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EXAMINING THE EFFECTS OF SUPPORT FOR TEACHERS' BASIC PSYCHOLOGICAL NEEDS ON TEACHERS' INTENT TO LEAVE

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Soli Deo Gloria.

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Abstract

Many schools are facing serious teaching shortages and high teacher turnover, a problem amplified in schools with difficult challenges, and especially in certain subject areas. Teacher turnover coupled with a lack of individuals entering and remaining in the profession has created a serious educational predicament. Various solutions have been attempted, but these efforts have often overlooked why quality teachers are leaving. School working conditions are a source of potential solutions in terms of improving teacher well-being and satisfaction that principals are more equipped to manipulate for the better. The purpose of this study is to gather preliminary empirical evidence of the relationship between leader support for teacher psychological needs and teacher intention to leave the school and/or profession. Self-Determination Theory, provided a framework for theorizing a multilevel path model of support for teacher autonomy, competence, and relatedness and its relationship to teacher intent to leave their school and/or profession. Results suggest that autonomy support was positively associated and antecedent to support for competence and relatedness. Autonomy support also had stronger direct negative relationships with both teachers' intent to leave the school and profession at the teacher level. Policy makers and school leaders should view these findings as a critical lever for alleviating the pervasive issue of teacher turnover.

Chapter 1: Introduction

The classroom teacher has a great effect on student learning. In fact, the evidence is so strong that many claim teachers are the foremost school-related factor for student achievement (Borman & Dowling, 2008; Darling-Hammond, 1997; Darling-Hammond, 2000; Forsyth et al., 2011; Goddard et al., 2001; Ingersoll, 2001; Ingersoll & May, 2013; Ladd & Sorensen, 2015; Palardy & Rumberger, 2008; Ronfeldt, Loeb, & Wyckoff, 2013; Simon & Johnson, 2015; Sutcher et al, 2016). For this reason the recruitment, development, and retention of effective teachers is critical to student learning (Darling-Hammond, 2002; Darling-Hammond; 2005; Goldhaber, 2003; Palardy and Rumberger, 2008; Rivkin, Hanushek, and Kain, 2005; Wright, Horn, and Sanders, 1997). Efforts to maintain a strong teacher workforce are especially important for districts in urban and impoverished areas where teacher turnover is high. Each new teacher requires an expenditure of time and resources for recruitment and training. When teachers leave the district, their expertise is lost which can impede school initiatives, disrupt the collegial environment, and hinder student learning (Podolsky et al., 2016; Ronfeldt, Loeb, & Wyckoff, 2013).

Many states are facing serious teaching shortages and high teacher turnover, a problem amplified in schools with difficult challenges, and especially in certain subject areas (Learning Policy Institute, 2017; Perda & Ingersoll, 2013). Teacher turnover coupled with a lack of individuals entering and remaining in the profession has created a serious educational predicament. Most in education recognize the ramifications of an unstable teacher workforce on student learning and, ultimately, the health and vitality of states and the nation as a whole. Continued research is needed to determine the conditions and reasons that lead to high teacher turnover (Borman & Dowling, 2008; Hancock & Scherff, 2010; Harvey, Harris, & Martinko,

2008; Odland & Ruxicks, 2009). In 1983, the National Commission on Excellence in Education predicted the beginning of major teacher shortages at the turn of the century (National Commission on Excellence in Education, 1983). It also warned that these teacher shortages would force schools into hiring under-qualified teachers; a prediction soon realized. In response, there were many initiatives aimed at teacher recruitment including student loan forgiveness, tuition reimbursement, and housing benefits (Ingersoll & Smith, 2003; Sutcher et al., 2016). For the most part these efforts have overlooked the retention of existing teachers, an oversight that has nevertheless brought some good teachers to the profession, but has not stopped many good teachers from leaving (Henke, Chen, & Geis, 2000; Ingersoll, 2001). Allowing alternative and emergency teaching certification to stem the tide of teacher attrition is one example of policy adjustments to alleviate the teacher workforce issue; however, this temporary solution undermines the retention of quality teachers over the long term (Ingersoll & Smith, 2003). According to Simmons (2006), these temporary reforms lack longevity in alleviating issues within the teacher workforce and student achievement.

Across the United States, approximately 500,000 teachers leave every year (Boyd et al., 2011). Researchers have sought to determine the causes and solutions to teacher turnover (Ingersoll, 2001; Ingersoll & May, 2013). The issue of teacher pay is constantly among the reasons for teacher departure, however, the school environment has also been found to be an important predictor of teacher attrition (Borman and Dowling, 2008; Ladd, 2011). While external factors such as salary and incentives can affect turnover, these policy tools are often out of the control of school and district leaders. However, school working conditions, which have been demonstrated to be an important predictor of teacher well-being and attrition, are more readily

manipulated by school leaders and therefore a source of potentially rich insights and/or solutions in terms of improving teacher well-being as well as the health and vitality (Parker et al., 2012).

In contrast to relying on temporary solutions such as using unqualified teachers, the argument which this study rests is that support for the long-term psychological and professional health of teachers will help to retain them. Teaching is a difficult profession. Teachers are expected to be autonomous in their classroom and competent in subject area content. Additionally they are expected to follow administrator directives, and work well with students, parents, teachers, and administrators. A school working environment that supports teachers in meeting these challenges and expectations can have far-reaching positive effects on teacher efficacy and satisfaction. Conversely, non-supportive school environments can lead to teacher dissatisfaction (Bakker et al., 2008).

