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I, Darci Smith, hereby submit this original work as part of the requirements for the degree of Master of Arts in Sociology.

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The Impact of Neighborhood Violent Crime on School Attendance

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The Impact of Neighborhood Violent Crime on School Attendance

Abstract

School-level academic performances are a matter of major concern to policy-makers in the United States. Outcomes such as standardized exam performances and graduation rates are considered important measures of school quality, and falling short on them can have detrimental consequences for schools due to federal policy guidelines. However, an important - and often overlooked - factor in enabling student success is student attendance rates. In order for schools to be most effective in preparing students to succeed, those students must first attend school regularly. However, conditions in neighborhoods in which schools are located may influence student attendance. In particular, prevalence of violent crime within a neighborhood can create the sense of a chaotic environment in which students are afraid to go to school and parents are concerned about sending their children there regularly. In this research, I use data from the Ohio Department of Education and the National Neighborhood Crime Survey to show that neighborhood violent crime rates have negative effects on school attendance rates, even when student and school characteristics are accounted for. I also find that the degree of socioeconomic disadvantage within a school negatively impacts student attendance, while teacher attendance rates are positively correlated with those of students.
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Introduction

Evaluating the quality and effectiveness of our nation’s schools and closing the educational achievement and attainment gaps that exist between various groups in the population is a major concern of policymakers and researchers alike. Many hours and research dollars have been dedicated to identifying factors that predict racial and social class gaps in such high-stakes outcomes as student grades, standardized exam performance, graduation rates and attendance. It is critical that we shed light on as many of these contributors as possible, because these are the targets at which the resources of education reformers should be aimed as we try to reduce these gaps.

Recent political policy discussions have centered on failure of America’s schools to prepare students to meet the measurement standards that have been set before them by the No Child Left Behind Act of 2001 (NCLB). In acknowledging the clear discrepancies between performances of minority groups and advantaged students, NCLB implicitly calls upon the public school system to rectify these inequalities. Schools with high average achievement scores are deemed effective, while schools with low average achievement scores are deemed to be failing, under the assumption that achievement scores are a direct reflection of school quality (Downey, von Hippel, and Hughes 2008). Whether it is decided that schools should continue to be evaluated on the basis of achievement rates or annual yearly progress, policies regarding school effectiveness fail to take into account any non-school effects on achievement.

Quality and effectiveness ratings have real consequences for the school itself, for the staff and administration, and for the students attending the school. When schools are labeled as “failing” and their teachers are viewed as “ineffective” due to achievement scores that are
deemed inadequate, jobs, funding, and reputations are put at risk. Without taking into account any personal, background, neighborhood, and/or structural factors that might influence the ability of students to perform well on mandatory standardized exams, schools that serve disadvantaged populations can easily be misjudged as ineffective (Downey, von Hippel, and Hughes 2008). Such labeling is detrimental to these schools, as high teacher turnover rates and loss of funding are automatically triggered by subpar measured performance over a three-year period under NCLB.

This is unfortunate, because underperforming schools are actually the most in need of increased funding and quality teachers. Schools labeled ineffective not only risk of losing the limited resources they do have and losing teachers who might really care about how much progress their students are making, but they also have reduced likelihood of attracting other caring, experienced, and quality teachers, which makes the NCLB mandate to maintain a faculty of highly-qualified teachers more difficult to meet. With such dire consequences facing schools, it is fair to ask how much of the student outcomes schools can reasonably control.

One important factor to consider when determining the limits of administrator and teacher efforts and expertise is student attendance. In order for students to benefit from schooling, they must first regularly attend school. Effective schools and high quality teachers will make no difference for students that are not present for instruction. Prior research reveals that school attendance rates vary in predictable ways and may, indeed, be a source of school inequality. Schools in low-income, inner-city districts tend to have lower attendance rates than those in higher-income suburban schools (Teasley 2004). In addition, children living in poverty, born to unmarried, teenage mothers, with unstable housing, or who attend run-down schools are at greater risk for school absenteeism (Ready 2010; Branham 2004). Increased levels of violence
in the neighborhood are also shown to negatively influence school attendance rates (Mathews, Dempsey, and Overstreet 2009; Schwartz and Hopmeyer Gorman 2003; Grogger 1997). Schools cannot be held accountable for socioeconomic, family background, and neighborhood characteristics that plague attendance rates. In this paper, I propose that neighborhood characteristics-namely neighborhood violent crime rates-negatively influence rate of student attendance.

