

School-Level Factors Associated with Teacher Retention in South Carolina

**WORKING PAPER SERIES II:
What We Know About the South Carolina Teacher Workforce**

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OCTOBER 2020



+ ABSTRACT

Retaining teachers is an ongoing challenge in K-12 education in the United States. Teacher turnover rates in the South, including South Carolina, are even more pronounced. To gain an understanding of the overall conditions regarding teacher turnover in South Carolina, we investigated school level factors associated with teacher retention in the state. An analysis of 1,100 public schools in 82 school districts revealed that teachers' satisfaction with school climate, teachers' views of school safety and student behavior, school poverty, principals' years at the school, and teacher salary played important roles in teacher retention. Additionally, the average teacher retention rate at high schools was significantly higher than that in elementary and middle schools. Further, the average retention rate at high poverty schools was significantly lower than that in low and medium poverty schools. Moreover, schools with new principals (three or fewer years of experience) had significantly lower teacher retention rates than the schools with experienced principals (more than three years). Finally, teacher retention rates did not differ significantly between urban and rural schools. We conclude this paper with recommendations and suggestions for strategies to retain teachers in South Carolina.

+ INTRODUCTION

Educational legislation and policies emphasize students' equal access to educational opportunities, quality instruction, and student success. In 2002, the Elementary and Secondary Education Act (ESEA) was amended and reauthorized as the No Child Left Behind Act (NCLB) which highlighted the importance of teacher quality and required schools to address the achievement gap among students. The impact of a teacher on student learning has been documented in numerous studies (e.g., Rockoff, 2004). Differences in teacher quality resulted in a difference of 7.5 percentage points in student achievement (Rivkin et al., 2005). Ronfeldt et al. (2013) estimated the impact of teacher turnover on Grades 4 and 5 student observations in New York City and found that students in grade levels with higher teacher turnover rates scored lower in both English language arts and mathematics. Therefore, retaining effective teachers is an important strategy for schools to ensure quality instruction and student learning.

However, it has been very challenging to retain effective teachers in the United States. According to Garcia and Weiss (2019), the teacher shortage was real, large, and growing, indicating that high-poverty schools suffered the most from the shortage of credentialed teachers. Sutchter et al. (2019) showed that the most important driving factor of teacher shortages was high teacher attrition. Attrition rates were much higher for new teachers (i.e., in their first year of practice) and teachers in high-poverty schools and districts compared to teachers with more than one year of experience in low-poverty schools (Loeb et al., 2005). Carver-Thomas and Darling-Hammond (2019) revealed that 8% of teachers leave the profession and about 8% shift schools each year in the U.S., which has resulted in an overall turnover rate of about 16%. The lowest overall turnover rates were in the Northeast (about 10%), and the highest overall turnover rates were in the South with about 16 to 17% in cities and suburbs and 14 to 15% in towns and rural areas.

To understand and address the issues of teacher shortage, teacher attrition, teacher turnover, and teacher retention, researchers (e.g., Darling-Hammond, 2003) focused on the factors associated with these issues. Ingersoll (2001) indicated that teacher turnover had large associations with job dissatisfaction and pursuing other jobs. Darling-Hammond (2003) found that multiple factors mattered for the recruitment and retention of teachers. These factors included salaries, class size, teaching load, availability of materials, teacher participation in decision-making, strong and supportive instructional leadership from principals, and collegial learning opportunities. Hughes (2012) conducted a survey study on teacher retention and found that teaching experience, student socioeconomic status (SES), salary, workload, parent and student cooperation, and technology made statistically significant contributions to teachers' plans to teach until retirement. A recent study by Carver-Thomas and Darling-Hammond (2019) revealed that teachers' high turnover rate was related to teacher salary, lack of administrative support, and alternative certification.

School poverty was one of the factors in the study of teacher retention. Hughes (2012) found that socioeconomic status (SES) made statistically significant contributions to teacher retention. Teachers were more likely to leave schools that had populations of high poverty (Smith & Ingersoll, 2004). Carver-Thomas and Darling-Hammond (2019) reported that the teacher turnover rates in schools with a majority of low-income students and students of color could be double those in schools with more White students and fewer low-income students. Specifically, they indicated that the turnover rates in Title I schools were nearly 50% greater than those in non-Title I schools.