Certainly, the role of supportive leadership within the educational profession can significantly shape teachers' perceptions of the quality of school working conditions (Gagné & Deci, 2005; Simon & Johnson, 2015). According to Ladd (2011), there is a significant relationship between the role of administrative support, teacher intent-to-leave, and actual attrition. We know that school leadership has a significant relationship with teacher trust, job satisfaction, and job performance (Fuller et al., 1996; Podolsky et al., 2016). The particular importance of autonomy support as an antecedent condition to other supportive conditions for teachers is also well-documented; empirical evidence suggests that leadership promoting and enabling the exercise of autonomy in the workplace can lead to enhanced intrinsic motivation and self-actualization (Roth et al., 2007). Conversely, there is evidence suggests that transactional leadership, characterized by the primary use of external motivators and controlling practices, can lead to higher turnover (Gagné & Deci, 2005).

It is important also to recognize that this issue extends beyond simply keeping teachers in the profession. Arguably more important than retention itself is how teachers feel about their work and whether they want to continue doing it. While teacher attrition is a real consequence of, for example, poor working conditions, intent to leave is a more proximal indicator of teacher withdrawal and dissatisfaction, which can have adverse effects on the school irrespective of the teacher leaving. Teachers fully engaged in their work in schools may contribute to the learning environment differently than those considering leaving the school or profession. Decreased motivation, work effort, and commitment are all associated with teacher intent to leave (Conley & You, 2009). This indicator of teacher withdrawal can adversely affect student achievement and lead to increased costs as a result of teacher absences (Leithwood et al., 1999), as well as result in decreased work effort and/or strained interactions with coworkers. Teacher intent to leave precedes actual turnover, and so focusing on this psychological state could lead to a better understanding of teacher withdrawal and, as a result, solutions to preempt teacher turnover (Conley & You, 2018).

Purpose of the Study

The purpose of this study is to gather preliminary empirical evidence of the relationships between various leader supports for teacher psychological needs—outlined by Basic Psychological Needs Theory, a sub-theory of Self-Determination Theory—and how these supports are related to teacher intent to leave the school and/or profession. In doing so, I theorize a model of support for teacher psychological needs and its relationship to teacher intent to leave and empirically test this model via a nonexperimental multilevel path analysis research design. The following research questions framed this research:

1. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the school?
2. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the profession?

Chapter 2: Review of Literature

The purpose of this review of literature is to provide a foundation for examining the effects of principal support for teacher basic psychological needs on teacher turnover intent. The review begins by examining some of the historical aspects of the teacher workforce within public education that have shaped the issue of turnover. Additionally, the issue of teacher turnover and teacher intent to leave are placed within the larger body of educational research as a piece that is critical to the improvement of public education. Conditions that lead to teacher attrition are examined as well as the reasons why teachers enter and stay within the education profession. The issue of teacher turnover is then examined through the lens of Self-Determination Theory (SDT) and its subsequent mini-theory, Basic Psychological Needs Theory (BPNT).

Historical Background of the Teacher Workforce

The issue of teacher turnover has been long-standing within the historical context of American public education (Hargreaves, 2010; Lortie, 1975; Murnane et al., 1991; Rosenholtz, 1989). Lortie (1975), a seminal education researcher, outlined many of the structures that have shaped the education establishment during its formalized expansion. He claims that teaching has long held the visage of being "special but shadowed" in that teachers are seen to be worthy of respect, but the occupation lacks much of the depth and formalization that other professions might have. Further, Lortie (1975) argues that schools tend to be cellular in their organization in that classes are focused on a single teacher with his or her students. This isolation allows teachers to be easily replaceable because changing teachers would not necessarily affect the individuals around them (Lortie, 1975; Rosenholtz; 1989). Because teachers often work in isolation, the amount of collaboration that exists between teachers decreases the relatedness they feel to those around them (Flinders, 1988; Rosenholtz, 1985). Eased entry to the profession has

been a response to teaching shortages that essentially lessens the requirements for credentialing to become an educator. Teaching has tended to be a structurally continuous craft in that the essence of the profession has not changed in the last century (Lortie, 1975).

While education was being formalized, teaching often was a transient position viewed as women's work before they had their own family and was, by extension, paid a transient wage (Apple, 1985; Rosenholtz, 1989). As teaching became a more stable career, the salaries remained low although teaching did come with the benefit of job security at a time when other professions were vulnerable to change. Tangible benefits of teaching included teacher tenure and due process which offer a protection that almost no other profession has. This idea was based on Prussian and German education systems and in the United States date back to 1909 (Goldstein, 2014). For some teachers, the pay issue is offset, if only slightly, by the job security that is found within public education (Goldstein, 2014). This, along with the establishment of a teacher retirement system, has provided a historically stable structure for those who wish to be career teachers (Goldstein, 2014). However, as discussed later, these reasons are proving to be insufficient when it comes to keeping teachers happy and satisfied in the career.

Teaching is also limited because it is an unstaged career, meaning that a teacher of thirty years has the same roles, expectations, and responsibilities as a first-year teacher (Lortie, 1975; Rosenholtz, 1989). While these are aspects that may detract from a lengthy career as a teacher, Lortie (1975) outlines five historical facets that attract individuals to teaching. The first is the "interpersonal theme" which encompasses teachers desire to work closely with other people. The second is "service" which entails a desire to serve the community and students through teaching. The third is the "continuation theme" which suggests that some desire to teach because they have identified both as a student and with school. The fourth is the "material benefits" associated with

teaching including the salary, job security, and benefits. The fifth is the benefit of "time compatibility" in which the individuals schedule lines up with the school schedule with hours and breaks the profession entails. Lortie (1975) argues that a significant driver of teacher satisfaction in the job and profession is the desire to reap the "psychic rewards" of teaching. For example, the desire is to see students happy, experiencing success, and thriving, to have meaningful relationships with colleagues, and to have the knowledge and skills to meet the challenges that come with teaching (Ng, 2006). For many teachers, these perceptions, due to the uncertain nature of the job, are more readily attainable than other more distal outcomes of education like student achievement that may take years to develop (Lortie, 1975).

