and their reports of the level of parental involvement using a series of independent *t* tests (see Table 1). Results showed three significant differences favoring Nativity schools and one favoring the comparison schools. As expected, Nativity school students perceived their math and language arts classes as more engaging with more supportive teachers, the school as providing a more peer-friendly environment, and their parents as more involved in their education. On the other hand, comparison Catholic school students viewed their principals as more caring and supportive. When we conducted analyses

Table 2

Results of Logistic Regression Analyses Predicting Gains in Students' Standardized Test Scores (N = 229)

Criterion = Change in Math Standardized Test Score (Increase $\geq$ 1 GE/year)

Predictor	B^1	$Wald^1$	*Nagelkerke* R^2 Change	p change
Block 1 (Forced entry of dichotomous predictors)				
School Gender Structure	- .99	3.68+		
Student Sex	- .01	< .01	.002	
Block 2				
School Type	-1.40	11.58***	.100	<.001
Block 3 (Stepwise entry):				
School is Enjoyable and Fair	.67	6.02**	.044	.014

Criterion = Change in Reading Standardized Test Score (Increase $\geq$ 1 GE/year)

Predictor	B^1	$Wald^1$	*Nagelkerke* R^2 Change	p change
Block 1 (Forced entry of dichotomous predictors)				
School Gender Structure	.44	.70		
Student Sex	.12	.12	.008	
Block 2				
School Type	-1.20	8.46**	.060	.007
Block 3 (Stepwise entry):				
School Adjustment Difficulty	- .36	6.16*	.046*	.013

+ $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$
Note: [1] Statistics for the final step.

of covariance, controlling for student sex, the same significant differences emerged. However, when we also added whether the principal of the school was African American or Caucasian to the analysis, a significant relation between the principal's race and students' perceptions of the principal as caring and supportive emerged, $F(1,319) = 19.02$, $p < .001$, with students perceiving African American principals as more caring and supportive. With this variable in the analysis, the effect for type of school was no longer significant,

Table 3

Results of Logistic Regression Analyses Predicting Whether Student Performance on Standardized Tests Is At or Above Grade Level (*N* = 229)

Criterion = Math Standardized Test Performance

Predictor	B^1	$Wald^1$	Nagelkerke R^2 Change	*p* change
Block 1 (Forced entry of dichotomous predictors)				
School Gender Structure	.82	2.36		
Student Sex	.16	.27	.079	.002
Block 2				
School Type	.80	4.59*	.027	.033
Block 3 (Stepwise entry):				
School Adjustment Difficulty	-.44	9.65**	.059	.002

Criterion = Reading Standardized Test Performance

Predictor	B^1	$Wald^1$	Nagelkerke R^2 Change	*p* change
Block 1 (Forced entry of dichotomous predictors)				
School Gender Structure	1.31	5.16*		
Student Sex	.59	3.48+	.135	<.001
Block 2				
School Type	.63	2.91+	.017	.085
Block 3 (Stepwise entry):				
School Adjustment Difficulty	- .36	6.16*	.027	.031

+ $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$
Note: [1]Statistics for the final step.

$F(1,318) = 2.08$. As shown in Table 1, there were no significant effects for type of school with respect to students' self-perceptions of self-esteem or school adjustment difficulties. Two comparisons approached significance with Nativity students reporting somewhat lower levels of intrinsic motivation for school work and their schools as somewhat more enjoyable with rules that were fair.

With respect to the second objective of the study, we examined which student perceptions were most related to students' school performance with respect to grade point average (GPA) and standardized test scores and test score gains. To that end, we conducted a series of regression analyses, controlling for school gender structure, student sex, and type of school (Nativity or comparison), with student test scores, gains, and GPA as the criteria.

As shown in Table 2, in binary logistic regression analyses, the extent to which students viewed their school environment as enjoyable with rules that were fair accounted for additional significant variation in the prediction of math test score gains, *Nagelkerke R^2* change = .044, *p* = .014. In addition, students' adjustment difficulties entered the equation for the prediction of reading test score gains, *Nagelkerke R^2* change = .046, *p* = .013. Adjustment difficulties also accounted for additional significant variation in Grade 7 test score achievement in both reading, *Nagelkerke R^2* change = .027, *p* = .031, and math, *Nagelkerke R^2* change = .059, *p* = .002 (see Table 3).