To test this proposition, I analyze 2003-2004 school year data from the Ohio Department of Education and crime data collected in 2000 from the National Neighborhood Crime Survey. I merge the two data sets together to look specifically at junior high schools and high schools in Akron, Cincinnati, Cleveland, Columbus, Dayton, and Toledo. With a series of four different regression models, I analyze the effect neighborhood violent crime has on school attendance, as well as how student characteristics and school characteristics affect this focal relationship. Findings from this study should provide information to researchers as to the mechanisms linking neighborhood conditions to school performance, as well as to policy makers. Findings from this study should show the importance of looking beyond just school-level factors when determining what makes schools effective or ineffective and what factors are most important for student success.

In the following section of this paper, I will review the literature on how school-level factors act as generators of inequality, the importance of school attendance, and the ways in which neighborhood conditions, most important for this research being neighborhood crime, influence school outcomes and school attendance patterns. In subsequent sections I describe my data and methods, present findings, and discuss implications for sociological research and educational policy practice.
Theoretical Background

School-Level Factors as Generators of Inequality

Under the No Child Left Behind Act, schools are held accountable for closing the gaps in achievement and attainment, under the assumption that inequality can be explained by school factors rather than individual factors (Dworkin 2005; Karen 2005). All schools, regardless of the neighborhoods in which they are located and the primary racial and social classes they serve, are expected to eliminate unequal outcomes in passage rates on high-stakes tests. Schools that fail to meet their adequate yearly progress goals are at risk of a dismissal of administration, loss of funding, and restructuring of the school by the state or a private company (Karen 2005).

Proponents of No Child Left Behind assume that failure to meet adequate yearly progress goals stems directly from characteristics of the school, such as class size, per-student spending, teacher quality, etc. (Karen 2005).

School risk factors including teacher experience, teacher mobility, teacher absences, and building quality are shown to be associated with academic achievement. Schools with inexperienced teachers, elevated numbers of teacher absences and more teachers that are new to the school tend to perform worse on standardized exams than schools with more seasoned teachers (Whipple, Evans, Barry, and Maxwell 2010). Previous research suggests that not only does an increase in school funding and teacher quality lead to higher test scores, but it also creates a school climate conducive to learning and high achievement (Owens 2010). Schools with numerous instructional resources, competitive curricula, and high quality teachers most commonly serve students from higher-SES backgrounds. These schools are better equipped to create a school environment in which high achievement and aspirations are the norm than can
Schools serving majority low-income populations and majority minority populations (Casciano and Massey 2012; Owens 2010).

Schools with fewer incidences of violence and less chaotic situations are shown to be less distractive and more conducive to learning. Once again, these types of schools are more commonly found serving children from high-SES backgrounds (Casciano and Massey 2012). While school characteristics are frequently used as explanatory variables for educational outcomes, school attendance is too often ignored. I contend that school attendance is not only an important explanatory variable to explore when looking at educational outcomes, but it is also an important outcome to research on its own.

**The Unexplored Importance of School Attendance**

Education is believed to be the key to social mobility. Passing standardized tests, maintaining a good grade point average, and ranking high in your class is important for completing high school and going on to higher education. If students are not attending school, though, it is unlikely they will be able to acquire the knowledge necessary for passing tests, maintaining high grades, and getting accepted into college. School attendance has implications for the individual students, for the students’ peers, and for the students’ communities. The negative consequences associated with failure to attend school regularly warrant more attention be paid to the reasons students choose to attend or not attend school.

Because education is believed to be the great equalizer, it can serve to alleviate the social inequality faced by low-income, minority students. Earning high school and college degrees leads to wage increases that are believed to have a greater payoff for blacks than whites (Downey 2008). Wage gaps in the labor market have been linked to differences in cognitive skills between
whites and blacks. The cognitive skills that lead to increased wages are commonly acquired in school. Staying in school, completing high school, and pursuing higher education can serve to help bridge wage gaps for those at the bottom (Neal and Johnson 1996). Previous research also suggests that pursuing higher levels of education acts as an insulation against going to prison, particularly for black men who are disproportionately incarcerated (Downey 2008).

Regular school attendance is of particular importance for low-SES children. For low SES students, who perform worse on standardized exams on average than do their higher-SES counterparts, the school months present the best opportunity to close the achievement gap (Ready 2010). As supported by seasonal research, schools, regardless of quality rating, are able to help reduce racial gaps in cognitive skills that emerge even prior to the start of formal schooling. While gaps in cognitive skills grow over the summer months, schools are able to make strides in closing these gaps during the academic year (Downey, von Hippel, and Beckett 2004). This evidence suggests that the cost of school absence is particularly high for poor students, whose families lack the resources to build for them the insulation against summer setback or to compensate for lost classroom instruction.