Demographic variables available in the South Carolina teacher data file School administration appeared to play an important role in teacher retention. According to Kukla-Acevedo (2009), support from the principal, in terms of communicating expectations and maintaining order in the school, was a protective factor against teacher turnover, and increased administrative support reduced the probability that teachers leave or switch schools. Boyd et al. (2010) studied the influence of school administrators on teacher retention decisions in New York City schools, and they found that teachers' perceptions of the school administration had the greatest impact on their retention decisions. Similarly, Carver-Thomas and Darling-Hammond (2019) indicated that lack of administrative support was one of the factors associated with high teacher turnover rates.

School location has also been an important factor in the study of teacher retention. Meyer et al. (2019) studied teacher retention, mobility, and attrition in Colorado, Missouri, Nebraska, and South Dakota, and found that the proportion of stayers was similar in rural schools (83%) and nonrural schools (82%). However, Carver-Thomas and Darling-Hammond (2019) indicated that teacher turnover varied by region and district type, and the turnover rates were higher at schools in cities and suburbs in comparison with those in towns and rural areas. Lankford et al. (2002) found that teachers were more likely to leave urban schools. Schools in the rural areas face similar challenges of retaining effective teachers. Irvin et al. (2020) studied recruitment and retention of teachers in rural South Carolina, and they discussed multiple challenges facing rural schools and provided recommendations for teacher recruitment and retention.

Teacher retention is often influenced by multiple factors. Kukla-Acevedo (2009) studied the relationship between teacher mobility decisions and their working place conditions and found that the first-year teachers' mobility decisions had strong associations with behavioral climate. Students' behavior problems were associated with teachers' plans to stay in or leave the profession (Easton et al., 2007; Wynn et al., 2007). Teachers' relations with parents and community were found to have the strongest effect on retention (Buckley et al., 2005). Bueno and Sass (2019) studied Georgia's bonus system in teacher recruitment and retention, and they found that bonuses reduced teacher attrition by 18 to 28%. Gray and Taie (2015) found that teachers with higher beginning salaries and mentors were more likely to stay. Carver-Thomas and Darling-Hammond (2019) revealed that teachers who entered the teaching profession through alternative certification pathways were much more likely to leave their schools and the profession.

This study focused on South Carolina and explored the school level factors associated with teacher retention. Specifically, this study intended to address the following research questions:

- What is the relationship between teacher retention and school level variables?
- How do teacher retention rates differ among elementary, middle, and high schools?
- How do teacher retention rates differ among schools of different poverty levels?
- How do teacher retention rates differ among schools with principals who have different years at the school?
- How do teacher retention rates differ between urban schools and rural schools?

+ DATA SOURCES AND METHODS

Participating Schools

This study used school report card data from the 2018-2019 school year that is publicly available from the South Carolina Department of Education (<https://ed.sc.gov/data/report-cards/>). Schools in districts that had special characteristics were excluded in this study. These districts included the Charter Institute at Erskine, Palmetto Unified School District, SC Department of Juvenile Justice, SC Governor's School for the Arts and Humanities, SC Governor's School for Science and Math, and SC School for the Deaf and the Blind. School report cards for South Carolina are summarized for four school types: primary, elementary, middle, and high schools. Schools with grades spanning grade levels may have report cards for more than one school type. Primary schools were excluded in this study considering that some variables were not measured at primary schools, and the sample size was small. Additionally, schools without teacher retention rates data for both current year and three-year averages were excluded in this study. Therefore, participating schools consisted of 1,100 public schools in 82 school districts in South Carolina. Among the 1,100 schools, 536 (48.7%) schools were located in rural areas, and 564 (51.3%) were located in urban areas. Among the 1,100 schools, 69 schools had both elementary and middle school types or both middle and high school types, and 11 schools had all elementary, middle, and high school types. Therefore, 649 (59.0%) were elementary schools, 314 (28.5%) were middle schools, and 228 (20.7%) were high schools.

School Level Variables

This study investigated the associations of teacher retention rates and school level variables. Teacher retention rates were calculated by the percent of teachers returning from the previous year. Two measures including the current year teacher retention rate and the three-year average of teacher retention rates were analyzed in the study.

A school climate survey is administered annually to teachers in South Carolina schools. Teachers' satisfaction with aspects of school climate from this survey was one of the school level variables. The survey includes items on teachers' satisfaction with school learning environment, school social physical environment, and school home relations. Data reflected the percentages of teachers at the school who reported to be satisfied with these three aspects of school climate. Teachers' view of school safety and student behavior was another school level variable, which included two questions from the school safety survey. One was the percentage of teachers at the school who Agree/Strongly Agree with the statement "I feel safe at my school before and after hours." The other was the percentage of teachers at the school who Agree/Strongly Agree with the statement "The rules for behavior are enforced at my school."

