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The Influence of Principal Retention and Principal Turnover on Teacher Turnover

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Abstract

This article investigates the critical influence principals have on mitigating or exacerbating teacher turnover. Both South Carolina Department of Education (SCDE) data and National Center of Education Statistics (NCES) Common Core of Data (CCD) from Academic Years 2016 to 2020 were used to analyze the research question. A Restricted Maximum Likelihood (REML) mixed-effects multiple regression model determined that there was a statistically significant relationship between principal turnover and teacher turnover ($p \leq 0.01$; b=-1.079) as well as Principal retention and teacher turnover ($p \leq 0.001$; b=0.169). The article provides evidence that retaining principals and reducing principal turnover can significantly reduce teacher turnover.

Key Words: Principal Retention; Principal Turnover; Teacher Turnover

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Introduction

Teacher turnover and issues in retaining and recruiting teachers is a growing problem in the United States (Lewis-Spector, 2016; Garcia & Weiss, 2019). However, the revolving door of the principalship may be a factor that exacerbates issues pertaining to teacher turnover and shortages. Several studies, including those by Barnes et al. (2007) and others (e.g., Carroll, 2007; Grissom et al., 2015; Guarino et al. 2006), highlight that principal turnover remains a significant issue and suggest that it is higher than the turnover rates of teachers. The NCES study by Goldring and Taie (2018), for instance, reports a national principal turnover rate of approximately 18 percent, comparative to the data in this study supporting a teacher turnover rate of 16%.

Principals play a vital role in the educational environment and have profound effects on it. Thus, the departure of a principal can have severe consequences for a school. Studies have shown that principal turnover has several adverse effects, including but not limited to decreased student achievement (Branch et al., 2009; Burkhauser et al., 2012; Kearney et al., 2012; Mascall & Leithwood, 2010), poor school climate and culture (Hanselman et al., 2016; Noonan & Goldman, 1995), lower graduation rates (Weinstein et al., 2009), the financial costs of principal replacement (Tran et al., 2018), and teacher turnover (Bétille et al., 2012; Miller, 2013; Ronfeldt et al., 2013). The principal retention research has also linked principal stability to student achievement (see: Akiba & Reichardt, 2004; Branch et al., 2009; Fuller & Young, 2009; Miller, 2009; Vanderhaar et al., 2006).

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Principal retention is essential to ensuring that a school remains focused on achieving its goals and fulfilling its mission. It takes time for school reform initiatives to be implemented, as revealed in the research of Fuller and Young (2009). This statement supports why maintaining a principal is essential. Researchers have reported that a principal can take five years on average to significantly improve their school's performance (Ringel et al., 2004; Weinstein et al., 2009). Anything less than that would leave a school ill-prepared to address the needs of students and faculty or maintain a school vision.

To illustrate the retention trends in principals across the country, Fuller and Young's (2009) Texas study showed that school districts retained elementary school principals for an average of 4.96 years while high school principals held their positions for an average of 3.38 years. In their analysis, Seashore-Louis et al. (2010) discovered similar results when calculating a principal retention rate ranging from three to four years per school on average in the United States. Moreover, they showed a reduced rate of principal retention in communities with low incomes and high minority populations. Lastly, Taie and Goldring's (2017) study in the U.S. found that school principals stay in their position for, on average, four years.

When considering the positive benefits of principal retention as previously discussed, because of the purported high turnover rates and short tenure of principals, one may suspect that leadership turnover may have some influence on the teacher turnover and retention issues faced by schools over the past decade. Given the context of teacher shortages in many states as well as teacher retention concerns cited heavily in the literature, this study examines whether leadership retention and turnover influence teachers' turnover when accounting for school and community factors. It is important to delineate principal retention from turnover as separate events because

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they are not inverses of each other statistically. The turnover metric captures a pinpoint in time when a principal leaves and the direct consequence on a school at that particular moment. At the same time, retention is a continuous metric that can occur prior to or after a principal leaves a school. The culture and climate can impact a school because of the principal's influence, which can impact a teacher's decision to leave or stay. The following research question guided this study:

Does principal turnover and retention influence teacher turnover when controlling for school and community factors?