The impact of poor attendance is revealed when assessing measureable school outcomes. For example, school attendance has been positively linked to math and reading achievement. Prior research has found that, even after controlling for gender and SES, frequent nonattendance negatively impacts achievement in mathematics (Lamdin 1996). Related to these weaker scores, students who are frequently absent from school are also much more likely than frequent attenders to fail to complete high school. The detrimental effects of this are well noted in prior research. Failing to complete high school leaves individuals lacking the educational credentials that are required even for unskilled, low-wage jobs. Predictably, this means that individuals who fail to
complete high school are at greater risk of living in poverty, unemployment, low-wages throughout their lifetime, incarceration, and negative mental health consequences (Ovink 2011; Dube and Orpinas 2009; Brady, Balmer, and Phenix 2007).

Beyond the effects of school attendance on students themselves, evidence also suggests that attendance habits also have meaningful impacts on students’ peers and the students’ community. Absent students are not only hurting their own learning by missing class instruction, but are also hurting their classmates by requiring teachers to spend more time reviewing the material they missed or to spend extra time disciplining disengaged and disruptive students (Gottfried 2011).

Of special note is the impact that low school attendance rates may have on a community overall. The aforementioned link between school absenteeism and failure to complete high school means that neighborhoods that house infrequent attenders are more susceptible to outcomes associated with high residency of high school dropouts, such as higher crime rates, lower civic participation, and a loss of benefits from income tax (Branham 2004).

**Neighborhood Effects on School Outcomes**

School level factors are most commonly used to explain achievement gaps, but the reality is that students spend most of their time outside of school. It is estimated that even students with perfect attendance only spend one-fourth of their waking hours throughout the calendar year in school (Downey, von Hippel, and Hughes 2008). Therefore, neighborhood effects cannot be ignored. Wilson’s collective socialization theory suggests that neighborhood characteristics can influence school-related behaviors and attitudes of youth through the types of role models they are exposed to (1996). When youth see adults in their neighborhood valuing education, pursuing
higher education, and holding steady jobs, they are more likely to adopt positive attitudes
towards education. For children growing up in neighborhoods with concentrated disadvantage,
though, a lack of positive role models and the reality of structural constraints on academic and
economic success can act as a major barrier to school success (Owens 2010; Drukker, Feron,
Mengelers and Van Os 2009; Ainsworth 2002; Wilson 1996).

Beyond socioeconomic disadvantage, neighborhood risk factors such as a high number of
female-headed households, a high percentage of high school dropouts, crowded homes, and
vacant buildings have been cited as adversely affecting achievement on standardized tests
(Whipple et al. 2010). Owens’ research on the interacting influences of neighborhoods and
schools shows that “living in [a] high-poverty neighborhood with more black residents, more
single mothers, and higher poverty and unemployment rates reduces the odds of high school
graduation (2010: 307). Neighbor support and neighborhood levels of social control are also
linked to school outcomes (Bowen, Rose, Powers and Glennie 2008; Ainsworth 2002). The
presence of supportive neighbors is positively associated with school engagement and academic
outcomes, while a perceived lack of support is negatively associated with grades, school
attendance, and behavior at school (“School Connectedness” 2010; Bowen, Rose, Powers, and
Glennie 2008).

Another neighborhood characteristic that is frequently discussed is the prevalence of
crime. Neighborhood crime has implications for the community at large and also for school
outcomes. Regardless of actual crime rates or personal victimization, the perception of increased
crime and the fear of crime in the neighborhood are shown to negatively impact the way
residents evaluate their community as a nice place to live (Hartnagel 1979). Research by Hipp
shows a reciprocal relationship between neighborhood crime and neighborhood structural
characteristics (2010). Neighborhoods with concentrated disadvantage tend to have high crime rates and neighborhoods with high crime rates tend to experience an increase in concentrated disadvantage (Hipp 2010). High rates of neighborhood crime also lead to residential instability and an increase in the African-American population in the community (Hipp 2010). Increased neighborhood crime rates affect not only the makeup of its residents, but also the types of businesses in the community. With rising crime rates comes an increase in bars and liquor stores in the community (Hipp 2010).