The school poverty index is used as a proxy for student socio-economic status at the school level (South Carolina Department of Education, 2017). School location information was from the E-rate data file (2017-2018) downloaded from the South Carolina Department of Education website (<https://ed.sc.gov/districts-schools/nutrition/meal-programs/national-school-lunch-program/e-rate-free-and-reduced-meal-eligibility-data/>). School locales were classified as rural or urban in this study (NCES, 2006).

This study also included the following variables: school enrollment defined as the total number of students who enrolled in the school (2018-2019), principal years defined as the number of years that a principal had served as a principal at the school, the student-teacher ratio in core subjects, the total Per Pupil Expenditure (PPE) was the dollars spent per pupil (federal, state, and local), the teacher salary defined as the average teacher annual salary at the school.

Data Analysis

We employed a quantitative data analysis method to investigate teacher retention in South Carolina. First, we used Pearson correlation analysis to explore the associations of teacher retention rates with school level variables including teachers' satisfaction with school learning environment, social physical environment, and school home relations, teachers' views of school safety and student behavior enforcement, teacher salary, school enrollment, school poverty, principal's years at the school, student teacher ratio, and total per pupil expenditure. Second, we used descriptive statistics, independent samples t-tests and analysis of variance (ANOVA) to examine the differences in teacher retention rates by a variety of variables. General differences across school type (elementary middle, and high) were initially examined. Then, analysis by school poverty, principals' years at the school, and school location (urban and rural) were conducted. School poverty was divided into three groups: low-poverty schools had poverty indices of 50% or less, medium poverty schools had poverty indices between 50 and 75%, and high poverty schools had poverty indices of 75% or higher. Principals' years at their current school were categorized into three groups: principals with one to three years at the school, four to nine years at the school, and 10 or more years at the school. Considering some schools had two or three school types of report card ratings, we analyzed data and reported results by school poverty level, principal years at the school, and school location separately for elementary, middle, and high schools.

+ RESULTS

To understand school level factors associated with teacher retention rates, we conducted an in-depth analysis. First, we present the correlation coefficients between teacher retention rates and multiple school level variables. Second, we present teacher retention rates based on school type, school poverty, principals' years at the school, and school location. In addition, we used independent samples t-tests and ANOVA to investigate the differences in teacher retention rates among schools with different characteristics. We also reported effect sizes to measure the magnitude of the differences.

Associations of School Level Factors and Teacher Retention

To explore the relationships between teacher retention and school level variables, we conducted correlation analyses. Considering these variables have continuous data, Pearson's correlation coefficients were calculated. According to Table 1, teacher retention rates had statistically significant relationships with almost all school level variables. Comparatively, teachers' satisfaction with school climate (learning environment, social physical environment, and school home relations), teacher salary, and school poverty had relatively strong associations with teacher retention rates. Student teacher ratio, school safety measures (teachers feel safe, rules for behavior enforced), principals' years at the school, and total PPE had relatively weak associations with teacher retention rates. Overall, these school level factors appeared to play important roles in teacher retention at schools.

Table 1. Correlation Coefficients of Teacher Retention Rates and School Level Factors

Factors	Elementary Schools		Middle Schools		High Schools	
	Retention Rate (1 Year)	Retention Rate (3 Year)	Retention Rate (1 Year)	Retention Rate (3 Year)	Retention Rate (1 Year)	Retention Rate (3 Year)
Teacher Satisfaction with Learning Environment	0.31**	0.34**	0.27**	0.32**	0.33**	0.40**
Teacher Satisfaction with Social Physical Environment	0.29**	0.30**	0.24**	0.27**	0.28**	0.33**
Teacher Satisfaction with School Home Relations	0.36**	0.44**	0.35**	0.36**	0.36**	0.36**
Teachers Feel Safe	0.20**	0.23**	0.16**	0.17**	0.19**	0.23**
Teacher Rules Enforced	0.29**	0.31**	0.17**	0.24**	0.14*	0.14*
Teacher Salary	0.33**	0.45**	0.32**	0.41**	0.30**	0.44**
School Enrollment	0.23**	0.29**	0.20**	0.28**	0.24**	0.33**
Principal Years at School	0.11**	0.15**	0.17**	0.24**	0.29**	0.30**
Student Teacher Ratio	0.07	0.13**	0.14*	0.17**	0.26**	0.27**
School Poverty Index	-0.33**	-0.38**	-0.33**	-0.34**	-0.34**	-0.44**
Total Per Pupil Expenditure	-0.25**	-0.30**	-0.21**	-0.23**	-0.27**	-0.32**