Literature Review

To better understand the importance of teacher retention, this review of literature briefly examines issues pertaining to the teaching market demand, the teaching shortage crisis, the impact of teacher turnover, and the relationship between principal turnover and teacher turnover.

The National Education Association claims that, since 2001, all US states have been affected by the teaching shortage crisis in some manner. However, the problem appears more nuanced when analyzed at micro levels such as from state to state, from district to district, and even within subject areas (Sutcher et al., 2019). Although there has been some debate over the existence of a national teacher shortage crisis, there have been multiple studies that have confirmed this conclusion (e.g., Garcia & Weiss, 2019; Lewis-Spector, 2016). Sutcher et al. (2016) analyzed the national teacher labor market in 2016 and saw that approximately 250,000 positions go unfilled each year. Aside from the vacancy rate in teaching, there was a 35% drop in teacher education enrollment at colleges and universities from 2009 to 2014.

In their 2019 study, Sutcher et al. reported a shortage of 112,000 teachers during the academic year (AY) 2017-2018. According to the report, even if the supply of teachers were to

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return to pre-recession levels (i.e., 260,000 teachers available per year), the demand for teachers would continue to outpace the supply by approximately 40,000 teachers. To add to the teacher shortage crisis, they reveal that perennially understaffed areas (such as special education, mathematics, and science) show little sign of responding to labor market demands, and states continue to report shortages in these areas.

Impact of Teacher Turnover

In an analysis of the impact of teacher turnover between 2002 and 2010, Ronfeldt et al. (2013) found that students performed worse in years with a high teacher turnover rate compared to years where fewer teachers turned over. In their study, students' math scores were 8.2% to 10.2% lower in years representing complete (i.e., 100 percent) turnover than in years representing no turnover. This study provides empirical evidence that teacher turnover negatively affects student achievement, specifically in math and English.

Henry and Redding (2020) examined administrative data from North Carolina for AY 2009-2014 to evaluate the consequences of teacher turnover for students in fourth through eighth grade. The analysis, similar to that of Ronfeldt et al. (2013), concluded that teacher turnover affected student achievement negatively. According to their findings, teacher turnover during the school year negatively affected both ELA and Math (-0.045 and -0.1, respectively) and that elementary school teacher turnover was more detrimental than middle school teacher turnover. Hanushek et al. (2016) speculate that the effect of teacher retention on student achievement may be due to three factors: 1) turnover reduces general human capital at the school, 2) new teachers tend to have limited teaching experience, and 3) new teachers tend to be less efficient.

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Principal Attrition and Teacher Turnover

As a school's culture, climate, and procedural organization are governed and developed by the principal (Edwards et al., 2018), the loss of a principal can rapidly disrupt these guiding philosophies. A school may struggle to maintain its current level of achievement under a new principal, question leadership commitment, or demonstrate a lack of ability to improve (Fink & Brayman, 2006). Simply put, in addition to principal quality and support principals provide, principal turnover can have an adverse effect on teacher retention and departure rates.

A significant relationship exists between principal turnover and teacher turnover, according to research. It has been found, for instance, in Béteille et al.'s (2012) study that teachers are 17% more likely to leave the year following the change of a principal. In accordance with these findings, the exploratory analyses by Jacob et al. (2015) concluded that teachers were less likely to leave their schools if their principal remained in place. Henry and Harbatkin (2019) assert that principal turnover due to voluntary departures is associated with an increase of 1.7 percentage points in teacher turnover. Finally, Miller (2013) examined the impact of teacher turnover on student achievement and its association with principal turnover and found a 1.3% ($b = -1.221$) increase in teacher turnover in the year preceding a principal's departure. She also confirmed in her research that the year after a principal left, there was an increase in teacher turnover of 1.6% ($b = -1.407$). Turnovers in personnel, such as teachers and principals, do not occur in isolation but often follow a pattern.