An estimated range of 75%-93% of middle and high school students have either witnessed and/or been victims of violence (Rosenfeld, Richman, Bowen, and Wynns 2006). Exposure to neighborhood violence has negative effects on mental health, school performance, school attendance and dropout rates. Higher rates of violence in the neighborhood are associated with lower standardized test scores, grade point averages, and attendance rates in schools in those neighborhoods (Mathews, Dempsey, and Overstreet 2009; Schwartz and Hopmeyer Gorman 2003; Grogger 1997). Exposure to violence has significant effects on feeling safe in both the school and the neighborhood. When students feel safe traveling to and from school, they are more likely to pass standardized reading and math achievement tests (Milam, Furr-Holden and Leaf 2010). Research conducted by Grogger shows that when students are concerned with their safety in the neighborhood, they have more trouble concentrating in school and are more likely to stay home out of fear (1997). Absenteeism from school as the result of safety concerns can end in students falling behind in school more easily, putting them at a greater risk for failing or withdrawing from high school (Grogger 1997). Perceived neighborhood danger, measured in regards to behavior of youth in the neighborhood and personally experiencing victimization, is negatively associated with school attendance (Rosenfeld, Richman, Bowen, and Wynns 2006;
Nash 2002; Bowen and Bowen 1999). Neighborhood crime also has a negative effect on the extent to which students find school meaningful, manageable, and comprehensible (Nash 2002). Students who feel unsafe in their neighborhood are less likely to avoid getting into trouble at school than students who feel safe in their neighborhood (Bowen, Rose, Powers, and Glennie 2008).

Exposure to community violence is highest among ethnic minority children living in poor, urban communities (Patton, Woolley, and Hong 2012; Mathews, Dempsey, and Overstreet 2009; Bowen and Bowen 1999). African-American, adolescent boys in urban neighborhoods are at high risk of being exposed to or involved in community violence. For this vulnerable population, feeling safe in the community is linked to the actual amount of violence in the community (Patton, Woolley, and Hong 2012). When African American, adolescent boys feel safe in their neighborhood and traveling to and from school, they are more likely to spend more hours at home studying, achieve higher grades, and behave better in school (Patton, Woolley, and Hong 2012).

The children that are most likely to be exposed to community violence are the same children who are likely to attend run-down, “failing” schools and have lower achievement scores than their majority, higher-SES counterparts. This is not just some sort of coincidence. Previous research suggests that an increase in the number of violent crimes creates an environment in which students do not feel safe (Brady, Balmer, and Phenix 2007). If students do not feel safe in their communities, in their schools, or traveling to and from school, they may choose to stay at home instead. Low-income, minority students have the most to gain from regularly attending school. They are also the most likely to be living in and attending schools in neighborhoods with concentrated disadvantage and increased exposure to community violence. It is important to
research whether this increased level of neighborhood violence is having a negative effect on school attendance. If there is, as I believe, a significant relationship between the two, suggestions can be made for public policy to increase safety and decrease violent crime in neighborhoods in order to benefit students’ attendance rates, and consequently, other educational outcomes.

**Figure 1. Conceptual Model of the Effect of Neighborhood Violent Crime Rates on School Attendance**

Figure 1 demonstrates the mechanism through which neighborhood violent crime rates impact students’ school attendance rates. Patton, Woolley, and Hong find a link between exposure to violence in the community and school outcomes (2012). Their findings are consistent with results of research conducted by many scholars such as Akiba (2010), Matthews, Dempsey, and Overstreet (2009), Schwartz (2003) and Grogger (1997). While this research focuses on the negative impact exposure to neighborhood violence has on academic outcomes, such as grades or test scores, I contend that a similar relationship can be found between neighborhood violent crime rates and school attendance. Neighborhoods with increased rates of
violence can create an environment, in which children do not feel safe traveling to and from school or being in the school itself (Brady, Balmer, and Phenix 2007; DeVoe, Dean, Traube, and McKay 2005).

The effect of neighborhood violent crime rates on student attendance is moderated by student characteristics such as sex, race, coming from a female-headed household and a disadvantaged socioeconomic background. Teasley notes that high school girls demonstrate higher rates of absenteeism than high school boys (2004). Children living in poverty and children born to unmarried, teenage mothers are more likely to miss school than more advantaged children (Ready 2010). Research shows that neighborhood violence affects different people in different ways. Bowen and Bowen suggest that urban students, male students, older students, and African American students are more exposed to and impacted by neighborhood violent crime (1999).

The effect of neighborhood violent crime rates on student attendance is also moderated by school characteristics including teacher education and teacher experience. Schools that are located in low-income, inner-city districts are associated with high rates of school absences (Teasley 2004). The relationship between parents and teachers and students and teachers can have an effect on rates of school attendance, as well (Reid 2005; Teasley 2004). Supportive teacher-student relationships create a warm school environment where students are more likely to be engaged in the curriculum and less likely to have high rates of absenteeism (Barile, Donohue, Anthony, Baker, Weaver, and Henrich 2012; Fallis and Opotow 2003). Schools located in low-income, high-crime neighborhoods are faced with difficulty in hiring effective and experienced teachers, though (Jacob 2007). Teachers in urban schools tend to be less
qualified in terms of their own educational background, their years of experience, and their certifications when compared to teachers in suburban schools (Jacob 2007).