Overall, teachers' salaries are 20 percent lower than those of other professionals with equivalent educational attainment. While teachers are found to be more altruistically motivated than people in other professions, they are also more likely to quit due to low wages. Salary is even more salient in math and science subject areas because those teachers can easily obtain jobs in other professions (Brewer, 1996; Mont & Rees, 1996; Murnane & Olsen, 1990; Theobald & Gritz, 1996). Those teachers are some of the most susceptible to teacher turnover.

In recent years, both federal and state policies have exerted extensive pressure and burdens on the teaching profession. No Child Left Behind (NCLB) brought about what many educators thought were unyieldingly rigorous expectations without the resources to achieve them, creating additional stressors on teachers (Ramanathan, 2008). According to Rebell and Wolff (2009), educators have never before felt the direct influence of the federal government's involvement in mandating specific levels of student achievement. Most noteworthy of these pressures was the use of high-stakes standardized testing as a sole measure of achievement. The

increase pressure of these specific accountability policies placed a greater constraint on teacher capacity and autonomy than has been seen previously (Kukla-Acevedo, 2009).

Additionally, Goldstein (2014) argues that seeking to evaluate teachers or make teacher pay contingent on test scores is detrimental to the teacher workforce. Under test-based accountability practices, teacher attrition has increased especially in those subject areas targeted by policy makers for standardized testing (Hoffman et al., 2001; Santoro, 2011). Many teachers of grade levels or subjects identified to be tested have opted to change subjects, grade levels, or to leave the profession entirely due to the narrowing of curriculum or the need to teach to the test. Accountability measures and funding constraints have also led to a rise in class size, a well-established source of teacher dissatisfaction, especially for new teachers (Johnson, 2006). Most importantly, scholars have demonstrated how high-stakes accountability policies work to inhibit teachers' ability to pursue the psychic rewards and autonomy that teachers have historically enjoyed (Ford et al., 2017; Hoffman et al., 2001; Ng, 2006; Santoro, 2011).

The Teacher Turnover Problem

In Oklahoma, teachers are leaving the state or the profession altogether at an alarming rate. According to the Oklahoma State School Boards Association, "Among new teachers, about 35% exit their school after the first year on the job. About 29% of new teachers exit their district and about 17% exit the Oklahoma public school system altogether after their first year on the job" (Hendricks, 2015, p. 3). According to one teacher who left the state in 2016, the issue is not simply salary; "it's retirement, it's class size, it's supplies. It's about kindness and respect. When you walk into that building in Texas, it's clean, it's not old, it's sharp-looking. It felt safe." (Eger, 2016, p. 4). This teacher left for a neighboring state and received a 52% increase in pay (Eger, 2016). According to Palmer (2016), "the ratio of uncertified teachers teaching in high

minority schools vs. low minority schools was much higher than average in Oklahoma: nearly 13 to 1, compared to a U.S. average of about 4 to 1" (p. 8).

The issue is pervasive in Oklahoma, but certainly is not localized there. In 2002, national averages for general employee turnover was at 11%, whereas teacher turnover was at 14.5% and 5% higher at high poverty schools (Ingersoll, 2002). In 2013, national teacher turnover jumped to 16% overall and was at 22% for high poverty schools (DiCarlo, 2015). While theory would suggest some level of teacher turnover is healthy, the turnover level found within schools disrupts the unity and organization of the school environment (Borman & Dowling, 2008; Ingersoll, 2001; Lortie, 1975). Schools that have high levels of teacher turnover show significant diminishment in student achievement (Borman & Dowling, 2008; Ronfeldt, Loeb, & Wyckoff, 2013). This evidence suggests that teacher turnover may be having drastic consequences on school effectiveness. In STEM and special education, teacher shortages and teacher turnover are pervasive issues, compounded by disadvantaged populations (Cowan et al., 2016).

That teacher turnover is a problem is supported by ample evidence (Borman & Dowling, 2008; Cowen et al., 2016; Ingersoll, 2001; Ronfeldt, Loeb, & Wyckoff, 2013). Most would agree that one of the major antecedents of student learning is having well-prepared, confident, and efficacious teachers (Wilson, Floden, & Ferrini-Mundy, 2001). However, in many schools teacher turnover is pervasive and persistent, requiring time and resources to be expended on searching for, hiring, and training new teachers, and this significantly thwarts any progress schools make towards improving their teacher corps. When this issue persists, new teachers are likely to leave much sooner. For example, research shows that first-year teachers are much more likely to enter the profession in high-poverty and high-minority group schools, but they are, also

more likely to leave those schools, thereby producing a cycle of teacher turnover (Shields et al., 2001; Simon & Johnson, 2015; Sutcher et al., 2016).

School working conditions are also an important predictor of teacher turnover (Borman & Dowling, 2008). Teacher burnout, low student achievement, teacher job dissatisfaction, as well as high staff turnover itself, create an environment not conducive to effective teachers teaching and students learning (Deborah, 2007). Research shows that there is a difference in how beginning teachers and career teachers respond to certain working conditions within the school (Kukla-Acevedo, 2009). New teachers are more susceptible to the negative influence of workplace conditions when compared to career teachers, having greater than five years of experience. According to Simon and Johnson (2016), teachers who leave disadvantaged schools often say they are not fleeing the students but rather the working conditions.