Principal turnover may be an underlying cause of the existing teacher shortage, as noted previously. South Carolina's Department of Education data showed that the principal turnover rate was approximately 1.6% during 2017-2018. The turnover rate is calculated by counting the number

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of principals at all public schools who had no prior experience at those schools during the given academic year and dividing it by the total number of non-specialty public schools. It is interesting to note that approximately 21 percent of the principals in this study's dataset had less than two years of experience at their particular school. According to these findings, approximately 21% of the public schools in South Carolina during the 2017-18 school year were managed by principals who were relatively new to their schools (0 to 1 year).

The School and Staffing Survey (SASS) of 2013 indicated that 21% of teachers who voluntarily left their positions cited dissatisfaction with the administration as an important or very important factor explaining their decision to leave (Learning Policy Institute, 2017). They were dissatisfied with the principal's inability to support teachers as well as the style of hierarchical leadership (top-down). The extent of teacher dissatisfaction with leadership is more significant in high poverty, high needs schools (i.e., schools that have traditionally had high levels of teacher turnover) (Grissom, 2011). Simon and Johnson (2015) recommend selecting high-quality principals in such schools to reduce teacher turnover. The authors define "principal quality" as principals who employ 1) effective instructional leadership, 2) effective school management, and 3) an inclusive decision-making process. As well as providing positive school cultures and environments, these characteristics are capable of influencing teacher turnover determinants such as satisfaction and self-efficacy (Aldridge & Fraser, 2016). From these findings, one may conclude that it is imperative that schools employ high-quality principals and make significant efforts to retain them.

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Advancement

There are few peer-reviewed, published studies evaluating the direct relationship between principal turnover and teacher turnover. Instead, the use of principal turnover has been addressed as a concomitant variable analyzing student achievement (i.e., Béteille et al., 2012; Ronfeldt et al., 2013). At this time, Miller's unpublished (2009) study is the only available research that directly addresses the influence of principal turnover on teacher turnover. This study advances the work of Miller (2009) by studying the effect of principal turnover on teacher turnover during the current decade where different societal and political pressures, as well as pandemic issues, affect schools. Similar to Miller, this study utilized data from the Common Core of Data (CCD); however, this study's focal position is the state of South Carolina as opposed to North Carolina. Additionally, Miller's study utilized data spanning to 2006, whereas this study's data spans 2020. Finally, this study differs from Miller's analysis by controlling for student, school, and geographic variables that could influence a teacher's departure.

Methodology

South Carolina was chosen as the focal State for this study because of the teacher shortages documented across the state. For instance, 2019 CERRA (Center for Educator Recruitment, Retention, and Advancement) data indicated that roughly 7,300 teachers left their teaching positions in AY 2018-2019, and most teachers (72%) no longer work at public schools in South Carolina. Nonetheless, the report did show that faculty vacancies at the beginning of AY 2018-2019 were up by 13% from those reported at the beginning of the previous year.

An analysis of the influence of school principals on teacher turnover was conducted by gathering data from a sample of public schools in South Carolina. Data came from the state

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department of education and the National Center for Education Statistics (NCES). The researcher collected data from 2016 to 2020 on teachers, principals, and students for analysis and discussion. The analysis was limited to only analyzing schools whose data were complete (i.e., had data available for all variables). Detailed information about the continuous variables used in the analysis can be found in Table 1.

A total of 561 schools across 80 school districts were included in the sample. The reported N represents the total number of schools accounted for over the five years. Analysis of the teacher and principal components of the sample revealed that the average number of teachers at the schools was 44, ranging from 8 to 255; the average teacher salary was $49,903 ranging from $37,759 to $52,980; and the return rate of teachers to their school, the dependent variable for this study, was 83.88%. The average retention of school principals (i.e., the number of consecutive years serving in a particular school), a primary predictor variable of the study, was 5.55 years, ranging from 0 to 36 years.