**Methodological Approach**

A quantitative analysis using secondary data was used to examine the focal relationship of this analysis: the effect of neighborhood violent crime rates on school attendance. While school outcomes such as standardized test scores, grade point average, graduation rates, etc. are often studied; school attendance is not often looked at as a primary school outcome. Likewise, variables including, class-size, per student expenditures, and cognitive ability are commonly used to explain achievement gaps, while the effect of neighborhoods is too often ignored. The lack of research available in regards to neighborhood violence and school attendance as explanatory and outcome variables warrants the use of quantitative analysis to establish the possible significance and strength of this relationship.

With the use of quantitative analysis comes the downfall of the inability to gather detail-oriented, descriptive results similar to those of qualitative analysis. However, I believe it is a worthwhile trade-off. Before researchers can set out to answer the “hows” and “whys” in terms of neighborhood violence affecting school attendance, it is important to establish that there is relationship worthy of studying. Another possible limitation of this quantitative approach lies in the two sets of data used. School data from the Ohio Department of Education and crime statistics collected in the National Neighborhood Crime Study from city’s police departments can have important implications for the schools, neighborhoods, and cities in which they are located. School officials may be tempted to mark up attendance rates, passage rates, etc., in order to appeal to residents of the school district and to meet state requirements. Police officials may
downplay the incidences of violent crime in their cities in order to seem safer and more appealing to potential residents. While it is not of huge concern, the methods used to collect the secondary data being used does present potential limitations for the validity of the results.

Data

School rating data collected from all schools and districts in the State of Ohio by the Ohio Department of Education (ODE) is being used to measure school attendance rates. I looked at aggregate school rating data from the 2003-2004 school year, along with school rating data disaggregated by racial/ethnic groups, gender, and economic status. Because crime statistics from the National Neighborhood Crime Study were gathered in 2000, using school rating data collected during the 2003-2004 school year allows me to show how the neighborhood context in 2000 has influenced later school attendance patterns.

Data from The National Neighborhood Crime Study (NNCS) are used to measure neighborhood violent crime rates. The NNCS is comprised of a sample of 9,593 census tracts in 91 large metropolitan areas (defined as having populations of at least 100,000 residents) throughout the United States. For the purpose of this study, only census tracts that are partly or wholly inside large cities in Ohio (Akron, Cincinnati, Cleveland, Columbus, Dayton, and Toledo) will be used. The primary purpose of the NNCS was to assemble tract-level crime and socioeconomic data for cities across the United States in order to permit analyses of the sources of crime for communities of different racial-ethnic and class composition. The sample is designed to represent the regional, population size, racial/ethnic composition, and poverty status of urban neighborhood in the United States in 2000. The principal investigators began with a stratified (within region) sample of cities with a population of at least 100,000 in 1999 and
proceeded to request from police departments of these cities address-based crime incident data or tract-level counts of index crimes.

Variables

*School attendance*. The dependent variable in this analysis is school attendance. *Attendance* measures the average school attendance rate per day for a school during the school day or the 2003-2004 school year.

*Neighborhood violent crime*. The focal independent variable in this analysis is neighborhood violent crime. The *Murder rate* is the three-year average census tract homicide rate. The murder rate represents the ratio of how many murders are reported for every 1000 people living within the census tract. The *Rape rate* is the three-year average census tract rape rate. The rape rate represents the ratio of how many incidences of rape are reported for every 1000 people living within the census tract. The *Robbery rate* is the three-year average census tract robbery rate. The robbery rate represents the ratio of how many robberies are reported for every 1000 people living within the census tract. The *Violent crime rate* is the three-year average census tract violent crime rate, measured using the three-year average murder, rape, robbery, and aggravated assault rates. The violent crime rate represents the ratio of how many murders, rapes, robberies, and aggravated assaults are reported for every 1000 people living within the census tract. Using a three-year average violent crime rate for the census tract allows us to establish a general relationship between neighborhood violent crime and school attendance, while focusing on the rate of specific violent crimes allows us to determine which violent crimes have a more significant impact on school attendance.
Student characteristics. Student characteristics include sex, race, and disadvantaged. Sex is measured using the percentage of male students. Racial categories include white, black, Hispanic, and Asian. In order to account for differences in attendance rates by racial categories, the percentage of White students is used to measure the influence of white privilege. The measure of disadvantaged is determined by whether or not a student receives free/reduced lunch. As mentioned, previous research suggests that school outcomes vary for different groups. Therefore, it is important to control for these student characteristics when examining the relationship between neighborhood violence and school attendance.