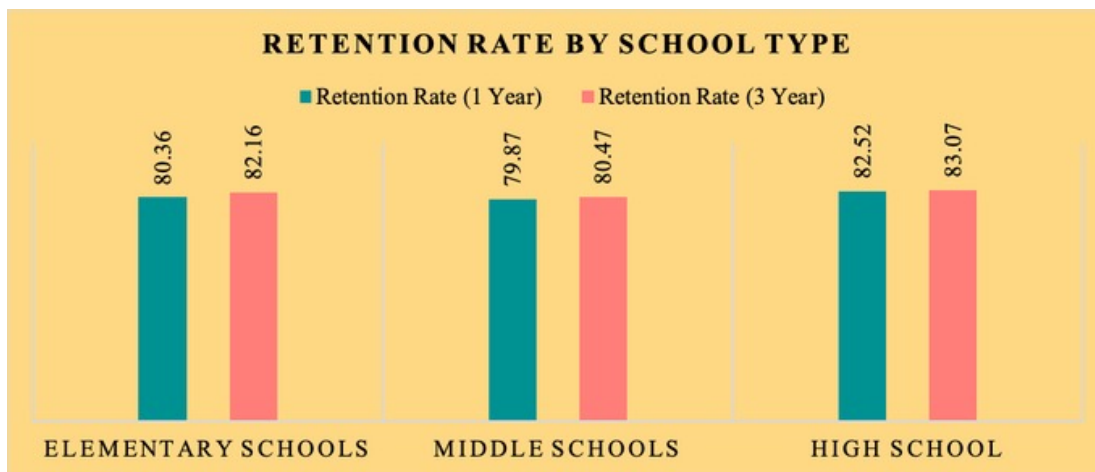
**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

Teacher Retention by School Type

To understand similarities and differences in teacher retention for elementary, middle, and high schools, we calculated the means of teacher retention rates by school type. According to Table 2, high schools had the highest teacher retention rates based on both the current year ($M = 82.52\%$) and the three-year average ($M = 83.07\%$). Middle schools had the lowest teacher retention rates based on both the current year ($M = 79.87\%$) and the three-year average ($M = 80.47\%$).

Table 2. Teacher Retention Rate by School Type (%)

School Type	Retention Rate (1 Year)			Retention Rate (3 Years)		
	N	Mean	Sig.	N	Mean	Sig.
Elementary Schools	647	80.36	$p = .011$ $\eta^2 = .008$	630	82.16	$p = .001$ $\eta^2 = .012$
Middle Schools	314	79.87		303	80.47	
High Schools	228	82.52		222	83.07	



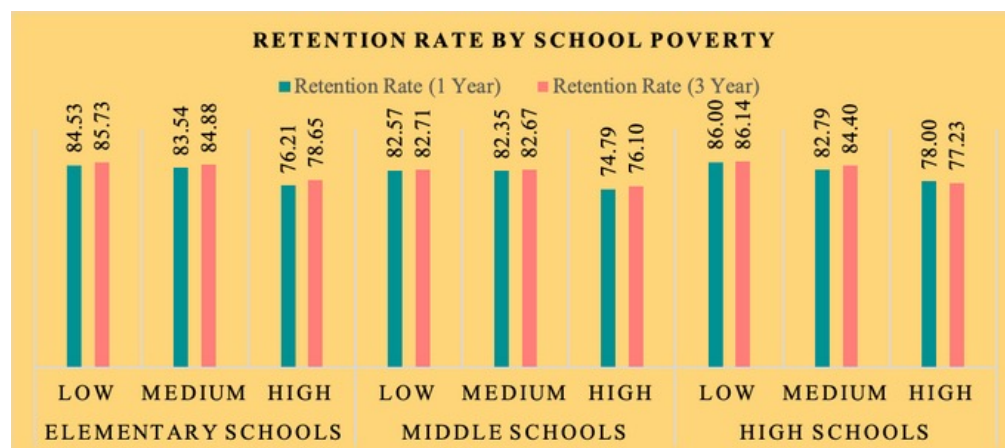
To further explore whether these differences in teacher retention rates were significant among elementary, middle, and high schools, we conducted ANOVA. The results revealed that teacher retention rates had statistically significant differences among the three types of schools based on both the current year ($p = .011$) and the three-year average ($p = .001$). Partial η^2 was used to measure the magnitude of differences. According to Cohen (1988) who defined a small effect ($\eta^2 = .008$), medium effect ($\eta^2 = .059$), and large effect ($\eta^2 = .138$), the differences in teacher retention rates were small for both the current year ($\eta^2 = .008$) and the three-year average ($\eta^2 = .012$). Tukey's honestly significant difference test (HSD) was used to test all pairwise differences. The analysis of the current year teacher retention rate revealed that the teacher retention rate at high schools was significantly higher than that in elementary and middle schools. However, the teacher retention rates did not differ significantly between elementary schools and middle schools. The analyses of the three-year average of the retention rates revealed that the teacher retention rate at middle schools was significantly lower than that in elementary and high schools. However, the teacher retention rates did not differ significantly between elementary schools and high schools.

