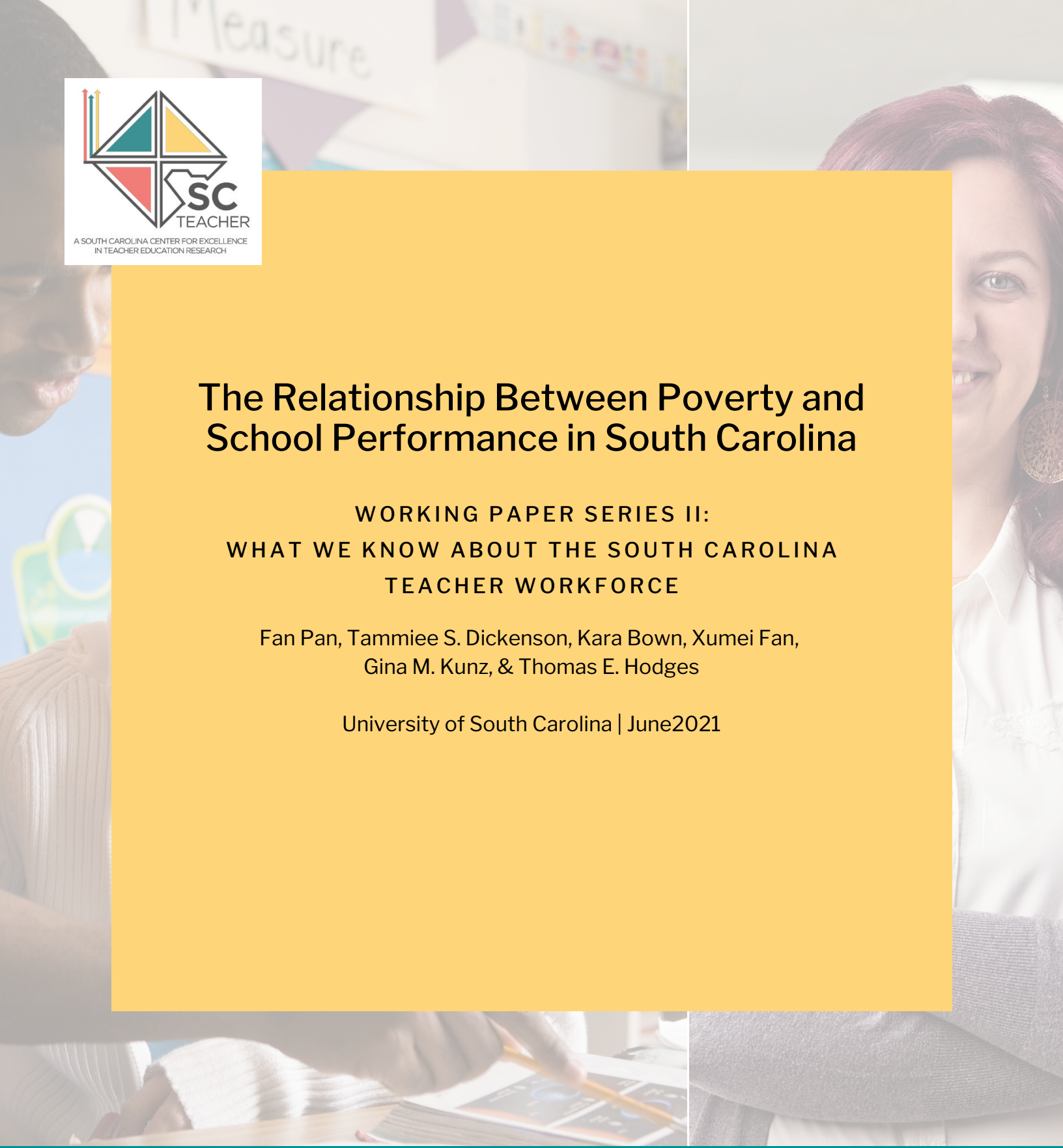

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The Relationship Between Poverty and School Performance in South Carolina

WORKING PAPER SERIES II: WHAT WE KNOW ABOUT THE SOUTH CAROLINA TEACHER WORKFORCE

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ABSTRACT

Poverty shapes the experience of more than twelve million children in the United States. To further an understanding of the relationship between poverty and school performance in South Carolina public schools, we investigated the association of high and low poverty levels with a range of state report card variables for three school levels: elementary, middle, and high schools. In this study, we considered variables in four categories: academic achievement/outcomes, student engagement, classroom environment, and student safety. An analysis of 1163 public schools in 88 school districts and state-operated programs revealed that for different school levels, significant differences by poverty level exist in these categories. We conclude with recommendations for policymaking, intervention programs, and funding opportunities to support high-poverty schools, and ultimately aiming to narrow the gaps of school performance due to poverty.