School characteristics. School characteristics taken into consideration in this analysis include teacher attendance, teacher experience, and teacher quality. Teacher Attendance is the average attendance rate for teachers during the 2003-2004 school year. Measuring teacher attendance gives insight into how invested teachers are in their schools. Teacher experience is the average numbers of years of experience teachers have in each respective school. Teacher experience allows us to measure the amount of turnover that is common in the schools in the sample. Teacher quality is measured by the percentage of teachers that are considered to be highly qualified. The Ohio Department of Education, per federal requirements, defines highly qualified teachers as those who are fully licensed by the state, have at least a bachelor’s degree, and have demonstrated competency in basic elementary curriculum or demonstrated competency in each subject they teach. As cited in previous research, student-teacher relationships, parent-teacher relationships, and teacher quality can have effects on school outcomes, including attendance. Accounting for these school characteristics allows us to look for any relationship
between neighborhood violence crime rates and the quality of teachers in urban schools. This also allows us to disentangle the possible effects of teacher attendance, experience, education, and certification on school attendance from the possible effects of neighborhood violence on school attendance.

Models

The nature of how the Ohio Department of Education collects school level data left numerous cases with missing values for racial, gender, and/or disadvantage categories. In order to maintain a decent sample size, I had to impute missing data values prior to running analyses. For each measure of neighborhood violent crime (the murder rate, the rape rate, the robbery rate, and the violent crime rate), several regressions were run. The first regression was simply the effect of the measure of neighborhood violent crime on attendance rates for the 2003-2004 school year. Next, measures of race, gender, and socioeconomic disadvantage were added to the regression. The following regression removed race, gender, and socioeconomic disadvantage and included teacher variables instead. The final regression included all variables in the model.

Results

The Influence of The Murder Rate on Attendance

As shown in the results for Model 1 in Table 3, the initial regression of the murder rate alone on attendance show a one-point increase in the murder rate leads to a 1.87% decrease in attendance rate. However, this relationship was not shown to be statistically significant.

The addition of controls for population variance by gender, socioeconomic disadvantage and the percentage of the student population that is white in Model 2 bring the influence of the
murder rate closer to being significant at the .05 level. With the addition of *White, Male, and Disadvantaged*, the influence of a one-point increase in murder rate increases to a 3.36% decrease in attendance rate.

Model 3 measures the impact of teacher characteristics on student attendance rates and controls for the effects of these variables on the relationship between the murder rate and the outcome variable. Including teacher characteristics in the regression of attendance on the murder rate lessens the influence of the murder rate on attendance and causes it to become extremely insignificant.

In the final model, student characteristics and teacher characteristics are included in the regression. With all of these variables included in Model 4, a one-point increase in the murder rate leads to a 2.50% decrease in attendance rate. However, this relationship is still far from statistical significance. In Model 4, though, the teacher attendance rate is shown to have a positive, significant influence on the attendance rate and being disadvantaged is shown to have a negative, significant relationship on attendance.

*The Influence of Robbery Rate on Attendance*

As shown for Model 1 in Table 4, the initial regression of the robbery rate on attendance a one-point increase in robbery rate leads to a .07% decrease in attendance. While this relationship is not statistically significant at the .05 level, it is close at .086.

Including the percentage of white students, the percentage of male students, and the percentage of disadvantage students in Model 2 bring the influence of the robbery rate on attendance to a statistically significant level. With the inclusion of *White, Male, and*
Disadvantaged, a one-point increase in the robbery rate now leads to a .10% decrease in attendance rate.

Model 3 removes student characteristics and includes teacher attendance, teacher experience, and teacher quality in the model. With the addition of teacher characteristics, the robbery rate is no longer significant.

In Model 4, all variables are included. With all controls in the model, the robbery rate does have a significant influence on school attendance. A one-point increase in the robbery rate leads to a .10% decrease in attendance rate. Similarly to the regression of attendance on the murder rate, teacher attendance rate and the variable of disadvantaged are also significant, with teacher attendance positively influencing student attendance and being disadvantaged negatively influencing student attendance.

The Influence of Rape Rate on Attendance

As shown for Model 1 in Table 5, the regression of attendance on the rape rate alone indicates that a one-point increase in rape rate leads to a .23% decrease in attendance. This relationship is far from significant, though.

The inclusion of gender, race, and socioeconomic disadvantage variables in Model 2 shows that one-point increase in the rape rate leads to a .40% decrease in attendance. While the inclusion of student characteristics in the model does bring the significance level down quite a bit, it is still not very close to statistical significance.