As seen in Table 4, partial correlation analyses showed that students' perceptions of their schools as enjoyable with rules that were fair, their parents' levels of involvement in their schooling, and their levels of intrinsic motivation and school adjustment difficulties accounted for significant variation in GPA over and above that explained by the covariates. In multiple regression analyses, with the three covariates entered first as a block, and the students' perceptions of aspects of the school climate considered in the second phase in stepwise fashion, only students' perceptions of their schools as enjoyable with rules that were fair entered the regression equation, accounting for an additional 2% of the variation in GPA. In the third phase, where self-perceptions were examined for stepwise entry, school adjustment difficulty (an additional 4% of the variation) and levels of intrinsic motivation (an additional 2% of the variation) added to the prediction of GPA.

Examining Nativity and comparison school students' written responses to the free response item provided support for findings of quantitative analyses. A significantly greater percentage of comparison school students (23.0%) named difficulties related to teachers' behaviors and school rules (too many or too strict) when compared to Nativity students (13.3%), $\chi^2(df = 1, N = 318) = 5.64$, *p* = .018. Students in the two types of schools expressed nearly equal percentages regarding a concern that school work was too difficult or time-consuming.

Results from observations and interviews. In addition to the considerably smaller class sizes and student-teacher ratios, the longer instructional day and higher-quality resources distinguish Nativity schools from the comparison

Table 4

Partial Correlation and Multiple Regression Analyses of Factors Related to GPA, Controlling for School Type and Gender Structure and Student Sex ($N = 267$)

Student Perceptions	Partial r	R^2 change	F (change)	Beta (last step)
Covariates (Entered together into regression in Block 1):				
School Type	.11			-.04
School Gender Structure	.08			.11
Student Sex	.10	.01	0.78	0
Climate Variables (Stepwise entry in Block 2):				
Principal Cares	.01			
Peer Social Climate	.02			
School Enjoyable & Fair[1]	.14*	.02	4.99*	.08
Academic Class Climate	.08+			
Parent Involvement	.10*			
Self-Perceptions (Stepwise entry in Block 3):				
Self-Esteem	.08			
Intrinsic Motivation[3]	.17**	.02	4.18*	.13*
School Adjustment[2] Difficulty	-.21***	.04	10.70***	-.19**

Two-tailed values: $+ p \leq .10$, $* p \leq .05$, $** p \leq .01$, $*** p \leq .001$
Note: Superscripts 1, 2, 3 indicate order in which variables entered the regression.

schools in the present study. Three of the four Nativity schools, for example, had very good science lab facilities and all of them had strong science programs with resources that were at least adequate for providing quality science lab experiences. At two of the Nativity schools students worked in teams of three with their own set of materials and recorded data and conducted calculations on individual worksheets. The small classes of 12 to 16 students enabled teachers to provide timely feedback to student groups and correct procedural errors. Although one of the two comparison schools had

a particularly strong and experienced teaching staff, their relative lack of access to instructional materials and the larger size of their classes made it difficult to provide the kind of individual attention that Nativity school teachers could and did provide.

In addition, in focus group interviews, Nativity students reported on the depth and breadth of their educational program that the comparison schools did not approach. For example, students at the Baltimore school for boys spoke with enthusiasm of the benefits of their small group advisories in which they could discuss issues of school stress and respect for others and of experiences like Outward Bound and summer camp activities through which they learned how to support and depend on one another. In all of the Nativity schools, students gave high marks to the teachers who took time to help them with their work and listen to their concerns. Students at all Nativity schools cited the small classes as beneficial and recognized how the late afternoon and evening tutorials and homework sessions helped them complete their work and contributed to their learning and skill development. Summer programs in Nativity schools that lasted for 2 to 6 weeks and included an academic component with a strong emphasis on developing students' reading skills likely contributed to students' academic development as well.

Discussion

The present study was conducted to contribute to the research on factors related to the academic success of urban African American middle school students in six high-poverty religious-affiliated schools representing two models of middle school education. Students at each school completed questionnaires examining their self-perceptions and perceptions of their school environments. In addition, the schools provided data on students' standardized test score and report card performance. Four of the schools included in the study (three operated by Catholic religious orders and one by the Episcopal church) followed the Nativity model of education and two schools were more traditional Catholic parochial schools. Differences between Nativity and parochial schools in students' academic performance levels and perceptions were compared and predictors of academic performance were examined.