Also included in the analysis were school variables related to student characteristics. For instance, student poverty has a significant impact on the teacher and principal labor markets. The sample indicates that the average poverty percentage of students, measured by the percentage of pupils eligible for free and/or reduced lunch, is 33.31% and ranges from 8.37% to 99.30%. Also included in the study was school enrollment (i.e., the number of students enrolled in a school) which ranged from 52 to 4,069 students, with an average of about 674 students.

The state and national datasets reported the racial make-up of all students. Representation of races included White (e.g., Caucasian, European American) and Nonwhite (e.g., American Indian/Alaskan Native, Asian/Pacific Islander, Hispanic, Black/African American,

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Hawaiian/Other Pacific Islander, and Two or More Races) students. According to the sample, the average number of White students enrolled was approximately 352, ranging from 0 to 3,338. Comparatively, there were approximately 322 non-white students ranging from 5 to 1,476. Table 1 provides detailed descriptions of all races included in the analysis. Because poverty and diversity are closely related factors that influence teacher turnover, they were included in the analysis. Several studies have reported the high turnover rate of teachers working in schools primarily populated by low-income, low-achieving students of color (Boyd et al., 2005; Clotfelter et al., 2011; Hanushek et al., 2004; Scafidi et al., 2007).

Table 1

Descriptive Statistics: Central Tendencies

	Range	Min.	Max.	Mean	SD
Teacher Count	247	8	255	43.91	22.86
Poverty[b]	90.93	8.37	99.30	66.31	19.00
Teacher Salary[a]	25221	37759	62980	49903.65	3602.86
Returning Teachers[b]	76.50	23.50	100	893.88	8.76
Principal Years at School (retention)	36	0	36	5.55	4.97
Enrollment	4016	52	4069	674.72	408.46
White Students	3338	0	3338	352.70	297.53
American Indian/Alaskan Students	102	0	102	2.20	5.39
Asian/Pacific Islander Students	177	0	177	9.67	15.83
Hispanic Students	516	0	516	65.66	78.34
Black/African American Students	1041	1	1042	215.63	162.22
Hawaiian/other Pacific Islander Students	29	0	29	0.91	1.92
Two or more Races students	184	0	184	27.89	22.57

Note. N= 2805 (n= 561 schools observed over a 5-year period).
[a]US dollars, [b]Percentage.

Table 2 summarizes the sample with regard to the frequencies and percentages of schools within each category. The researcher considered several factors in determining a school's

classification, including its level, location, region, and Title 1 status. School levels included elementary schools, high schools, middle schools, and primary schools.

In 2016-2020, the sample consisted of approximately 54% elementary schools and approximately 20% high schools, 21% middle schools, and 5% primary schools. School-level has been utilized as a control variable in many studies; however, very few studies have identified school level as a reliable predictor of teacher turnover. Each school setting has its dynamics and difficulties in the current educational environment, but there is no evidence that a specific grade level or school level is more problematic or more susceptible to turnover. In their research, Redding and Henry (2018) found that middle and high school teachers are more likely to leave than those at the elementary and middle school level. According to the researchers, relationships as well as within-year turnover for middle school students (114%) and high school students (312%), compared to elementary students, were more robust. Throughout their discussion, the authors failed to explain why the difference occurred at different levels or provide a theoretical basis that alludes to a cause for the disparity. Their focus was instead on the impact of turnover on the students at each level.

Schools were disaggregated according to their NCES urban-centric local classifications (i.e., city, suburb, town, rural). The following approximate distributions were obtained: 13% city, 31% suburban, 14% town, and 42% rural. The majority of schools in South Carolina are located in rural areas (41.9%). Among the challenges rural schools face, Hammer et al. (2005) identified recruitment and retention as the two most important issues. Specifically, they attribute difficulties in recruitment and retention to lower salary levels, isolation for teachers (both geographical

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and social), and poor working conditions. Because of the potential impact school location has on teacher turnover, school location served as a covariate in the analysis.