The inclusion of teacher characteristics instead of student characteristics in Model 3 makes the influence of the rape rate extremely insignificant.
In Model 4, which includes all variables, a one-point increase in the rape rate leads to a .38% decrease in the attendance rate. However, the rape rate is still statistically nonsignificant. Once again, though, teacher attendance leads to a positive, significant influence on student attendance and being disadvantaged leads to a negative, significant influence on student attendance.

*The Influence of Violent Crime Rate on Attendance*

The violent crime rate uses the three-year census tract average murder, rape, robbery, and aggravated assault rates. As shown for Model 1 in Table 6, a one-point increase in the violent crime rate leads to a .05% decrease in attendance rate. This relationship alone is not shown to be statistically significant.

When controls for gender, race, and socioeconomic disadvantage are added in Model 2, a one-point increase in the violent crime rate leads to a .07% decrease in attendance rate. This relationship is statistically significant.

In Model 3, which includes teacher characteristics and excludes student characteristics, a one-point increase in the violent crime rate leads to a .04% decrease in attendance. This relationship is not considered to be statistically significant, though.

In Model 4, which includes all variables in the analysis, a one-point increase in the violent crime rate leads to a .08% decrease in attendance rate. In this model, the influence of the violent crime rate is extremely significant. Once again, teacher attendance rate has a positive, significant relationship on student attendance and being disadvantaged has a negative, significant relationship on student attendance.
Discussion

The analyses in this project set out to demonstrate the important, and often understated, impact that neighborhood context has on children’s school outcomes. In this paper I examined the relationship between census tract level violent crime rates and school attendance rates. The focal assumption of this project was that an increase in neighborhood violent crime would lead to decreased school attendance. Additionally, analyses were conducted to explore the role that sex, race, and socioeconomic status may play in altering the focal relationship, with the assumption that attendance rates, exposure to violence, and impact of the exposure to violence may vary by different groups of people. Finally, analyses were also conducted to explore the role, if any, that teacher attendance, experience, and quality may play in altering the relationship between neighborhood violent crime and school attendance.

Results of these analyses show that neighborhood violent crime rates do have an impact on school attendance rates and are worthy of further scholarly and policy focus. While all measures of violent crime showed a negative relationship with school attendance, certain types of violent crime showed a more telling relationship. The murder rate and the rape rate never reached a statistically significant relationship with school attendance, while the robbery rate and a measure created to show the average rate of violent crime rate did have a negative, significant relationship with school attendance. The results show that the nature of the crime, along with the looming threat of crime is important in how influential crime rate is in school attendance. It is intuitive to assume that for this sample, comprised of a roughly equal percentage of male and female students, being raped on the way to or from school is not of eminent concern. It is more plausible, though, that increased rates of robbery or overall violent crime could create a climate of fear, resulting in students wishing to stay home from school or parents and guardians wishing
to keep their children home from school. As shown in frequency statistics, the mean for the robbery rate and the mean for violent crime at the census tract level are much higher than those of the murder rate and the rape rate. Increased incidences of robbery and violent crime make these sorts of crimes rates more influential in creating the neighborhood climate.

Previous research on the impact of neighborhood crime on school outcomes has focused mainly on performance in school, standardized tests, and behavior in school, with increased levels of crime and exposure to violent crime having a negative impact on all of these outcomes. The results of my analyses can add to this body of research by showing the important effect that neighborhood violent crime has on school attendance. If students are having a hard time attending school because of violent crime rates, it would make sense that their performance and test scores would suffer due to absenteeism.

When considering race, sex, and a measure of socioeconomic status in the relationship between neighborhood violent crime and school attendance rates, the analyses show that being white, being male, and being socioeconomically disadvantaged have a negative effect on school attendance rates. While previous research has suggested that girls are more likely to have lower attendance rates, males are more likely to be affected by neighborhood violence, and African Americans are more likely to be affected by violent crime, the results from my sample contradict these findings. However, race and sex did not prove to have any significant effect on the relationship between violent crime rates and school attendance rates.

In support of previous research, the analyses of the effect of each measure of violent crime on school attendance show that being disadvantaged had a significant, negative effect on school attendance. Students who are socioeconomically disadvantaged are the most likely to live in high-crime neighborhoods, so it is not surprising that neighborhood crime rates would have an
important effect on school attendance rates in these communities. Economically disadvantaged students are faced with a greater risk of increased exposure to violence, which has been shown to not only negatively affect academic performance, but also, as confirmed by these analyses, school attendance rates. For socioeconomically disadvantaged students, the increased exposure to violent crime has serious potential to create a chaotic neighborhood, in which students are fearful of their safety when traveling to and from school. Students from socioeconomically disadvantaged backgrounds are faced with many challenges that more privileged students are not. For these students, school attendance is imperative for things such as closing summer learning gaps, creating an opportunity to pursue higher education or obtaining a well-paying job. Neighborhood violent crime rates negative effect on school attendance rates act as another barrier to success for this population.