Teacher Retention by School Poverty

To understand teacher retention at schools of different poverty levels, we calculated the means of teacher retention rates by low, medium, and high school poverty index ranges. According to Table 3, high-poverty schools had the lowest teacher retention rates based on both the current year and the three-year averages across elementary, middle, and high schools. Low-poverty schools had the highest teacher retention rates based on both the current year and the three-year averages. For example, low-poverty high schools had the highest teacher retention rate of 86.14% based on the three-year average, and high-poverty middle schools had the lowest teacher retention rate of 74.79% based on the current year retention rate.

Table 3. Teacher Retention Rate by School Poverty (%)

School Type	School Poverty	Retention Rate (1 Year)	Sig.	Retention Rate (3 Years)	Sig.
Elementary Schools	Low (50% or Below)	84.53	$p = .000$ $\eta^2 = .116$	85.73	$p = .000$ $\eta^2 = .148$
	Medium (50% < P < 75%)	83.54		84.88	
	High (75% or Above)	76.21		78.65	
Middle Schools	Low (50% or Below)	82.57	$p = .000$ $\eta^2 = .126$	82.71	$p = .000$ $\eta^2 = .141$
	Medium (50% < P < 75%)	82.35		82.67	
	High (75% or Above)	74.79		76.10	
High Schools	Low (50% or Below)	86.00	$p = .000$ $\eta^2 = .087$	86.14	$p = .000$ $\eta^2 = .196$
	Medium (50% < P < 75%)	82.79		84.40	
	High (75% or Above)	78.00		77.23	



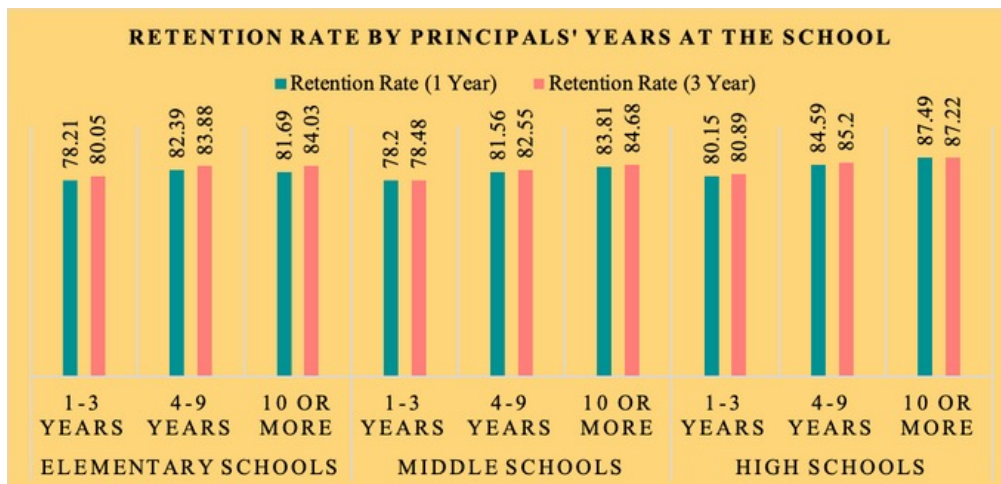
To further explore whether these differences in teacher retention rates were statistically significant among schools of different poverty levels, we conducted three ANOVAs: one for each school type (elementary, middle, and high school). Results revealed that teacher retention rates were significantly different among schools of different levels of poverty for both the current year and the three-year average, with p-values smaller than .001. Partial η^2 was used to measure the magnitude of differences. The differences in teacher retention rates were medium to large based on the current year retention rate, and the differences in teacher retention rates were large based on the three-year average (Cohen, 1988). Tukey's HSD revealed that for elementary, middle, and high schools, the teacher retention rates at high poverty schools were significantly lower than those in low poverty and medium poverty schools. However, the teacher retention rates did not differ significantly between low poverty schools and medium poverty schools.