Student achievement, teacher relatedness, and school effectiveness are harmed by faculty instability (Ronfeldt, Loeb, & Wyckoff, 2013; Watlington et al., 2010). The reasons why teacher turnover affects student achievement as drastically as it does are complicated; however, the two variables are highly correlated (Borman & Dowling, 2008; Ronfeldt, Loeb et al., 2013). Teacher turnover is particularly concerning in schools with high proportions of disadvantaged populations already experiencing challenges. For example, student achievement can be affected by the loss of faculty trust within a building and can be depleted with the leaving and consequent hiring of a new teacher (Ronfeldt et al., 2013). These issues are often prevalent in struggling schools. Teacher turnover has especially negative effects in schools with a large presence of low-performing Black students who are already struggling academically (Ronfeldt et al., 2013).

It is important to acknowledge that the issue of teacher turnover is one that is often oversimplified (Lindqvist, Nordanger, & Carlsson, 2014). In the literature, the definitions and

measurement of teacher turnover has been inconsistent, and this leads to confusion about how to understand and learn from the teacher turnover problem. Teacher turnover entails the cumulative effect of teachers leaving the school, district, or profession. Schools that experience high turnover on a regular basis experience the difficulty of replacing and training teachers with disruptions to the school culture.

According to Holme and her colleagues (2017), scholars have mainly measured this issue through annual turnover where only a single year's worth of turnover is accounted for. Less common are longitudinal studies, which examine the issue over several years to examine whether the issue was unique to that year or a chronic issue that continually plagues the district. As I am focusing instead on turnover intention as opposed to actual teacher turnover, in some sense this is another way to avoid the complexity of measuring turnover and instead focusing on teacher withdrawal behaviors (Cohen et al., 2016).

Furthermore, it is also important to acknowledge that the issue of teacher shortages are not necessarily due to the lack of the *quantity* of teachers (Ingersoll, 2001). There are many more qualified teachers than are hired; however, the difficulty exists in attracting those academically qualified as well as keeping them once a school has invested in them through professional development and human capital (Cowan et al., 2016; Darling-Hammond, 2003). While teacher attrition becomes an issue of hemorrhaging good and qualified staff, less that twenty percent of those leaving do so to retire (Henke, Chen, & Geis, 2000; Ingersoll, 2001). Schools seem to profit little from training newly hired teachers since any expertise they have acquired is lost when they move on (Watlington et al., 2010).

Factors Associated with Teacher Turnover

Due to the far-reaching effects of teacher turnover, it is important to discuss what we know about the antecedent conditions that lead to teacher attrition and/or teacher retention. In her research on teacher retention, Darling-Hammond (2003) focuses on some of these. Evidence suggests that teacher pay has a turnover elasticity effect upon teacher retention (Darling-Hammond, 2003; Hendricks, 2013; Sutcher et al., 2016). Such an effect entails more teachers without permanent credentials, less experienced teachers, and teachers with lower education levels. Increase in retention would likely then result in potential increases in student achievement to correspond with the improved retention rate of teachers from year to year (Podolsky et al., 2016). But we also know that salary only matters to a point, which typically corresponds with the pay levels in comparable non-education sector jobs (Borman & Dowling, 2008). Thus, Oklahoma's 2018 adoption of an increased salary schedule will undoubtedly have a positive effect on teacher job satisfaction, retention, and student achievement, this legislative action will not likely solve the issue entirely. Oklahoma's problem is compounded by the fact that Texas and other neighboring states are responding to teacher walkouts across the nation by raising teacher salaries, thus re-establishing the pay gap that existed before. It is therefore necessary for Oklahoma's public education leaders to focus on alternate means exploit other means to reduce teacher turnover, and not wait for additional funding to solve the problem. The reality is that most states have cut school funding, and there are some, including Oklahoma, that continue to cut funding (Leachman et al., 2016).

According to Ingersoll and Smith (2003), there are four primary reasons for beginning teachers to leave the profession: school staffing action, personal reasons, pursuit of another job, or dissatisfaction. Podolsky and her colleagues (2016) add that inadequate preparation and lack

of support for new teachers are additional reasons teachers are leaving. For instance, teacher preparation programs and professional development opportunities are vital to endowing teachers with the confidence they need handle the challenges in their own classrooms. States struggling to find teachers are moving to emergency and alternative certifications. Many of these teachers, lacking the preparation, feel overwhelmed and underprepared (Podolsky et al., 2016). As a possible consequence, 49% of uncertified teachers leave within the first five years compared to 14% of certified teachers (Darling-Hammond, 2003). Thus, those who are not adequately prepared to teach are less likely to stay with the profession, and any expertise they have gained within the classroom is lost when they leave.

Reducing teacher dissatisfaction seems to have the greatest potential for schools to improve their organizational climates and retain their teachers (Podolsky et al., 2016). A reason listed for teachers being dissatisfied is, expectedly, insufficient salary; however, additional contributing issues are student discipline, lack of administrative support, poor student motivation, lack of faculty influence, class size, and few opportunities to advance (Ingersoll & Smith, 2003). Ingersoll and Smith (2003) conclude that simply increasing the flow of more teachers into the workforce is not a sufficient solution to resolve chronic turnover by teacher attrition or teacher migration.