INTRODUCTION

In the United States, 12.6 million, or 18 percent, of all children, live in poverty (National Center for Education Statistics, 2020). This child poverty rate, though falling since 1973, remains one of the highest in the world among industrialized countries (OECD, 2021). In South Carolina, a state where over half the counties are identified to have persistent child poverty and where the overall child poverty rate is 22 percent, this figure is shaped by geography and race/ethnicity. Poverty rates in the state differ considerably by county with Lexington County at 17.5 percent and Williamsburg at 37.7 percent (The Annie E. Casey Foundation, n.d.). Of additional concern for South Carolina -- 12 percent of its children live in concentrated poverty, places where 30 percent of the population lives in poverty (Children's Trust of South Carolina, 2019). Beyond these geographic markers, poverty needs to be understood in terms of race and ethnicity. Children of color (i.e., Black, African American, Hispanic or Latino) in South Carolina disproportionately constitute poor children (76 percent) and those living in high poverty neighborhoods (73 percent) (Children's Defense Fund, 2020).

While these figures point to the significant scope of child poverty in the United States and South Carolina, we begin to recognize the damaging impact of this condition when we consider the effects of poverty on the education, health, and security for this population. In the U.S., half of the students attend mid- to high-poverty schools where over 50 percent or more of the children qualify for free or reduced price lunch (FRPL) (NCES, 2017). Poverty and increasing economic inequality across the U.S. leads to reduced access to educational resources, higher levels of stress, food insecurity, poorer nutrition, and limited healthcare among many effects (Berliner, 2013). Research shows that high poverty students face stressors on multiple ecological levels, including in families, in schools, and neighborhoods (Cooper & Crosnoe, 2010; Fraser et al., 2004). The structural constraints of this environment "present formidable challenges" as children progress through K-12 schooling and in their aspirations for post-secondary education(Cilesiz & Drotos, 2016, p. 3). The coronavirus pandemic has only worsened the difficult conditions of those in poverty; 42 percent of children live in households now reporting having difficulty covering expenses such as food, rent or mortgage, car payments, medical expenses, or student loans (Sherman et al., 2020).

Poverty, in powerful ways, shapes educational opportunity and outcomes in the United States.

Poverty, in powerful ways, shapes educational opportunity and outcomes in the United States. The educational conditions in high poverty schools stand in stark contrast to low poverty ones, with fewer advanced classes, less experienced teachers, and higher teacher turnover rates. Educational researchers identify these disparities as creating educational "opportunity gaps." These opportunity gaps form of as a result of two forces: "inequities that are directly related to children's backgrounds and school practices that reinforce and often exacerbate inequity" (Boykin & Noguera, 2011, p. 186). Among the more pronounced school practices contributing to this gap are tracking and school financing, the latter of which is largely determined outside of the school at the district, state, and federal policy levels.

For economically disadvantaged students, access to higher-level courses remains limited especially at the middle and high school levels. Loveless (2014) found that high poverty middle school students were much less likely to be in placed in higher-level mathematics classes compared with their low poverty peers. Compared to low poverty students, high poverty students are also less likely to be enrolled, when available, in rigorous coursework, such as International Baccalaureate (IB) programs, and Advanced Placement (AP) courses.

