THE RELATIONSHIP BETWEEN POVERTY AND SCHOOL PERFORMANCE IN SOUTH CAROLINA

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COLLABORATOR ORGANIZATIONS

Research, Evaluation, and Measurement Center

South Carolina Teacher Education Advancement Consortium Though Higher Education Research
BACKGROUND

- Poverty shapes educational opportunity and outcomes in the United States
- High poverty schools have difficulty recruiting and retaining teachers
- The opportunity gap also points to the disparity in children’s access to learning in a safe environment
- This study examined the relationship between poverty and a variety of school performance variables in South Carolina for three school levels (elementary, middle, and high)

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?
PARTICIPATING SCHOOLS

• 2019 SC School Report Card data from the SC Department of Education
• Excluded the schools that served special populations
• 1163 public schools in 88 school districts or state-operated programs
  • 683 (58.7%) elementary schools
  • 341 (29.3%) middle schools
  • 241 (20.7%) high schools

SCHOOL LEVEL VARIABLES

• Schools divided by quartiles of the poverty index
  • Low poverty schools from the lowest 25%
  • High poverty schools from the highest 25%
• Examined school performance variables from SC School Report Cards that may be compared with national trends
• Broad categories for variables include:
  • Academic achievement/outcomes
  • Student engagement
  • Classroom environment
  • Student safety
DATA ANALYSIS

• Examined variables within each of the broad categories

• Conducted independent sample t-tests of means between low and high poverty schools

• Calculated standardized mean difference effect sizes

• Conducted separate analysis by school level (elementary, middle, and high schools)

RESULTS – ACADEMIC ACHIEVEMENT

Elementary Schools

- Mean ELA (SC Ready): 27 (High poverty), 30 (Low poverty)
- Mean Math (SC Ready): 64 (High poverty), 68 (Low poverty)

Middle Schools

- Mean ELA (SC Ready): 25 (High poverty), 19 (Low poverty)
- Mean Math (SC Ready): 80 (High poverty), 55 (Low poverty)

High Schools

- Mean ELA (End of Course): 37 (High poverty), 40 (Low poverty)
- Mean Math (End of Course): 70 (High poverty), 68 (Low poverty)
SUMMARY OF RESULTS FOR STUDENT ACHIEVEMENT

• High poverty schools had lower achievement results than low poverty schools in both ELA and Math

• Effects were very large (1.9 to 3.4, larger for ELA than Math)

• Results were consistent for all three school levels (elementary, middle, and high school)

RESULTS – SCHOOL CLIMATE SURVEY ITEMS

<table>
<thead>
<tr>
<th>Teacher satisfaction with school-home relations</th>
<th>Elementary Schools</th>
<th>Middle Schools</th>
<th>High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>High poverty</td>
<td>64</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Low poverty</td>
<td>96</td>
<td>91</td>
<td>89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher satisfaction with social and physical environment</th>
<th>Elementary Schools</th>
<th>Middle Schools</th>
<th>High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>High poverty</td>
<td>83</td>
<td>80</td>
<td>82</td>
</tr>
<tr>
<td>Low poverty</td>
<td>94</td>
<td>90</td>
<td>92</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher satisfaction with learning environment</th>
<th>Elementary Schools</th>
<th>Middle Schools</th>
<th>High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>High poverty</td>
<td>81</td>
<td>75</td>
<td>76</td>
</tr>
<tr>
<td>Low poverty</td>
<td>93</td>
<td>88</td>
<td>90</td>
</tr>
</tbody>
</table>
SUMMARY OF RESULTS FOR SCHOOL CLIMATE SURVEY ITEMS

• Teachers from high poverty schools reported lower satisfaction with school climate items

• Largest difference for satisfaction with school-home relations (effect sizes 2.0 to 2.5)

• Results were consistent for all three school levels

RESULTS – OTHER VARIABLES WITH VERY LARGE EFFECTS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Elementary Schools</th>
<th>Middle Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic absenteeism rate</td>
<td>14/6</td>
<td>18/9</td>
</tr>
<tr>
<td>Percent of parents agreeing that &quot;my child feels safe at school&quot;</td>
<td>86/95</td>
<td>78/89</td>
</tr>
<tr>
<td>Percent of students with out of school suspensions</td>
<td>12/3</td>
<td>29/7</td>
</tr>
</tbody>
</table>
RESULTS – OTHER VARIABLES WITH VERY LARGE EFFECTS

SUMMARY OF RESULTS FOR OTHER VARIABLES WITH VERY LARGE EFFECTS

- High poverty schools had higher student absenteeism rates with large effects (1.2 to 1.4) for all school levels
- High poverty schools had higher student suspension rates with large effects (1.6 to 1.9) for all school levels
- Parents from high poverty elementary and middle schools reported lower agreement rates of their child feeling safe at school with large effects (1.2)
- High poverty high schools had a lower percent of college or career ready graduates with a large effect (1.8)
ENCOURAGING FINDINGS FOR HIGH POVERTY SCHOOLS

• Teacher attendance rates were strikingly similar (~94%) between high and low poverty schools across school levels
• 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 school level, a similar percentage of teachers have an advanced degree in low and high poverty schools (58.5% vs. 57.9%)
• High poverty schools had smaller percentages of inexperienced/out-of-field teachers in core classes than low poverty schools at the middle and high school levels

CONCERNING FINDINGS REVEALING INEQUITIES

• SC academic achievement falls into similar patterns with national trends regarding significantly lower scores for high poverty schools (Olszewski & Corwith, 2018)
• Student engagement variables align with established national patterns (Yazzie-Mintz, 2007) and point to a more stable environment in low poverty schools
• Sharp differences in student safety aspects indicates concerning trends across all levels about the lack of a healthy learning environment in high poverty schools
RECOMMENDATIONS

Future research using alternative analysis approaches to examine longitudinal and multivariate trends

Policy Recommendations

• Advised changes align along the 4-As (Tomaševski, 2006)
  • **Availability**: Expand the availability and number of school counsellors, psychologists, and nurses (i.e., the specially targeted caring staff of the school).
  • **Accessibility**: Open access to higher-level (e.g., AP, IB) courses should be prioritized to provide opportunities to learn with the most experienced teachers and to be academically challenged.
  • **Adaptability**: Adapt and transform the school climate into one where students feel safe, accepted, and supported as an intervention to improve academic outcomes and home-school relationships.
  • **Acceptability**: Invite the community to dialogue about possible changes can generate a grassroots’ investment and insight into ways to make schools acceptable and prioritized in communities.

THANKS!

Paper forthcoming at sc-teacher.org/resources/

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