Teacher Retention by Principals' Years at the School

To understand teacher retention rates for schools where principals had different years of experience at their current schools, we calculated the means of teacher retention rates by ranges of years with the same principal (Table 4). Schools where principals had one to three years at their current school had the lowest teacher retention rates based on both the current year and the three-year average across elementary, middle, and high schools. Schools where principals had 10 or more years at their current schools had the highest teacher retention rates based on the three-year average. For example, high schools where principals had 10 or more years at the school had the highest teacher retention rate of 87.49% based on the current year rate, and middle schools where principals had one to three years at the schools had the lowest teacher retention rate of 78.20% based on the current year retention rate.

Table 4. Teacher Retention Rate by Principals' Years at the School (%)

School Type	Principal Years at the School	Retention Rate (1 Year)	Sig.	Retention Rate (3 Years)	Sig.
Elementary Schools	1-3 Years	78.21	$p = .000$ $\eta^2 = .031$	80.05	$p = .000$ $\eta^2 = .052$
	4-9 Years	82.39		83.88	
	10 or More Years	81.69		84.03	
Middle Schools	1-3 Years	78.20	$p = .003$ $\eta^2 = .038$	78.48	$p = .000$ $\eta^2 = .078$
	4-9 Years	81.56		82.55	
	10 or More Years	83.81		84.68	
High Schools	1-3 Years	80.15	$p = .000$ $\eta^2 = .069$	80.89	$p = .000$ $\eta^2 = .094$
	4-9 Years	84.59		85.20	
	10 or More Years	87.49		87.22	



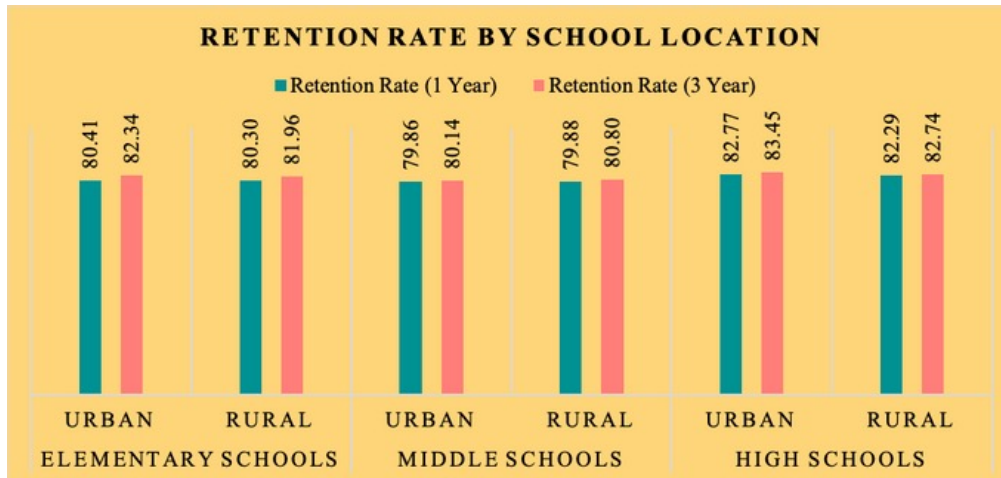
ANOVA results revealed that the teacher retention rates were significantly different among schools where principals had different years of experience at the school based on both the current year and the three-year average of the retention rates, with p-values smaller than .01. Partial η^2 was used to measure the magnitude of differences. The differences in teacher retention rates were small to medium for the current year, and about medium to large for the three-year average (Cohen, 1988). Tukey's HSD revealed that teacher retention rates at schools where principals had three or fewer years at the school were significantly lower than those at the schools with more experienced principals. The retention rates did not differ significantly between schools where principals had between four and nine years of experience and the schools where principals had 10 or more years of experience.