The limited financial resources of high poverty schools make it more difficult to recruit and retain teachers. García and Weiss (2019) report that in this time of increased teacher shortages, high-poverty schools both have a harder time filling teacher vacancies and also experience higher turnover and attrition than low-poverty schools. This trend is evident in South Carolina where an analysis of teacher vacancy data from the 2020-21 school year indicated that districts in the highest poverty quartile tend to have significantly higher teacher vacancy rates than districts in the lowest poverty quartile (Dickenson et al., 2021). These factors combined lead to high poverty schools having a less experienced teaching staff. This development is reflected in the 2015-2016 data indicating 39.8 percent of newly hired teachers in high poverty schools are in their first year of teaching (compared to 33.8 percent at low poverty schools) (Ibid.). Limited resources also restrict possibilities for learning, enrichment, and education beyond schools (including fieldtrips, extracurricular activities, and supplemental outside-of-school programs) (Snellman et al., 2015). Finally, these financial circumstances lead to high poverty schools lacking adequate counseling and advising, which impacts scheduling and influences post-secondary plans (Giancola & Kahlenberg, 2016).

The opportunity gap also points to the disparity in children's access to learning in a safe environment. Research finds that students in high poverty schools experience more safety problems, such as bullying, danger, and suspension, in comparison with students in low poverty schools (Luthar & Becker, 2002; Raver et al., 2007). These environmental concerns extend from the whole-school to the classroom levels (Waxman et al., 2008) and influence student engagement and behavior. In a study of 81,000 students across the United States, low poverty schools consistently report higher levels of classroom engagement than high poverty schools (Yazzie- Mintz, 2007). In contrast, classroom environments in poor schools were associated with high levels of student aggression, tenuous peer relations, and a weak academic focus. These in- and out- of-school factors create conditions over the long-term that contribute to high dropout rates among economically insecure students. In a National Center for Educational Statistics study of dropout rates by income level from 1990 to 2013, researchers found youth from families in the lowest income quintile consistently had the highest dropout rate (though the gaps were, of note, narrowing) (NCES, 2015).

The combination of high poverty and low social welfare in the U.S. contributes significantly to academic achievement gaps (Chmielewski & Reardon, 2016). Significant disparities exist in income-related achievement with numerous studies demonstrating the relationship between poverty and academic performance (e.g., Olszewski & Corwith, 2018). A variety of academic measures are cause for concern. Children from high poverty families, for example, tend to have lower scores on standardized tests -- ranging from state accountability tests to the SAT and ACT -- of academic achievement. Of particular concern regarding test scores given the current weight of high-stakes testing is the outsized role of the community, or out-of-school factors, in shaping test results.

Christopher Tienken and his team of researchers (2017) have been able to accurately and empirically predict middle level state standardized test scores based on family and community demographic data alone.As such, test scores mirror another "educational opportunity" that mixes possibilities, or more often the lack of possibilities, in the school and community (including access to child care, preschool, and after-school programs) (Freedberg, 2019).

In considering the long impact of economic insecurity for students, we find troubling indicators at the post-secondary level. Enrollment trends reveal that students from high-income families are three times as likely to enroll in a selective institution of higher education as students from low-income families (24% vs. 8%) (Giancola & Kahlenberg, 2016). This is of note since students who attend more selective institutions have higher graduation rates, higher rates of continuing on to graduate school, and higher beginning salaries. Post-secondary completion rates also indicate concerning developments. Compared to low poverty peers, high poverty students are less likely to graduate from college (49% vs. 77%) and less likely to earn a graduate degree (29% vs. 47%) (Wyner et al., 2007).

Regardless of the attributes of the school, school leadership has been found to be the strongest predictor of teachers' feeling of organizational engagement, career commitment, and retention sentiments and decisions (Boyd et al., 2011; Weiss, 1999).

Specific interventions are needed if high poverty students are to be ready for college and future career success. Previous research indicates that social supports for students can moderate the impact of poverty and its associated stressors. Cultivating a positive school climate, for example, may be especially important for high poverty students (Eccles et al., 1993; Olszewski & Corwith, 2018). School climate refers to the organizational environment within an educational institution. A positive school climate, characterized by supportive relationships and emotional and physical safety, is important for all children, but especially for those students living in poverty (Cohen & Geier, 2010). Additional research on school climate finds that students from poor families are more likely to learn when environments are characterized by collegiality, collaboration, shared decision-making, positive attitudes, high quality instruction, and a clear mission (Reeves, 2003). Stewart (2007; 2008) further found that a cohesive social context reduces the educational problems commonly found in high poverty schools.