Evidence suggests that teacher pay is a contributing factor; however, in addition, school environmental conditions such as facilities and availability of supplies have also lowered teacher morale (Darling-Hammond, 2003). Furthermore, the issue of high teacher turnover is exacerbated in schools with high poverty and higher percentages of students of color. Within these high-poverty schools, teachers not only face the usual challenges, but they have fewer

resources, poorer working conditions, and the stresses of students' families with greater needs (Darling-Hammond, 2003).

Moving Beyond Teacher Pay to Improving Working Conditions

Ingersoll (2001) argues that low achievement within the educational system today stems from issues other than curriculum. Rather, it is due to inadequate staffing and retention of qualified teachers. While there are some poor rural or highly urban districts that have trouble finding teachers to fill classrooms, the real problem is finding qualified teachers. Ingersoll (2001) finds that teacher turnover in high poverty schools is 50% higher than in schools with lower poverty. He uses the term "revolving door," which he defines to be "where large numbers of qualified teachers depart their jobs for reasons other than retirement" (p. 499). This "revolving door" involves the departure of teachers who are indeed qualified to pursue other employment because they are dissatisfied with the education field (Boyd et al., 2011). Therefore, Ingersoll (2001) concludes that increased efforts within teacher recruitment programs will only be a viable solution if schools organizational structures can address antecedent variables that lead to teacher satisfaction and teacher retention.

In additional studies, Ingersoll and Smith (2003) and Podolsky et al. (2016) describe some perceived antecedent conditions that lead to teacher turnover for beginning teachers. Ingersoll and Smith initially break down teacher turnover into two more descriptive terms: teacher attrition and teacher migration. Teacher attrition refers to those who choose to leave the teaching profession altogether, and teacher migration refers to those who choose to leave one school only to go to another. Due to retention problems within schools, school systems are responding by lowering the standards expected of new teacher recruits. Legislatures have attempted multiple responses to teacher shortage issues which include career change programs,

alternative certifications, recruitment of foreign teachers, signing bonuses, and student loan forgiveness programs (Ingersoll & Smith, 2003). However, each of these only seek to infuse candidates into teaching, and they do little to contribute to the retention of teachers after the benefits of these programs wane.

The present reality requires solutions separate from salary increase due to problematic funding that are not likely to go away in the near future. While there are many antecedents to turnover, working conditions represent a significant opportunity for improvement with great effectiveness and little cost (Ford et al., 2019). Teacher retention is increased when teachers commit themselves to the vision of the school, communicate with colleagues, coordinate their activities, and behave more friendly towards one another (Mills, 1967). School leadership can greatly foster environments like that described by Mills (1967) which will in turn increase the percentage of teachers returning from year to year (Forsyth, Ford, Lepine, & Olsen, 2016). Social capital built by the strength and functionality of relationships within the building, while harder to define and measure, is suggested to be of even greater significance when teachers return from year to year (Forsyth et al., 2016). This social capital is one that Allen and Shanock (2013) define as having facets of perceived organizational support and embeddedness within the organization. Results of their study suggest that these two facets are antecedent conditions that support low turnover within the organization, especially within an individual's early years (Allen & Shanock, 2013). Perceived organizational support, it would seem, is paramount to influencing commitment and reducing undesirable turnover.

There is substantial research that suggests the role of school administration on teacher turnover (Ford et al., 2019; Sutcher et al., 2016). As Darling-Hammond (2003) points out, "Keeping good teachers should be one of the most important agenda items for any school leader"

(p. 7). According to Boyd and his colleagues (2011), one of the greatest influencers for teachers' retention and by extension turnover decisions is their perception of school administrators. The role of the school administrator has a profound effect on teachers' decisions to stay or leave and is confirmed by those who have chosen to leave the school or profession (Boyd et al., 2011; Sutcher et al., 2016). The appropriate style of leadership, perceived management support, and conducive environment are factors within any organization associated with staying (George, 2015; Hussain & Asif, 2012).

The role of supportive leadership within the educational profession can have far-reaching effects on teachers' perception of their working conditions (Gagné & Deci, 2005; Mancuso, 2010; Simon & Johnson, 2015). In one particular study from North Carolina, Ladd (2011) examines the effect of teacher working conditions such as the quality of school leadership, opportunities for development, and quality of facilities. The findings show a significant relationship between school leadership as a working condition and the resulting teacher-intended movement and teacher-actual movement from the school (Ladd, 2011). While there have been extensive studies that have examined similar working conditions from a qualitative perspective, this study offers the analytic benefits of an empirical model that accounts for other school climate characteristics via extensive statistical controls.

Teacher Turnover and Intent to Leave

As mentioned before, prior research has measured teacher turnover in several ways. The most common measure is annual turnover which is measured by the proportion of staff in a single year leaving the school. Another less common method used to identify schools that perpetually struggle with high turnover is measuring turnover longitudinally over multiple years which can be done at absolute or relative rates. Additionally, for many studies, there is no

distinction between teachers leaving the school for employment at another school and teachers leaving the profession entirely (Holme et al., 2017). The argument behind not distinguishing between the two is that there is no difference in the effect it leaves upon the school (Ingersoll & Perda, 2010).

However, studying turnover only by examining it after teachers have already left the school is a problem for trying to prevent turnover. Arguably more important are teachers' mindsets and attitudes about wanting to stay or leave. Intent to leave is a more proximal indicator of teacher turnover and can have adverse effects even without the teacher leaving. For the purpose of this study, teacher intent to leave, a variable significantly correlated with actual turnover (Harvey, Harris, & Martinko, 2008), is defined as the extent to which a teacher has thought about or plans to leave his/her current position and/or the teaching profession, as measured by the magnitude and frequency of such thoughts. Each of these antecedent conditions discussed in the previous section can lead to teachers' dissatisfaction with their profession and the desire to pursue other means of employment. Whether acted upon or not, this mindset can have consequences to teacher effectiveness (Skaalvik & Skaalvik, 2011).