Results showed, as expected, that Nativity school students achieved at significantly higher levels than did students in the comparison parochial schools with respect to Grade 7 standardized test score performance in reading and mathematics and in gains in their standardized test scores during their middle school years. The clear effect for type of school in predicting student standardized test performance and gains provides further support for the

notion that urban children placed at risk can be very successful academically. These results also are consistent with a recent report indicating that Catholic high schools operated by religious orders, independent of the diocesan organization, contribute more to students' academic gains than do those operated within the diocesan structure (Wenglinsky, 2007). Although this report did not identify specific factors associated with independent Catholic schools that account for better student academic performance, there are several factors that distinguish Nativity schools from the comparison schools in the present study that could inform this effect.

Analyses of interview and observational data suggest that among these factors are the smaller student-teacher ratios and class sizes at the Nativity schools as well as the extra hours students in Nativity schools spend in learning activities during the extended school day and summer programs. Nativity school students reported often and consistently in interviews that they appreciated the high amount of attention given to them by teachers and the small classes that contributed to their learning. Consistent with other research, the amount of time students in Nativity schools spend in classroom instruction, homework assistance, and tutoring in the afternoons and evenings, as well as in summer academic instruction, is likely to contribute considerably to their superior academic gains (e.g., Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Wenglinsky, 2004).

The Nativity school practice of extending the school day is one that has become a part of the approach being used by other recent innovations in urban middle level education, including the KIPP (Knowledge is Power Program) schools (Thernstrom & Thernstrom, 2003). Such a practice provides more *engaged learning time* for students than is found in most public and Catholic schools. When students are placed in small instructional groups and provided one-on-one assistance with homework assignments and academic skill development, engaged learning time is extended and the quality of the learning is enhanced. Findings from the present study and other research suggest that engaging students in learning activities longer contributes substantially to student academic gains (Fenzel et al., 1997; Finn & Rock, 1997). In addition, research has shown that smaller schools with small classes and teachers who are supportive of students' efforts tend to do a better job than do larger schools of engaging students in learning (Balfanz & Mac Iver, 2000; Finn & Rock, 1997; see also, Fenzel & Flippin, 2006), factors that are present in Nativity schools. The strength of the effects of class size and the amount of time students are engaged in learning could not be determined, as they cannot be separated from the school type variable in the present study because of the relatively uniform way in which Nativity schools follow this model of

providing small classes for instruction, an extended academic day, and summer programs that address academic, social, and personal development. In focus group interviews, many Nativity students commented that, although they did not always enjoy spending so many hours in school, they acknowledged how much it contributed to their academic development and preparation for high school and college.

The analyses of student perceptions revealed differences between school types that inform potential influences on student academic achievement. For example, results showed that Nativity students perceived their math and language arts teachers to be more supportive and task oriented and the peer social environment to be friendlier when compared to students in the more traditional parochial schools. Nativity students were also less likely than comparison school students to express concerns about the ways their teachers treated them on the open-ended questionnaire item. In addition, Nativity students, while acknowledging that their teachers were strict, were clear in their appreciation of the extent to which teachers taught them by providing academic and social support. As Wilson and Corbett (2001) found, urban middle school students prefer teachers who are strict, respectful, and fair, keep them on task, and explain material to them in ways that they can understand. From the results of the present study, however, it is not clear how much of a role these perceptions play in student academic achievement, although, as we discuss below, students' self-perceptions may be a contributing factor. In addition, given that not all Nativity school students experience high levels of academic performance (Fenzel, 2009), more research is needed to understand better the roles that teacher variables play in student academic achievement.

Nativity school students also viewed their parents as more involved in their schooling, a factor that was found to be related to student GPA, although this relation did not hold up in multivariate analyses. As interviews with Nativity teachers and administrators showed, getting parents involved in the schools takes a considerable amount of effort, and doing so is a defining characteristic of the Nativity model (Podsiadlo & Philliber, 2003). Also, as previous research has suggested, schools for urban children placed at risk can support students' academic achievement by encouraging effective parental involvement (Gutman & Midgley, 2000).

With respect to the relation of students' climate and self-perceptions to academic performance regardless which type of school they attended, their perceptions of the school as enjoyable and its rules fair seem to play a substantial role, as this variable was related to students' GPA and gains in math achievement, after controlling for school type, school gender structure, and student sex. These findings, which are supported by previous research with

minority students (Swaminathan, 2004; Towns et al., 2001; Waxman et al., 1997), shows the importance of establishing a school environment in which students feel supported and treated fairly. As research has shown, a caring and supportive interpersonal environment, which teachers take the lead to establish within and outside of their classrooms, helps to engage urban learners (Waxman et al., 1997; Wilson & Corbett, 2001). It was clear from student interviews that they viewed the Nativity schools as possessing such characteristics. In addition, other recent research showed that one of the factors that distinguished a high-performing from a lower-performing Nativity school for girls was students' perceptions of the classroom climate as supportive and engaging (Fenzel, 2009). These findings suggest that providing a caring, supportive, and orderly school environment should accompany the extended learning time afforded students in small urban schools in order to maximize school effectiveness and student academic gains.