This study aims to contribute to the ongoing examination of the relationship between poverty and education in the U.S. by exploring differences between high- and low-poverty schools in South Carolina across levels (i.e., elementary, middle, and secondary) and along a defined set of indicators. This research focuses on South Carolina data and illustrates an overall picture of poverty level and state report card information. Specifically, this study addresses the following research questions:

- How do high poverty and low poverty elementary schools compare on multiple school performance indicators?
- How do high poverty and low poverty middle schools compare on multiple school performance indicators?
- How do high poverty and low poverty high schools compare on multiple school performance indicators?

DATA SOURCES AND METHOD

Participating Schools

This research employed 2019 South Carolina school report card data from the South Carolina Department of Education (SCDE) and excluded the schools that served special populations, including incarcerated youth, deaf and blind students, and students in special high school residency programs. School report cards are produced by school type (elementary, middle, and high) according to the grade levels that the schools serve, and schools may have more than one school type. Primary schools were excluded in this research because some school report card variables were not measured at primary schools and the sample size was small. Schools included in the analytic sample consisted of 1163 public schools in 88 school districts or state-operated programs in South Carolina. Among the 1163 schools, 683 (58.7%) schools had elementary school type, 341 (29.3%) schools had middle school type, and 241 (20.7%) schools had high school type. In order to investigate the associations between school poverty and school performance by school level, this study conducted separate analysis for elementary, middle, and high schools.

School Level Variables

Data from variables on the South Carolina school report cards, produced for state and federal accountability, was analyzed for the study. Within each school type (elementary, middle, and high), schools were separated into four groups based on quartiles of the poverty index. Poverty levels in this study were calculated using the school poverty index variable (based on student TANF, Medicaid, SNAP, foster child, homeless or migrant status) from the school report card information for 2019. The quartiles were calculated separately for each school type (elementary, middle, and high). Comparisons on key school report card variables were made between schools in the lowest and the highest poverty quartiles. For this analysis, low poverty schools were defined as the lowest 25% and high poverty schools were defined as the highest 25% of all schools based on school poverty index.

Requirements for the South Carolina accountability system for public schools and school districts are provided by the Education Accountability Act of 1998, as last amended by Act 94 of 2017. The goal of the accountability system is to improve teaching and learning to equip students with a strong academic foundation and ensure that all students graduate with the world-class knowledge, skills and characteristics as defined by the Profile of the South Carolina Graduate. SC school report cards were developed to measure performance of individual schools and districts under the state's accountability system. Points out of a 100-point scale for each school are determined based on various performance indicators. Overall school ratings are determined based on point ranges defined separately for each school type (i.e., elementary, middle, and high). Schools are rated at one of five performance levels in relation to criteria to ensure all students meet the Profile of the SC Graduate. Overall school performance ratings are Unsatisfactory, Below Average, Average, Good, and Excellent.

SC school report cards include two sections, one on academics and one on school environment. Each section includes multiple indicators where each indicator consists of multiple variables. Academic indicators include academic achievement, preparing for success, English learners' progress, student progress (elementary and middle schools), graduation rate (high school only), and college and career readiness (high school only). School environment indicators include student engagement, classroom environment, student safety, and financial data. All academic indicators are included in points toward accountability ratings, unless small sample sizes preclude inclusion. Of the school environment indicators, only student engagement is included in points toward accountability ratings. Accountability manuals are produced annually by the SC Education Oversight Committee and can be found at https://www.eoc.sc.gov/accountability-manuals. The manuals explain the accountability model and describe variables associated with the various indicators. Interested readers may view the 2018-19 Accountability Manual for more detailed information on school report card variables available for the 2018-2019 school year.

We chose to focus our analysis on select variables that may be compared with national trends.

While the SC school report cards include a wide array of variables that are important to the state, we chose to focus our analysis on select variables that may be compared with national trends. Broad categories for variables included in are analysis are academic achievement/outcomes, student engagement, classroom environment, and student safety.