Engaged teachers contribute to the learning environment differently than those considering leaving. Decreased motivation, work effort, and commitment are all byproducts of teachers' intentions to leave regardless of whether they follow through on the intention (Conley & You, 2009). Additional issues are decreased student achievement and increased expenses on the district through increased teacher absences (Leithwood et al., 1999). Teacher intent to leave precedes actual turnover and focusing on this psychological state could lead to a better understanding of and perhaps finding solutions to teacher turnover before teachers leave (Conley

& You, 2018). This makes it an important indicator of teacher withdrawal that school leaders in particular should pay attention to.

Leader Support and Intent to Leave

Critical to the discussion of supporting teachers are school leaders. Principals and other leaders have an ability to shape school structures and conditions. Thus, they play a critical role in the support for teachers' psychological needs. A goal of this study is to enhance understanding of factors effecting teacher turnover intent—an understanding that might inform principals in their efforts to reduce teacher turnover.

The literature suggests that the relationship between leader support and teacher intent to leave, is mediated. Organizational commitment to the school has been found to have a negative association with teachers' intentions of leaving (Conley & You, 2009; Conley & You, 2018). Teacher burnout has also been found to be negatively associated with organizational commitment (Grayson & Alvarez, 2008; Hakanen et al., 2006; Skaalvik & Skaalvik, 2010). Burnout has also been found to negatively affect teachers' intentions to leave (Maslach & Jackson, 1981; Maslach et al., 2001; Richardson et al., 2008). Though mediating constructs like burnout are not a part of this study, they demonstrate previous mediators that can affect how school leaders can shape teachers' intentions of leaving. Noteworthy is that many of these teacher-level studies do not examine school-level variations. Also, most of these studies do not distinguish between teacher intent to leave the school and intent to leave the profession (for one exception, see Ford et al., 2019). According to Skaalvik and Skaalvik (2011), teacher job satisfaction also affects teacher intentions to leave a particular school. Previous studies have shown a significant relationship between job satisfaction, turnover intention, and teacher turnover (Harvey, Harris, & Martinko, 2008). According to Wells and Peachey (2011),

employees who are job satisfied have their needs met by school leaders resulting in decreased teacher turnover intention. Marston and Brunetti (2009) conducted a survey and concluded that teacher job satisfaction greatly affects teacher turnover intent. Additionally, based on extended interviews with teachers, they concluded that teacher turnover intention and resulting actual teacher turnover were correlated (Marston & Brunetti, 2009).

According to Ford and colleagues (2019), leader support can be viewed along three distinct dimensions: the organizational, interpersonal, and intrapersonal. Through their actions or inactions, school leaders possess the ability to foster or stymie conditions that directly affect teacher needs and, consequently, teacher turnover intention.

Organizational. School leaders are tasked with the role of cultivating an organizational climate that is supportive of teachers' psychological needs. School leaders create a positive climate through professional development opportunities that further teachers' continued learning, enabling school structures which involve shared decision-making, and conditions which foster trust within the staff (Ford et al., 2019; Forsyth et al., 2011; Sinden et al., 2004). According to Sinden (2004), these school structures can drastically affect the operation of schools. Bureaucratic top-down approaches can alienate and demotivate teachers; in contrast enabling structures that guide behavior and empower teachers to be more effective (Ford et al., 2019). The contrast of how each of these methods could promote the support of teachers' psychological need satisfaction places the role of the school leader central to this discussion.

Organizational climate is fostered through properties perceived by teachers within the school which influences motivation and behavior. It is primarily created through the formalization of rules and procedures and the hierarchy of authority (Adler & Borys, 1996; Sinden, 2004). Rules and procedures that are coercive in nature lead to alienating subordinates

which could lead to hindering teachers' psychological needs (Ford et al., 2019). Such coercive practices can lead to high rates of absenteeism and stress (Rousseau, 1978). However, enabling rules and procedures help employees by providing flexible guidelines that promote problem-solving and empower teachers in their craft. Through enabling organizational structures, school leaders can foster collaboration over conformity and cooperation over obedience. Such enabling structures can foster trust within the school environment and defray teacher burnout (Forsyth et al., 2011; Van Maele & Van Houtte, 2015).

While an enabling organizational environment can certainly foster a more positive work atmosphere, the question arises: does this support help to defray teacher intentions to leave? Teacher burnout can be directly affected by the social conditions present within schools (Hakanen et al., 2006). Conversely, previous research by Malinen and Savolainen (2016) demonstrates that a supportive climate increases collective teacher efficacy; however, the relationship to burnout was not supported. Certainly, more research is necessary around the topic of supportive organizational structure as it relates to teacher burnout and ultimately teacher intent to leave.