One unexpected finding that favored the comparison parochial schools was that their students rated their administrators as more caring and supportive than did Nativity school students, although this factor was not related to any of the measures of student academic achievement. This finding is somewhat surprising, as observations showed that the principals in all schools were involved in the daily operation of the schools and interacted regularly and effectively with the students. However, additional analyses of this relation showed that when the race of the principal was added to the analyses, the effect for type of school disappeared. In the two schools, one Nativity and one comparison, where the principal was African American, students rated the level of support and caring of the principal the highest. In addition, because this comparison parochial school had the highest population of African American students (114) of any school included in this study, the perceptions of its students had a relatively strong influence on the finding for type of school.

Students' self-perceptions were also related to student achievement outcomes in the present study. The more likely students were to persist in their school work when it was difficult and the less difficulty they had since the start of the school year getting along with teachers and other students, paying attention, following rules, and getting homework done, the better their grades, regardless of school type or school gender structure. Difficulty adjusting to the demands of school also predicted gains in reading standardized test scores and whether the student performed at or above grade level in reading and math achievement. These findings are consistent with previous work that has shown the important role that self-perceptions play in the academic achievement of minority students (Powell & Jacob Arriola, 2003) and are

also supported in other recent research that distinguished a higher-performing from a lower-performing Nativity school (Fenzel, 2009). As some research has suggested, factors such as students' intrinsic motivation and self-efficacy perceptions may mediate the relation between the quality of the school environment and student academic achievement (Fenzel & O'Brennan, 2007; Gutman & Midgley, 2000). However, more research on these processes is needed, particularly for urban middle school students placed at risk who attend public, Catholic, and alternative independent schools. Nevertheless, these findings suggest the need for teachers and school administrators to be aware of each individual student's progress in school and the difficulties each student might face that may interfere with his or her ability to focus on academic demands. Their small school and class size and a low student-teacher ratio make it easier for Nativity schools to provide this type of monitoring.

Additional school-related factors, such as teacher quality and the quality of the curriculum, that could explain the superior academic performance of students in Nativity schools, should be examined in future research as well. For example, because a larger percentage of the teaching staff in Nativity schools in the present study was comprised of relatively inexperienced, Americorps-type volunteers when compared to the comparison Catholic schools (47.2% vs. 0), more research is needed to understand how these teachers contribute to the high student academic achievement levels in Nativity schools. Although researchers have not agreed on the relative importance of various factors that determine teacher effectiveness or which factors related to teacher quality are most responsible for student achievement gains (Wayne & Youngs, 2003), research has shown that a staff of well-trained and dedicated teachers is an essential component of an effective middle school (e.g., Cochran-Smith, 2003). Perhaps the volunteer teachers bring an energy and level of commitment to their teaching and tutoring of students that some more experienced teachers in larger schools do not (Fenzel, 2009; Fenzel & Flippin, 2006). One thing that is certain is that their presence contributes substantially to lowering the student-teacher ratios in Nativity schools.

With respect to limitations of the present study, because students' academic performances represent achievement that preceded their completion of assessments of their perceptions, it is difficult to ascribe cause-and-effect relations between student perceptions and academic performance. In addition, despite the finding that students in Nativity schools demonstrated superior academic gains compared to students in urban Catholic schools included in the present study, student characteristics related to their selection into Nativity schools may account for some of the findings, although students in one of the Nativity schools are selected by lottery among those who qualify financially.

At the same time, however, the similarity of the groups of students in the two types of schools with respect to qualification for the federal meal program should lessen the concern about the equivalence of the two groups of students. In addition, differences in the school structures could have affected students' climate perceptions and self-perceptions, as most of the students in the comparison schools did not undergo a transition to a different school between Grade 5 and 6.

Urban public middle schools were not included in the present study, in part because it has been established that the record of student standardized test score performance in cities where schools included in the present study are located is notably poorer (e.g., Fenzel, 2009; Philliber Research Associates, 2001). Students at both the Nativity middle schools and the comparison Catholic schools outperformed students from similar backgrounds attending public urban schools during the time period corresponding to that of this study (e.g., Baltimore City Public Schools System, 2006; Fenzel & Hessler, 2002).