Academic Achievement/Outcomes. For academic achievement, elementary type analysis and middle school type analysis include SC Ready assessments in English language arts and mathematics, whereas high school type analysis includes End-of-Course (EOC) assessments in English languages arts and mathematics. The South Carolina College-and Career-Ready Assessments (SC Ready assessments) are statewide assessments in English language arts and mathematics. End-of-Course (EOC) assessments are statewide final exams in SC Public Schools for courses that are considered "gateway" subjects, including English/language arts, mathematics, science, and social studies. Student retention rate (percentage of students required to repeat a grade) was also examined for all school types as an academic outcome. Additional academic outcomes for high schools include on-time graduation rate and percentage of diploma earners who are college or career ready based on relevant test scores.

Student Engagement. This category includes chronic absenteeism rate of students and teacher results from three items on a school climate survey. Chronic absenteeism is defined as missing 10 percent or more school days during the school year in which students were enrolled. The SCDE administers climate surveys to teachers, parents, and students annually each spring. Our analysis examined results of key items reported on SC school report cards from teacher respondents. These variables include the percentage of teachers who reported that were satisfied with the learning environment, the physical environment, and home-school relations for their respective schools.

Classroom Environment. This category includes a variety of variables connected with teacher quality and consistency. Variables include the percentage of teachers with advanced degrees, percentage of teachers returning from previous year (three-year average), percentage of inexperienced/out-of-field teachers in core classes, percentage of teacher vacancies unfilled for more than 9 weeks, and teacher attendance rate.

To optimize the success of the mentorship program, reduced teaching requirements should be provided for both [mentor and mentee], so they can have the time and space to engage in the mentorship relationship and work.

Student Safety. Variables in this category include perceptions of school safety from surveys of parents and teachers as well as student suspension data. Survey data includes the percentage of parents who agree or strongly agree with the statement "My child feels safe at school" and the percent of teachers agree or strongly agree the statements "I feel safe at my school before and after hours" and "The rules for behavior are enforced at my school." Student suspension data includes the percentage of students enrolled with in-school suspensions and the percentage of students enrolled with out-of-school suspensions during the school year.

Data Analysis

This research examined the relationship of poverty and a variety of school performance indicators. Independent sample t-tests were conducted to compare school performance differences between high poverty schools (in the highest poverty quartile) and low poverty schools (in the lowest poverty quartile). Considering poverty level could have different relationships depending on school type, we analyzed data and reported results separately for elementary, middle, and high schools. Effect size was also calculated for differences between low poverty schools and high poverty schools and the significance level of .05 for each variable. An effect size measure, Cohen's d, was used to determine the standardized mean difference between high poverty schools and low poverty schools. As a general rule of thumb, Cohen (1988) suggested that values of d = 0.2 represent small effects, d = 0.5 represent medium effects, and d = 0.8 represent positive effects. Based on the calculated differences, positive values for Cohen's d indicate low poverty schools have higher mean values whereas negative values indicate high poverty schools have higher mean values. Before the statistical analyses were conducted, distributions of the data were examined for underlying assumptions. These analyses were carried out using SAS software.

RESULTS

Our analyses examined the relationship of school poverty with a variety of school performance measures for elementary, middle, and high schools. We used independent samples t-tests for each school type to investigate differences between high poverty schools and low poverty schools in variables under various performance indicators from SC school report cards. Overall, high-poverty and low-poverty schools had statistically significant differences for variables in the areas of academic achievement/outcomes, student engagement, classroom environment, and student safety. A summary of results under each area is provided below.

Academic Achievement/Outcomes. The largest effect sizes were observed for student proficiency rates on standardized tests with high poverty schools having substantially lower proficiency rates than low poverty schools for all school levels (d ranged from 1.86 to 3.37). The ELA assessments had larger effect sizes than math assessments. Student retention rates were statistically significant greater in high poverty schools than in low poverty schools with medium effects for elementary and middle schools and large effect for high schools. At the high school level, graduation rate and percentage of graduates considered college or career ready were statically significantly greater for low poverty than high poverty schools with large and very large effects, respectively.

Student Engagement. Chronic absenteeism was statistically significantly greater for high poverty than for low poverty schools with large effects across all school levels. From the climate survey, teacher satisfaction with home-school relations had very large effect sizes for all school levels with teachers from high poverty schools expressing substantially less satisfaction with home-school relations compared to those from low poverty schools (d ranged from 1.99 to 2.54). The other two items from the school climate survey regarding the learning environment and the social and physical environment had statistically significant greater teacher satisfaction rates for low poverty than high poverty schools with large effects for all school levels.