Interpersonal. School leaders interact with teachers through intentional communications as well as informal discussion. These interpersonal interactions can have far-reaching influences on teacher emotions (Skaalvik & Skaalvik, 2010). School leaders should communicate with staff formally and informally in ways that are strategic, targeted at teacher growth, and seek to improve teacher craft (Ford et al., 2019). Interaction between school leaders and teachers can foster or inhibit autonomy, competence, and relatedness-supportive behaviors, which the school leader should leverage through ensuring intentional interactions that are focused. Teachers expend a great deal of effort and self-sacrifice and principals' recognition of this can nurture

teacher competence (Lambersky, 2016). Through interpersonal interactions, principals can demonstrate recognition, while also being collaborative, sharing organizational decision-making. These interactions can foster a climate of collective trust and can provide competence support by the application of expertise and relational support by demonstrating genuineness and care (Bryk & Schneider, 2002; Forsyth et al., 2011; Lambersky, 2016; Ryan & Deci, 2000). Positive and intentional school leader interactions with teachers can lead to higher commitment and lower teacher turnover intention even in low-performing schools by stimulating relational support for teachers (Richardson, 2008).

Intrapersonal. While interpersonal interactions occur between two individuals, intrapersonal refers to one's own perception of interactions and occurrences. According to Ford et al. (2019), this intrapersonal dimension for school leader support of teacher psychological needs relates to "…how individual teachers interpret and/or experience leader efforts as needs-supportive within the workplace, and the consequences these have for their burnout, commitment, and intent to leave" (p. 9). Teaching can be lonely work unless there are significant efforts and organizational norms enacted for collaboration, shared decision-making, and professional development. Teaching is a demanding profession with considerable stressors from student and parent interactions, organizational demands, and fostering learning within the classroom (Hakanen et al., 2006).

Intrapersonal experiences of school leader interactions which are interpreted negatively or add to the stress of the teacher can produce greater teacher burnout and decreased efficacy, motivation, and organizational commitment (Conley & You, 2009; Hakanen et al., 2006). Such negative effects can lead to teacher withdrawal, stymied relational support, which can alter

school climate through deteriorated interactions with coworkers and students, and ultimately increased teacher burnout (Grayson & Alvarez, 2008).

Intrapersonal perceptions of autonomy-supportive and relational-supportive school leader interactions, which demonstrate trust and shared decision-making, have been found to lead to an increase in overall organizational commitment and decrease in teacher burnout (Hakanen et al., 2006; Skaalvik & Skaalvik, 2011). This organizational commitment is a sense of belonging created in part through positive associations regarding school leaders and can increase teacher efficacy and job satisfaction while leading to a decrease in teacher burnout (Skaalvik & Skaalvik, 2010; 2011).

Summary of the Review of Literature

Teaching differs from other professions in that it is often undervalued and unappreciated. Teachers mainly enter the profession for altruistic reasons—desiring to make a difference by serving their community's youth. One of the major antecedents of student learning is having well-prepared, confident, and efficacious teachers. However, teaching is viewed as a "special but shadowed" profession. It requires the same educational level as many other professions, but the pay and prestige of the profession are drastically lower. In dealing with behavioral issues, high-stakes testing, large class sizes, and difficult working conditions, many teachers who enter the profession are overwhelmed—often leaving early in their career. The issue of teacher pay coupled with the difficult demands of the profession have led to an unhealthy teacher turnover problem. Increased teacher attrition as led to lessening the qualifications to become a teacher and proliferation of alternative and emergency certifications. Due to this change, many entering the profession are less qualified and prepared to cope with the demands and stressors of teaching—an issue only amplified for those new teachers entering high-needs schools with high teacher turnover. Focusing on teacher intentions to leave, rather than actual turnover, allows school

leaders and policy makers to affect change before actual turnover occurs. While the issue of teacher pay is ongoing, working conditions a reliable opportunity for retaining good teachers with little cost. School leaders can leverage organizational structures that are enabling rather than restrictive. How school leaders interact with their staffs greatly shapes teacher organizational commitment, efficacy, and motivation. Support for teachers mental and emotional states of motivation and efficacy can lead to happier and more effective teachers.

Chapter 3: Theoretical Framework

As the review of literature demonstrates, teacher turnover plagues education as a result of multiple shortcomings in the educational system especially in meeting the needs of teachers (Darling-Hammond, 2003; Henke, Chen, & Geis, 2000; Ingersoll, 2001; Kukla-Acevedo, 2009; Lortie 1975; Lindqvist, Nordanger, & Carlsson, 2014; Ronfeldt, Loeb, & Wyckoff, 2013; Sheilds et al., 2001; Wilson, Floden, & Ferrini-Mundy, 2001). Research demonstrates some of the causal linkages between school environmental factors including a lack of necessary support and teacher retention and attrition (Brewer, 1996; Darling-Hammond, 2003; Forsyth et al., 2016; Ladd, 2011; Ingersoll, 2001; Ingersoll & Smith, 2003; Mills, 1967; Mont & Rees, 1996; Murnane & Olsen, 1990; Theobald & Gritz, 1996). Self-Determination Theory (SDT), by means of Basic Psychological Needs Theory (BPNT), is particularly useful in theorizing about how various school and leader supports can satisfy basic psychological needs of teachers (Ford et al., 2017; Ford et al., 2019), and how such supports can be leveraged to motivate teachers to remain in the profession (Adams & Forsyth, 2006; Assor et al., 2002; Bryke & Schneider, 2002; Deci, 1971; Deci, Eghrari, Patrick & Leone, 1994; Deci & Ryan, 2002; Forsyth, Adams & Hoy, 2011; Goddard et al., 2001; Hoy, 2002; Jang et al., 2010; Niemiec & Ryan, 2009; Reeve, 2002; Reeve & Jang, 2006; Ryan & Deci, 2000; Wu, Hoy, Tarter, 2013).