Results of the present study provide a strong case for the academic benefits that Nativity model middle schools provide for urban African American children placed at risk. Characteristics of the educational model that guides Nativity schools, most notably the small class sizes and student-teacher ratios and the extended day for homework assistance and tutoring, are worthy of adoption in other schools that serve urban students placed at risk. The intimate nature of the schools also facilitates respectful and trusting social relationships involving teachers and students that can reduce school stress and contribute to young adolescents' motivation to achieve at high levels. As results of this study show, students in Nativity schools enjoy their school experiences, feel that they are treated fairly, and have satisfying peer relationships while, at the same time, they are experiencing outstanding academic progress. Urban middle schools must find ways to structure the kind of intimate and supportive, yet challenging, environments that are characteristic of Nativity middle schools. Among the possible approaches to providing such environments in urban settings might be a team or house approach wherein small groups of students are taught by teams of teachers who meet with students for more than one period each day and the use of small advisory groups (George & Alexander, 2003; Trimble, 2004).

At this time of crisis in urban education, Nativity schools and their partner Miguel schools, now subsumed under the umbrella organization of NativityMiguel schools, ensure that Catholic education will continue to have a strong presence in cities where African American children would otherwise be left behind. These successful schools represent small but important

initiatives that have the potential to effect substantial social change with respect to decreasing the ever elusive achievement gap.

References

Balfanz, R., & Byrnes, V. (2006). Closing the mathematics achievement gap in high-poverty middle schools: Enablers and constraints. *Journal of Education for Students Placed at Risk, 11*(2), 143-159.

Balfanz, R., & Mac Iver, D. (2000). Transforming high-poverty urban middle schools into strong learning institutions: Lessons from the first five years of the Talent Development Middle School. *Journal of Education for Students Placed at Risk, 5*(1/2), 137-158.

Baltimore City Public Schools System. (2006). *School profiles*. Retrieved September 15, 2006, from http://www.bcps.k12.md.us/Student_Performance/

Braun, H., Jenkins, F., & Gregg, W. (2006). *Comparing private schools and public schools using hierarchical linear modeling* (NCES 2006-461). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Carnegie Council on Adolescent Development, Task Force on Education of Youth Adolescents. (1989). *Turning points: Preparing American youth for the 21st century.* Washington, DC: Carnegie Corporation of New York.

Cattaro, G. M. (2002). Catholic schools: Enduring presence in urban America. *Education and Urban Society, 35*(1)*,* 100-110.

Center for the Social Organization of Schools. (2003). *Talent Development Student Survey*. Baltimore, MD: Author.

Cochran-Smith, M. (2003). Teaching quality matters. *Journal of Teacher Education, 54*(2)*,* 95-98.

Cooper, H., Nye, B., Charlton, K., Lindsay, J., & Greathouse, S. (1996). The effects of summer vacation on achievement test scores: A narrative and meta-analytic review. *Review of Educational Research, 66*(3)*,* 227-268.

Dicintio, M. J., & Gee, S. (1999). Control is the key: Unlocking the motivation of at-risk students. *Psychology in the Schools, 36*(3)*,* 231-237.

Fenzel, L. M. (2009). *Improving urban middle schools: Lessons from the Nativity schools.* Albany, NY: State University of New York Press.

Fenzel, L. M., & Flippin, G. (2006, April). *Student engagement and the use of volunteer teachers in alternative urban middle schools.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Fenzel, L. M., & Hessler, S. P. (2002, April). *Nativity schools: Follow-up evaluation of the success of an alternative middle school for urban minority boys.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Fenzel, L. M., & Monteith, R. H. (2008). Successful alternative middle schools for urban minority children: A study of Nativity schools. *Journal of Education for Students Placed At Risk, 13*(4), 381-401.

Fenzel, L. M., & O'Brennan, L. M. (2007, April). *Educating at-risk urban African American children: The effects of school climate on motivation and academic achievement.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Fenzel, L. M., Peyrot, M. F., & Premoshis, K. (1997, March). *Alternative model for urban middle level schooling: An evaluation study*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED409387)

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*(2)*,* 221-234.

Gardner, R., III, & Miranda, A. H. (2001). Improving outcomes for urban African American students. *The Journal of Negro Education, 70*(4), 255-263.

George, P. S., & Alexander, W. M. (2003). *The exemplary middle school* (3rd ed.). Belmont, CA: Wadsworth.