Classroom Environment. A statistically significant difference was observed for the percentage of teachers with an advanced degree at the elementary school level that was not observed at the middle or high school levels. This difference was small in magnitude (d=.27) with teachers from low poverty schools observed to have about four percent more teachers with advanced degrees than high poverty schools. The three-year average teacher return rates were statistically significantly greater for low poverty schools than high poverty schools with large effects for all school levels. The percentage of inexperienced or out-of-field teachers in core subjects did not differ significantly between low and high poverty schools at the elementary or middle school levels. For high schools, low poverty schools had a statistically significantly greater percentage of inexperienced or out-of-field teachers in core subjects than high poverty schools with a medium effect size. Examining the percentage of teacher vacancies that are unfilled for more than nine weeks, the difference between low and high poverty schools was statistically significant for middle and high schools but not for elementary schools. For middle and high schools, high poverty schools had significantly more teacher vacancies than low poverty schools with medium effects. For all school levels, teacher attendance rate did not differ significantly between low and high poverty schools with a consistent average of about 94 percent.

Student Safety. Parental agreement rates on their child feeling safe in school was statically significantly greater for low poverty than for high poverty schools across all levels. Effects were large at the elementary and middle school levels and medium at the high school level. Teacher agreement rates that they feel safe at school before and after hours were significantly greater for low poverty than high poverty schools for elementary and high schools with medium effects, but were not significantly different for middle schools. Teacher agreement rates that rules for behavior are enforced at their school were statistically significantly greater for low poverty than high poverty schools with large effects for elementary and middle schools and a medium effect for high schools. For all school levels, the percentage of students who had in- and out-of-school suspensions were statistically significantly greater for high poverty than low poverty schools with large effects for in-school suspensions and very large effects for out-of-school suspensions.

Table 1. SC School Performance by Poverty (Elementary Schools)

Indicators	Low Poverty (Q1)		High Poverty (Q4)		P-Value	Effect Size (Cohen's d)
	Mean	N	Mean	N		
Academic Achievement/Outcomes						
Student proficiency rate on SC Ready ELA assessment	64.49	168	27.16	163	<.0001	3.37
Student proficiency rate on SC Ready math assessment	66.18	168	30.41	163	<.0001	2.62
Student retention rate	0.70	159	1.95	164	.0004	-0.40
Student Engagement						
Chronic absenteeism rate	5.91	156	14.01	153	<.0001	-1.42
% of teachers satisfied with learning environment	93.38	154	81.43	161	<.0001	0.89
% of teachers satisfied with social and physical environment	93.64	154	83.17	161	<.0001	0.85
% of teachers satisfied with school-home relations	95.90	154	63.53	161	<.0001	1.99
Classroom Environment						
% of teachers with advanced degrees	60.04	168	56.34	166	.0125	0.27
% of teachers returning from previous year (3-year average)	85.58	152	75.76	156	<.0001	1.12
% of inexperienced/out-of-field teachers in core classes	19.80	168	18.88	161	.6905	0.04
% of teacher vacancies unfilled for more than 9 weeks	1.08	164	1.97	166	.0819	-0.19
Teacher attendance rate	94.49	166	94.19	162	.1848	0.15
Student Safety						
% parent agreement with "My child feels safe at school"	94.65	162	85.86	161	<.0001	1.20
% teacher agreement with "I feel safe at my school before and after hours"	82.99	162	74.29	162	<.0001	0.47
% teacher agreement with "The rules for behavior are enforced at my school"	98.09	162	92.44	162	<.0001	0.82
% of students with in-school suspensions	2.33	168	6.83	166	<.0001	-0.72
% of students with out-of-school suspensions	2.81	168	12.31	166	<.0001	-1.56

Table 2. SC School Performance by Poverty (Middle Schools)