Teacher Retention by School Location

To understand teacher retention rates for schools of different locations, we calculated the means of teacher retention rates by urban and rural school classification. According to Table 5, teacher retention rates were very similar for schools in urban areas and rural areas across elementary, middle, and high schools. For example, urban elementary schools ($M = 80.41\%$) had slightly higher teacher retention rates than rural elementary schools for the current year ($M = 80.30\%$).

Table 5. Teacher Retention Rates by School Location (%)

School Type	School Location	Retention Rate (1 Year)	Sig.	Retention Rate (3 Years)	Sig.
Elementary Schools	Urban	80.41	$p = .905$	82.34	$p = .568$
	Rural	80.30		81.96	
Middle Schools	Urban	79.86	$p = .991$	80.14	$p = .494$
	Rural	79.88		80.80	
High Schools	Urban	82.77	$p = .717$	83.45	$p = .504$
	Rural	82.29		82.74	



To further explore whether the differences in teacher retention rates were statistically significant between urban schools and rural schools, we conducted independent t-tests. The results revealed that the teacher retention rates did not have statistically significant differences between urban schools and rural schools for both the current year and the three-year average, with p-values greater than .05.

+ FINDINGS AND DISCUSSION

Findings for this study were based on an analysis of 1,100 public schools in 82 school districts in South Carolina. This study found that teachers' satisfaction with school learning environment, school social physical environment, and school home relations had significantly positive associations with teacher retention rates. Teachers' views about school safety and enforcement of rules for behavior also had significantly positive associations with teacher retention rates. These findings suggested that teachers' working environment (e.g., school climate, school safety, behavior) played a significant role in teacher retention. These findings are consistent with previous studies. Ingersoll (2001) indicated that teachers' job dissatisfaction had large associations with teacher turnover. Kukla-Acevedo (2009) found that the first-year teachers' mobility decisions had strong associations with behavioral climate, therefore suggesting that it is very important to build a safe, healthy, positive, and welcoming school climate to promote teacher retention.

Principals' years of experience at the school was found to be significantly associated with teacher retention. Schools with new principals who had one to three years of experience at the school had significantly lower teacher retention rates than the schools with more experienced principals. The findings echoed previous research findings. Carver-Thomas and Darling-Hammond (2019) indicated that lack of administrative support was associated with teachers' high turnover rates. Kukla-Acevedo (2009) showed that support from the principal was a protective factor against teacher turnover. In addition, Boyd et al. (2010) found that teachers' perceptions of the school administration had the greatest impact on their retention decisions. Therefore, administrators' support is a key element in retaining teachers, and one important strategy is therefore to retain principals.

This study revealed that school poverty had significantly negative associations with teacher retention rates. There were large differences in teacher retention rates among schools of different poverty levels. High poverty schools had significantly lower teacher retention rates than those in low and medium poverty schools. In particular, high-poverty middle schools had the lowest teacher retention rate. These findings were consistent with findings from other studies. Hughes (2012) found that socioeconomic status (SES) made statistically significant contributions to teacher retention. Carver-Thomas and Darling-Hammond (2019) identified high turnover rates in schools serving students from low-income families. In addition, teachers were more likely to leave schools that had high poverty populations (Smith & Ingersoll, 2004).

School locale was used to categorize schools as urban and rural (NCES, 2006). We found that urban schools and rural schools did not have statistically significantly different teacher retention rates from each other. The findings were similar to those by Meyer et al. (2019) who studied teacher retention, mobility, and attrition in Colorado, Missouri, Nebraska, and South Dakota and found that the proportion of stayers was similar in rural schools (83%) and nonrural schools (82%). However, other researchers (e.g., Lankford et al, 2002) found that teachers were more likely to leave urban schools. It's important to note that South Carolina does not have large urban cities that these studies may include.

In addition to the school level factors discussed above, this study also revealed that teacher salary, school enrollment, student teacher ratio, and total per pupil expenditure had significant associations with teacher retention rates (three-year averages). Teacher salary has been studied broadly. For example, Gray and Taie (2015) found that teachers with higher beginning salaries were more likely to stay than teachers who began with lower starting salaries. Bueno and Sass (2019) studied Georgia's bonus system in teacher recruitment and retention and found that bonuses reduced teacher attrition by 18 to 28%.