The Elementary and Secondary Education Act, also known as Title I, Part A, offers schools financial assistance to ensure that all children receive a free, equitable, and high-quality education. To further address poverty, Title I status was included in the model. There were three types of schools in the sample: Non-Title I, Title I, and Targeted Title I schools (i.e., schools that provide specific services to selected students). About 48% of the sample consisted of non-Title I schools, 52% were Title I schools, and less than 1% were Targeted Title I schools.

Table 2
Descriptive Statistics: Frequency and Percentages

	Frequency	Percentage
School Level[a]		
Elementary	1510	53.8
High	570	20.3
Middle	594	21.2
Primary	131	4.7
School Location[a]		
City	375	13.4
Suburb	866	30.9
Town	389	13.9
Rural	1175	41.9
Title I Status[a]		
Non-Title I	1355	48.3
Title I	1445	51.5
Targeted Title I	5	0.2
Principal Turnover[a]		
No Turnover	2323	82.8
Turnover	482	17.2
Region[a]		
Savannah River	375	13.4
Low Country	635	22.6
Pee Dee	479	17.1
Midlands	436	15.5
Upstate	880	31.4

Note: [a] Number of schools in the category. Schools observed over a 5-year period

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South Carolina is divided into five geographical regions (Savannah River, Low Country, Pee Dee, Midlands, and Upstate). Approximately 13 percent of the sample schools are located along the Savannah River area, which is located near Georgia's eastern border in South Carolina. Approximately 23% of the sample came from South Carolina's Low Country, the state's southernmost and most coastal portion of the state. About 17% of the sample schools were located in Pee Dee, located in the state's coastal region and on its eastern border. Located in the central, northeastern portion of South Carolina, the midland region accounts for approximately 16 percent of the sample. Lastly, the Upstate region is located in the state's northwest region and accounted for approximately 31% of the sample.

One of the primary predictor variables in this study was principal turnover. Principal turnover for a school was dummy coded to capture principal departures in a given year. Principals who turned over during the given year were coded as one, and principals who remained at their school during the respective year were coded as zero. Schools that experienced a principal departure during each year of the observation period (2016-2020) were flagged for each turnover. About 83% of the schools in the sample reported no principal turnover, while 17% experienced a principal turnover during the observation period.

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Results

This study utilized a Restricted Maximum Likelihood (REML) mixed-effects multiple regression model to address the research question. The use of random effect variables in the model addresses unobserved unit-specific heterogeneity and reduces type-1 error. There were 561 different groups (i.e., schools) within the model. The random effect component was validated by meeting the 20-25 group threshold necessary to offer accurate estimates of regression coefficients, standard errors, and associated variance components (Vaisey, 2016).

Model:

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$$Y_{ij} = \beta_{0j} + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \beta_5 X_{5ij} + \beta_6 X_{6ij} + \beta_7 X_{7ij} + \beta_8 X_{8ij} + \beta_9 X_{9ij} + \beta_{10} X_{10ij} + \beta_{11} X_{11ij} + \beta_{12} X_{12ij} + \beta_{13} X_{13ij} + \beta_{14} X_{14ij} + \beta_{15} X_{15ij} + \beta_{16} X_{16ij} + \beta_{17} X_{17ij} + \beta_{18} X_{18ij} + \beta_{19} X_{19ij} + \beta_{20} X_{20ij} + \beta_{21} X_{21ij} + \beta_{22} X_{22ij} + \beta_{23} X_{23ij} + \beta_{24} X_{24ij} + \beta_{25} X_{25ij} + \beta_{26} X_{26ij} r_{ij}$$