Much of the current research and policy initiatives in education have focused on school level characteristics as a primary cause of student successes and failures. Policies such as No Child Left Behind contend that teacher quality, certification, and experience are important for improving student test performance. In these analyses, though, teacher attendance rate is the only school-level factor that has any significance on the relationship between violent crime rate and attendance rate. Teacher attendance rate significantly improves school attendance rate. These findings suggest that rather than quality or experience, teacher investment in the school is more important for school attendance rates. Students are not aware of how many degrees, years of experiences, awards, etc., their teachers have. Students are able to gauge how invested their teachers are in the school and in the students. Despite high rates of violent crime, having teachers who are dedicated to coming to work every day to engage and help students learn is able to offset some of the negative effects of neighborhood violent crime. When teachers show that they are
invested in the school and are concerned about the students’ progress, they are able to create a safe and positive learning environment that is not only conducive to learning, but also to the desire to attend school.

Conclusion

The analyses of this project show how useful and important it is for neighborhood violence to be considered when studying school outcomes. Far too often, it is the parents, teachers, and students who are blamed for poor performance on standardized exams and in the classroom. Rather than focus so much on how much money schools spend per student, class size, and teacher quality, research in the field of education can benefit greatly from an increased focus on the effect of what is going on in the neighborhoods where students live and attend school. Not only is it important that neighborhood climate be taken into account, but also it is important that outcomes other than test scores and grade point average are taken into consideration. Student attendance is an important outcome that is rarely given a front seat in education research. In order for students to have high achievement in the classroom, they must first make it to the classroom. The results of this project demonstrate how violent crime rates, particularly the robbery rates and overall average violent crime rates, have negative implications for school attendance rates. Schools serving socioeconomically disadvantaged populations are at a higher risk of decreased attendance rates, while schools with high teacher investment, as seen through teacher attendance rates, are able to counterbalance some of the negative effect of violent crime rates on school attendance.

Future research needs to spend more time examining how neighborhood level factors influence school outcomes, such as student attendance. As previously mentioned, one downfall
of this project lies in its strictly quantitative nature. The analyses presented in this paper have established that there is in fact a relationship that exists between neighborhood violent crime rates and school attendance rates. Further exploration of this relationship could take a more qualitative approach, or even a mixed method approach, in order to find out how and why neighborhood violent crime rates negatively impact school attendance rates. Whether it is due to fear or some other factor, future research conducted on a more individual level has the potential to reveal why students are not attending school, why coming from a disadvantaged background negatively impacts school attendance rates, and why teacher attendance rates have such a positive effect on school attendance rates.
References


Table 1. Means and Descriptions for all variables in analysis

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<tr>
<th>Variable Name</th>
<th>Description</th>
<th>Mean</th>
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<td>Attendance Rate 2003-2004</td>
<td>The average school attendance rate per day for a school during the school day or the 2003-2004 school year</td>
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<td>Murder Rate</td>
<td>Three year average census tract homicide rate</td>
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<td>Robbery Rate</td>
<td>Three year average census tract robbery rate</td>
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<tr>
<td>Rape Rate</td>
<td>Three year average census tract rape rate</td>
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<td>Percentage of White Students</td>
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<td>Male</td>
<td>Percentage of Male Students</td>
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<td>Disadvantaged</td>
<td>Percentage of Students receiving free/reduced lunch</td>
<td>50.56</td>
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<td>Teacher Experience</td>
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<td>Percent of Teachers Highly Qualified</td>
<td>Percentage of teachers who are fully licensed by the state, have at least a bachelor's degree, and have demonstrated competency in basic elementary curriculum or demonstrated competency in each subject taught</td>
<td>83.25</td>
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Table 2. Correlations for all variables

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*p < .05  **p < .01
Table 3. Logistic regression of murder rate, teacher attendance rate, teacher experience, highly qualified teachers, white, male, and disadvantaged on school attendance rate

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Table 4. Logistic regression of robbery rate, teacher attendance rate, teacher experience, highly qualified teachers, white, male, and disadvantaged on school attendance rate

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Table 5. Logistic regression of rape rate, teacher attendance rate, teacher experience, highly qualified teachers, white, male, and disadvantaged on school attendance rate.

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Table 6. Logistic regression of violent crime rate, teacher attendance rate, teacher experience, highly qualified teachers, white, male, and disadvantaged on school attendance rate

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