+ CONCLUSIONS AND RECOMMENDATIONS

Conclusions and Implications

There are several conclusions regarding teacher retention that can be drawn from this study. First, teachers' satisfaction with aspects of school climate, teachers' views of school safety and student behavior, school poverty, principals' years of experience at the school, and teacher salary played a very important role in teacher retention. Second, retention rates were significantly different among elementary, middle, and high school teachers, with small effects. Third, there were large differences in teacher retention rates among schools of different poverty levels, and the retention rates at high poverty schools were significantly lower than those in low and medium poverty schools. Fourth, teacher retention rates were significantly different among schools where principals had different years at the school, and schools with new principals who had three or fewer years of experience had significantly lower teacher retention rates than the schools with experienced principals. Finally, urban schools and rural schools did not have significantly different teacher retention rates.

The findings of this study contribute to the literature of teacher retention in general. It provides a holistic picture of teacher retention in South Carolina. It also helps identify school level factors related to teacher retention in South Carolina. The findings could be used to inform policymaking in K-12 education, funding designation for schools, and developing strategies for school improvement and teacher retention.

Limitations and Recommendations

There were several limitations to this study. One major limitation was that we examined only school level variables associated with teacher retention. Teachers' decisions to stay, move, or leave their profession are influenced by many factors, such as personal and professional characteristics, as well as student body composition (Borman & Dowling, 2008). Therefore, we recommend future studies should consider both teacher level and student level variables in addition to school level variables. Another limitation was related to school locales. We used only two major categories: urban and rural (NCES, 2006). This might not differentiate subtypes of each category. The National Center for Education Statistics (NCES, 2006) defined three subtypes of rural schools including fringe, distant, and remote. We recommend that more studies be conducted to explore teacher retention by considering the subtypes of locales (e.g., large city, remote rural, etc.). In addition, this study employed only a quantitative data analysis method. We recommend that future studies should employ qualitative approaches to explore in-depth the reasons why teachers stay or leave their profession. Acknowledging teachers' specific reasons for staying or leaving would be helpful in developing strategies that can be effective in retaining teachers.

Strategies for Teacher Retention

Based on the findings of this study and the literature reviewed, we provide the following suggestions that could contribute to ideas for teacher retention programs and educational policymaking in South Carolina. First, there should be strong collaboration between higher education teacher preparation programs and teacher retention programs. Previous literature has found that a strong and effective teacher preparation program is an important strategy for teacher retention. As Darling-Hammond (2003) indicated, hiring better prepared teachers resulted in lower attrition and higher levels of competence. DeAngelis et al. (2013) found that well-prepared first-year teachers were much more likely to plan to stay in teaching.

Second, schools should develop supportive administrative leadership through various strategies such as supporting principals, retaining principals, and shared leadership (Podolsky et al., 2019). That suggestion was further supported by the findings in this current study that principals' years at the school was significantly related to teacher retention rates. Relatedly, Santoro (2018) argued that the moral core of teaching must be considered in teacher retention, and teachers can find their moral core through professional communities. Thus, we consider it important for schools to strive to build a positive and welcoming climate with a strong professional community for teachers. This community should be built in a safe, healthy, and supportive school environment, and actively involve and engage family and community (Hughes, 2012). This was supported by our study's findings that teachers' satisfaction with aspects of school climate were positively associated with teacher retention.

In addition, we recommend that school type and grade levels should be considered in policymaking regarding funding allocation, interventions, and programs at the schools. This study revealed that high-poverty middle schools had the lowest teacher retention rate. It further suggests different types of preparation might be needed for different types of schools. For instance, high poverty middle schools need particular attention in reform efforts. Finally, schools should consider increasing teacher salaries and/or providing incentives to teachers because teachers with higher beginning salaries have been found to be associated with a greater likelihood to stay (Gray & Taie, 2015; Hughes, 2012).

It is important to consider that teachers' decisions to remain in the field or to leave the teaching profession are more complex than any single factor. As Borman and Dowling (2008) noted, teachers' decisions to stay, move, or leave their profession are influenced by many factors, such as personal and professional characteristics, as well as student body composition; further, resources were found to be key moderators of turnover. In addition, previous literature has found that teachers who were certified and mentored were less likely to leave their profession (Darling-Hammond, 2003; Gray & Taie, 2015; Smith & Ingersoll, 2004) and that well-operated induction and mentoring programs were the best method for increasing teacher retention (Brill & McCartney, 2008). Therefore, we suggest that school-, teacher-, and student-level variables be considered collectively and thus should be analyzed as an interrelated system, rather than relying on individual factors.

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