Indicators	Low Poverty (Q1)		High Poverty (Q4)		P-Value	Effect Size (Cohen's d)
	Mean	N	Mean	N		
Academic Achievement/Outcomes						
Student proficiency rate on SC Ready ELA assessment	60.13	82	24.54	80	<.0001	3.15
Student proficiency rate on SC Ready math assessment	55.19	82	18.83	79	<.0001	2.64
Student retention rate	0.42	82	2.23	79	.0091	-0.42
Student Engagement						
Chronic absenteeism rate	8.79	83	17.51	74	<.0001	-1.18
% of teachers satisfied with learning environment	88.26	78	74.92	77	<.0001	0.93
% of teachers satisfied with social and physical environment	90.31	78	79.80	77	<.0001	0.91
% of teachers satisfied with school-home relations	90.89	78	55.18	77	<.0001	2.54
Classroom Environment						
% of teachers with advanced degrees	58.54	82	57.94	81	.7691	0.05
% of teachers returning from previous year (3-year average)	82.26	77	74.72	76	<.0001	0.85
% of inexperienced/out-of-field teachers in core classes	18.05	81	14.24	78	.1741	0.22
% of teacher vacancies unfilled for more than 9 weeks	1.65	81	3.55	77	.0154	-0.39
Teacher attendance rate	94.10	81	94.12	78	.9522	-0.01
Student Safety						
% of parent agreement with "My child feels safe at school"	89.31	80	78.26	77	<.0001	1.21
% of teacher agreement with "I feel safe at my school before and after hours"	73.61	78	68.90	79	.1141	0.25
% of teacher agreement with "The rules for behavior are enforced at my school"	97.08	78	92.16	79	<.0001	0.81
% of students with in-school suspensions	10.50	82	24.09	81	<.0001	-1.05
% of students with out-of-school suspensions	7.42	82	28.96	81	<.0001	-1.91

Table 3. SC School Performance by Poverty (High Schools)

Indicators	Low Poverty (Q1)		High Poverty (Q4)		P-Value	Effect Size (Cohen's d)
	Mean	N	Mean	N		
Academic Achievement/Outcomes						
Student proficiency rate on English 1 EOC assessment	70.13	57	36.98	57	<.0001	2.92
Student proficiency rate on Algebra 1 EOC assessment	68.35	57	40.04	57	<.0001	1.86
% of diploma earners who are college or career ready	83.09	61	59.39	55	<.0001	1.84
Student four-year graduation rate	88.60	58	75.87	59	.0004	0.68
Student retention rate	1.39	57	5.33	57	<.0001	-0.79
Student Engagement						
Chronic absenteeism rate	14.02	59	25.82	56	<.0001	-1.18
% of teachers satisfied with learning environment	90.27	54	76.35	54	<.0001	1.08
% of teachers satisfied with social and physical environment	92.46	54	82.22	54	<.0001	0.96
% of teachers satisfied with school-home relations	88.87	54	54.40	54	<.0001	2.33
Classroom Environment						
% of teachers with advanced degrees	65.44	62	60.95	60	.0556	0.35
% of teachers returning from previous year (3-year average)	85.43	53	77.23	56	<.0001	1.00
% of inexperienced/out-of-field teachers in core classes	18.57	60	10.95	56	.0430	0.38
% of teacher vacancies unfilled for more than 9 weeks	1.56	60	3.83	60	.0473	-0.37
Teacher attendance rate	94.66	62	94.41	60	.5138	0.12
Student Safety						
% of parent agreement with "My child feels safe at school"	87.55	59	80.42	55	.0012	0.62
% of teacher agreement with "I feel safe at my school before and after hours"	79.64	58	72.00	57	.0125	0.47
% of teacher agreement with "The rules for behavior are enforced at my school"	96.91	58	92.76	57	.0031	0.56
% of students with in-school suspensions	11.47	61	26.56	60	<.0001	-1.16
% of students with out-of-school suspensions	7.72	61	28.43	60	<.0001	-1.82