Greene, J. P., & Forster, G. (2003, September). *Public high school graduation and college readiness rates in the United States*. New York: Center for Civic Innovation at the Manhattan Institute. Retrieved February 14, 2006, from http://www.manhattan-institute.org/html/ewp_03.htm#01

Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. *Journal of Youth and Adolescence, 29*(2), 223-248.

Hale, J. E. (2001). *Learning while Black: Creating educational excellence for African American children*. Baltimore, MD: Johns Hopkins University Press.

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology, 17*(3)*,* 300-312.

Harter, S. (1985). *Manual for the self-perception profile for children*. Unpublished manuscript, University of Denver, Boulder, CO.

Johnson, K. A. (1999, October 7). *Comparing math scores of Black students in D.C.'s public and Catholic schools* (Center for Data Analysis Report #99-08). Retrieved April 2, 2007, from http://www.heritage.org/Research/Education/CDA99-08.cfm

Lipsitz, J. (1984). *Successful schools for young adolescents.* New Brunswick, NJ: Transaction Books.

Moos, R. H., & Trickett, E. J. (1987). *Classroom Environment Scale manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Noguera, P. A. (2003). *City schools and the American dream: Reclaiming the promise of public education.* New York: Teachers College Press.

Norton, J., & Lewis, A. C. (2000). *Middle grades reform: A Kappan special report*. Retrieved March 2, 2004, from http://www.pdkintl.org/kappan/klew0006.htm

Perie, M., Vanneman, A., & Goldstein, A. (2005). *Student achievement in private schools: Results from NAEP 2000-2005* (NCES 2006-459). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Peterson, P. E., & Llaudet, E. (2006, September). *On the public-private school achievement debate* (KSG Working Paper Series No. RWP06-036). Cambridge, MA: Harvard University, John F. Kennedy School of Government.

Philliber Research Associates. (2001, September). *An evaluation of the achievements of students attending Nativity Mission Center*. Accord, NY: Author.

Podsiadlo, J. J., & Philliber, W. W. (2003). The Nativity Mission Center: A successful approach to the education of Latino boys. *Journal of Education for Students Placed at Risk, 8*(4), 419-428.

Powell, C. L., & Jacob Arriola, K. R. (2003). Relationship between psychosocial factors and academic achievement among African American students. *Journal of Educational Research, 96*(3)*,* 175-181.

Prince, C. D. (2002). Missing: Top staff in bottom schools. *School Administrator*, *59*(7), 6–9, 11-14.

Swaminathan, R. (2004). "It's my place": Student perspectives on urban school effectiveness*. School Effectiveness and School Improvement, 15*(1)*,* 33-63.

Thernstrom, A., & Thernstrom, S. (2003). *No excuses: Closing the racial gap in learning.* New York: Simon & Schuster.

Towns, D. P., Cole-Henderson, B., & Serpell, Z. (2001). The journey to urban school success: Going the extra mile. *The Journal of Negro Education, 70*(1/2)*,* 4-19.

Trimble, S. (2004). *What works to improve student achievement* (NMSA Research Summary #20). Retrieved January 29, 2004, from http://www.nmsa.org/portals/0/pdf/publications/On_Target/achievement/achievement_4.pdf

U.S. Department of Education, National Center for Education Statistics. (2004a). *The nation's report card: Mathematics highlights 2003* (NCES 2004-451)*.* Jessup, MD: U.S. Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (2004b). *The nation's report card: Reading highlights 2003* (NCES 2004-452)*.* Jessup, MD: U.S. Government Printing Office.

U. S. Department of Education. (2008). *Preserving a critical national asset: America's disadvantaged students and the crisis in faith-based urban schools.* Washington, DC: Author.

Waxman, H. C., Huang, S.-Y., Anderson, L., & Weinstein, T. (1997). Classroom process differences in inner-city elementary schools. *Journal of Educational Research, 91*(1)*,* 49-59.

Wayne, A. J., & Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational Research, 73*(1), 89-122.

Wenglinsky, H. (2004). The link between instructional practice and the racial gap in middle schools. *RMLE Online, 28*(1)*.* Retrieved March 7, 2006, from www.nmsa.org/research/rmle/summor04/article1.htm

Wenglinsky, H. (2007, October). *Are private high schools better academically than public high schools?* Washington, DC: Center on Education Policy. Retrieved December 20, 2007, from http://www.cep-dc.org/document/docWindow.cfm?fuseaction=document.viewDocument&documentid=226&documentFormatId=3665

Wilson, B. L., & Corbett, H. D. (2001). *Listening to urban kids: School reform and the teachers they want.* Albany, NY: State University of New York Press.

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