This model is utilized for the dependent variable, percentage of returning teachers *i* in school *j*, and is predicted from a linear combination of variables X_{1ij}, X_{2ij}, X_{3ij}, X_{4ij}, X_{5ij}, $X_{6ij,}$ X_{7ij}, X_{8ij}, X_{9ij}, X_{10ij}, X_{11ij}, X_{12ij}, X_{13ij}, X_{14ij}, $X_{15ij,}$ X_{16ij}, X_{17ij}, X_{18ij}, X_{19ij}, X_{20ij}, X_{21ij}, X_{22ij}, X_{23ij}, X_{24ij}, X_{25ij}, X_{26ij}, and an individual-level prediction error term, r_{ij}. Variables $X_{1ij}\{\ldots\}X_{26ij}$ correspond to all of the covariates and the independent variables in the model.

Table 3 below provides the regression analysis results, which highlight the relationship between principal turnover/retention and teacher turnover. Significant variables fell into four categories: Academic Year, School/Individual, Community, and Main Predictors.

The regression analysis reported that all academic years were statistically significant predictors of the number of returning teachers in the sample. The referent year of 2020 was compared to 2019, 2018, 2017, and 2016. Academic years 2016, 2017, and 2018 display positive coefficients (i.e., b= 4.26, b=2.12, b=1.42, respectively), which indicates that as compared to 2020, each academic year had higher numbers of returning teachers.

Comparatively, 2019 reported a negative coefficient ($p \leq 0.01$; b=-1.288), indicating a lower percentage of returning teachers compared to the 2020 academic year. It is important to note that 2019 marked the beginning of the COVID-19 Virus Pandemic, and the decrease in the number of returning teachers may be a result of the impact of the virus.

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Table 3

Mixed Effects Regression Model of Principal Turnover/Retention and Teacher Turnover

Variables	Coefficients and Standard Errors
Fixed Effect Variables	
Intercept	46.01***
	(3.159)
AY 2016	4.26***
	(.532)
AY 2017	2.12***
	(.494)
AY 2018	1.43**
	(.484)
AY 2019	-1.288**
	(.469)
High School	-1.80***
	(.495
Middle School	-1.90***
	(.399)
Primary School	.517
	(.706)
Teacher Count	-0.086***
	(.021)
Poverty	-0.053***
	(.015)
Teacher Salary	.000***
	(0.000)
Principal Years at School	.169***
	(0.032)
Principal Turnover	-1.079**
	(.417)
Suburban	0.836+
	(0.488
Town	2.13***
	(0.592)
Rural	2.25***
	(0.524)
Title I	-0.416
	(0.437)
Targeted Title I	-4.906
	(3.392)
Enrollment	-0.132

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Variables	Coefficients and Standard Errors
	(0.115)
American Indian/Alaskan Students	0.276*
	(0.119)
Asian/Pacific Islander Students	0.118
	(0.115)
Hispanic Students	0.140
	(0.115)
Black/African American Students	0.134
	(0.115)
White Students	0.139
	(0.115)
Hawaiian/other Pacific Islander Students	0.187
	(0.141)
Two or more Races students	0.156
	(.817)
Region	0.817***
	(0.111)
Random Effects Variables	
School	56.509
	(1.518)

Note. Standard of errors appear in parentheses
Dependent Variables: Percentage of Returning Teacher
+ $p \leq 0.10$. *$p \leq 0.05$. **$p \leq 0.01$. *** $p \leq 0.001$

When looking at school type and using elementary schools as the referent source, high school and middle schools were significant predictors of returning teachers. The coefficients indicate that when compared to elementary schools, high schools ($p \leq 0.001$; b=-1.80) and middle schools ($p \leq 0.001$; b=-1.90) both display significantly lower percentages of returning teachers. Also, the state region ($p \leq 0.001$; b=0.817) was a significant positive predictor of the percentage of returning teaches.