CONCLUSION AND DISCUSSION

This study provides a contribution to crucial conversations, and understandings, about the association of poverty level with school performance measures in South Carolina. Findings from this study are based on an analysis of 1163 public schools in 88 school districts and state-operated programs in South Carolina. We focused on variables from four central categories in this study: academic achievement/outcomes, student engagement, classroom environment, and student safety. The results, highlighted in the section above, largely align with established findings regarding public education and poverty within the United States, which we discuss briefly below after highlighting some largely encouraging findings. First, in comparing across levels, we found that teacher attendance rates were strikingly similar (~94%) between high and low poverty schools. Furthermore, the average South Carolina teacher absentee rate (~6%) falls in line with national averages. Second, at the elementary level, both low and high poverty schools had similar percentages of teacher vacancies unfilled for more than nine weeks. At the middle and high school levels, however, these percentages begin to spike in high poverty schools. Third, at the middle-school levels, a similar percentage of teachers have an advanced degree in low and high poverty schools (58.5% vs. 57.9%). The advanced-degree data falls into a bowtie pattern in SC, with greater differences at both the elementary and high school levels between school types and a reduced "knot" at the middle school level. These middle-level percentages reflect national averages as well. Finally, and surprisingly given the broader research on this topic, high-level poverty schools had smaller percentages of inexperienced/out-of-field teachers in core classes than low poverty schools across all levels.

Beyond these encouraging similarities between high and low poverty schools, other major indicators within the four variable areas (i.e., academic achievement/outcomes, student engagement, classroom environment, and student safety), unfortunately, point to concerning levels of sharp difference and inequalities. Across levels, SC academic achievement data falls into similar patterns with national trends particularly regarding significantly different test outcomes between students in low and high poverty schools (Olszewski & Corwith, 2018). The larger effect sizes for ELA than math assessments merits further research to understand this sharp subject-level difference in South Carolina. Student engagement variables (e.g., absenteeism, teacher satisfaction with home-school relations) likewise align with established national patterns (Yazzie-Mintz, 2007) and point to a more stable environment (regarding the attendance of students, return of teachers, etc.) in low-poverty schools. Finally, the sharp differences in the sense of school safety between low and high poverty rates indicates concerning, broad trends across all levels and among students and teachers about the lack of a healthy environment for learning.

RECOMMENDATIONS

We conclude with several recommendations based on this study. First, we recommend further research using alternative analysis approaches to examine longitudinal and multivariate trends. This study serves as an important first step that examined difference between the highest and lowest poverty levels for schools based on the state report card information from one school year. While the one time point study reveals a snapshot difference, a diachronic or longitudinal study could chart these data points and any trends over time. Therefore, we recommend future studies consider examining the state report card information over multiple years. We also recommend that future studies use other methods, such as multiple regression or MANOVA, to account for the multivariate nature of the data. These analytic approaches enable researchers to explore correlations that may reveal patterns among a collection of variables for the lowest and highest poverty schools. Likewise, qualitative research in these schools could provide deeper insights into teacher and student experience of these differing educational environments.

This study also leads to several policy recommendations. Advised changes align along the 4As: availability, access, adaptability, and acceptability (Tomaševski, 2006). First, we recommend expanding the availability and number of school care staff particularly counsellors, psychologists, and nurses. Second, opening access to higher-level (e.g., AP, IB) courses should be prioritized especially at the middle and high school levels to provide opportunities to learn with the most experienced teachers and to be academically challenged. Third, we advise adapting and transforming the school climate into one where students feel safe, accepted, and supported as an intervention to improve academic outcomes and home-school relationships. Finally, inviting the community to dialogue about possible changes can generate a grassroots' investment and insight into ways to make schools acceptable and prioritized in communities. Fortunately, South Carolina has a small geographic footprint, which can facilitate the flow of ideas and resources to high-need areas. While the challenges to address the educational needs, especially of high poverty schools, are significant, they can be met with the assistance of targeted research, the commitment of resources, and policy enhancement.

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[1]Strategies to define poverty differ across time and institution. Poverty can be defined in purely economic terms, such as by family income, or can be extended to encompass other aspects of potential social and economic disadvantage, such limited contributions to child welfare and educational outcomes (Burney & Beilke, 2008; Engle & Black, 2008).

[2] Persistent poverty is defined as when 20 percent or more of a population has been experiencing poverty in every U.S. Census since 1980. The 24 South Carolina counties with persistent child poverty include Allendale, Bamberg, Barnwell, Calhoun, Charleston, Chester, Chesterfield, Clarendon, Colleton, Darlington, Dillon, Fairfield, Florence, Georgetown, Hampton, Jasper, Lee, McCormick, Marion, Marlboro, Orangeburg, Saluda, Sumter, and Williamsburg (Sisters of Charity Foundation, 2020, p. 7).