Variables such as school location and region both significantly impacted the percentage of returning teachers in the sample. For instance, town ($p \leq 0.001$; b=2.13) and rural schools ($p \leq 0.001$; b=2.25) reported higher returning teachers when using urban schools as a referent source.

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Suburban schools also produced higher percentages of returning teachers than urban schools; however, the findings were marginally significant ($p \leq 0.10$; b= 0.836) and may be due to chance. State regions were included in the analysis solely as a control variable, and its significance indicates that certain regions throughout the state experience significantly more teacher turnover than other regions ($p \leq 0.001$; b=0.817).

Other school-related variables such as the number of teachers, teacher salary, student enrollment, poverty percentages, and student demographics were statistically significant. The number of teachers at a school was found to negatively correlate with the percentage of returning teachers ($p \leq 0.001$; b=-0.086), indicating that schools with large teacher populations had higher teacher turnover; while teacher salaries were identified as a positive predictor of the percentage of returning teacher ($p \leq 0.001$; b=-0.000). Similarly, student enrollment negatively influenced teacher turnover ($p \leq 0.001$; b=-0.132), whereby schools with larger student populations reported higher teacher turnover. Percentage of impoverished students ($p \leq 0.001$; b=-0.053) and specific student demographics displayed significant correlations with the percentage of returning teachers. Specifically, the percentage of students in poverty negatively correlated with the percentage of returning students, and the number of American Indian/Alaskan students positively correlated with the percentage of returning teachers.

The main predictors for this study were principal retention and principal turnover. The study found that principal retention positively impacted the percentage of returning teachers ($p\leq 0.001$; b=0.169), while principal turnover negatively impacted the percentage of returning teachers ($p \leq 0.01$; b=-1.079). Ultimately, the findings conclude that principals who stay at their schools for extended periods reduce the number of teachers who turnover.

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Conclusion

From the review of research and data, this study provides evidence supporting a relationship between teacher turnover and principal turnover, which could play a role in the teacher shortage crisis. The analysis results recognize that high poverty and high minority schools have high attrition for both teachers and leaders. Considering these schools are generally the most at risk for poor academic achievement (Childs & Russell, 2017), the turnover statistics are somewhat expected. Nonetheless, teacher and leader stability remain a necessity to increase the performance of these types of schools. Other school characteristics such as school level, community, and geographic region were significant predictors of teacher retention.

The analysis did indicate there was a clear relationship between teacher retention and principal retention. The findings indicated that the percentage of returning teachers increased as the same principals remained in the school, and there were higher percentages of returning teachers each year when there was no principal turnover. In their principal movement study, Tran and Buckman (2017) highlight that principals often leave for higher salaries; however, school districts in high poverty areas often cannot pay principals the same as more affluent districts. Therefore, we see the revolving door of the principalship begin the turnover sequence that trickles down to teachers. Unfortunately, money could be the catalyst that precipitates the teacher turnover cycle, which may have manifested into the teacher shortage crisis across U.S. states.

Attracting and retaining high-quality teachers and reducing the teaching shortage is not a quick fix. The teacher shortage phenomenon has many layers, and the blame can be found within a host of areas (i.e., federal and state policy, financial and job markets, local communities, districts,

and schools). This study informs school and district leaders of an area they can control. This area is *school leadership*. The South Carolina data show that if principals stay, teachers are likely to stay as well. If the schools can retain their current workforce, then it is up to human resources offices to remain strategic in recruiting high-quality personnel to fill shortage gaps.

Just as all studies, the findings of this study should be interpreted through its limitations. The present study addresses the influence of principal retention and turnover on the percentage of returning teachers from 2016-2020 in South Carolina. Therefore, the study's findings are only generalizable to this specific population; nonetheless, the endogeneity based on state educational policy, wages, and union status is controlled by only using one state. Future researchers are encouraged to examine this topic by utilizing national databases with reliable control variables capable of addressing state-specific endogeneity.

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