In this study, I identify Self-Determination Theory (SDT) as a useful theoretical framework for explaining how general social conditions of schools interact with psychological factors to alter teacher affective states and lead to decreased teacher intent to leave. SDT fills a gap between seemingly discrepant viewpoints that exist concerning psychoanalytic and behavioral theories. Behavioral theories center on the idea that any human action is prompted by a habit which is learned. However, psychoanalytic theories center on a conceptualization of

motivation as actions controlled by subconscious thought (Deci & Ryan, 2002). SDT bridges this gap by explaining how subconscious needs support individual behaviors through increasingly internalized motivation.

SDT is composed of a subset of minitheories that includes Basic Psychological Needs Theory (BPNT) as well Cognitive Evaluation Theory (CET) and Organismic Integration Theory (OIT) that describe the various contexts under which individuals are optimally motivated. Individuals are dynamic, constantly changing, and growing and SDT accounts for the mercurial nature of human motivation (Deci & Ryan, 2002). BPNT outlines how individuals are able to self-regulate when certain basic psychological needs have been met (Deci & Ryan, 2002). The premise is that individuals are naturally driven to seek out challenging tasks, examine new ideas, and actualize their potential, provided certain conditions are met. These conditions are organized into three basic needs, or nutriments: autonomy, competence, and relatedness. Autonomy refers to seeing oneself as the origin or source of one's own behavior (Deci & Ryan, 2002). An important distinction is that autonomy does not suggest independence or entail being freed from any constraint, but simply the ability to choose a course of action, witness the outcome and attribute that outcome to one's own decision making and not that of an outside source. Competence is the need to feel capable of doing a task. For example, if a task is too simple one might not appropriately engage within the content because he or she finds it overly simplistic. However, on the other end of the spectrum, if one finds the task to be overly difficult, he or she may become dejected and not feel capable. Relatedness is the need humans experience, as social beings to feel interconnected to those around us and to a larger community.

The choice to use BPNT over other SDT sub-theories is based on the fact that the majority of the teacher workforce, because extrinsic motivators such as money or prestige are lacking, entered the profession for altruistic reasons (Borman & Dowling, 2008; Darling-Hammond, 1997; Deci & Ryan, 2002). Becoming a teacher because one cares and wants to make a difference in the lives of students signifies an intrinsic motivation towards teaching. Since teachers are already intrinsically motivated, this study focused on BPNT because continuing to foster the nutriments that lead to further intrinsic motivation is pivotal for teachers in their work. Other SDT sub-theories like OIT explain how to motivate individuals who do not have intrinsic orientations to the work or task. Additionally, using BPNT allows scholars and practitioners to focus on creating conditions in schools that give teachers an opportunity to have these needs fulfilled so teacher intrinsic motivation can be activated (Deci & Ryan, 2002). The assumption is that fulfillment of intrinsic desire will lead to higher efficacy, satisfaction, and ultimately higher retention.

Motivation within schools has perpetually been an issue in the realm of modern education. When one considers the propositions of SDT, it is intuitive that a majority of classrooms could be inhibiting student learning (Deci & Ryan, 2002). However, the focus of this work has been primarily centered on students, leaving unexplored knowledge about the conditions that foster teacher learning and motivation. Thus, in this study I theorize what conditions constitute basic psychological needs support for teachers: (a) the support of an autonomous working environment, (i.e., supporting teacher autonomy); (b) the support of teacher ability to teach their content, (i.e., supporting teacher competence); and (c) the support of teacher positive interactions with their colleagues, (i.e., supporting teacher relatedness) (Niemic & Ryan,

2009). SDT argues that if the foundational needs of BPNT are met, individuals will be further intrinsically motivated in their craft (Deci & Ryan, 2002).

A renewed focus on teacher motivation remains central to the discussion of educational policy and practice because it is predicated upon the idea that teachers become better educators based upon the degree to which their personal expectations for the teaching profession are met. In order to be self-determined as an educator, teachers must perceive autonomy in performing the duties involved in their jobs, feel competent to tackle the tasks with which they face, and to feel connected to those around them as a part of a school community. Considering the bureaucratic top-down approach of some school environments, it is likely that the basic needs of teachers remain significantly unmet. Educators are not merely intended to be masters of their craft but also inspire learning. SDT recognizes that some extrinsic motivators, such as reward and punishment systems, may actually inhibit intrinsic motivation (Deci & Ryan, 2002). This places school leaders in a critical position when it comes to supporting or inhibiting conditions that satisfy teacher basic psychological needs.

Meeting Teachers' Psychological Needs

School leaders can affect teacher psychological needs in a variety of ways. Schools have organizational policies and procedures that are often created, communicated, and maintained by school leaders. These organizational school structures can be enabling to teacher needs if designed with teacher needs in mind. Policies which enact shared decision-making strategies, professional development opportunities, and other conditions which foster trust within the collective staff can lead to increased organizational commitment and lower burnout (Ford et al., 2019; Forsyth et al., 2011; Sinden et al., 2004). This stands in stark contrast to traditional bureaucratic top-down approaches that can alienate teachers and lead to decreased motivation.

School leaders also interact daily with teachers in a variety of ways, both informally and formally. Such interactions can have far-reaching consequences when it comes to teacher emotions (Skaalvik & Skaalvik, 2010). In order for such interpersonal interactions to support teacher psychological needs, communications should be strategic, targeted at teacher growth, and seek to improve teachers (Ford et al., 2019). Principal-teacher interactions should foster a climate of collective trust through genuineness and care (Bryk & Schneider, 2002; Forsyth et al., 2011; Lambersky, 2016; Ryan & Deci, 2000). Such interactions lead to higher organizational commitment and lower teacher turnover intention (Richardson, 2008).

Ultimately, it is teacher perception about the extent to which their psychological needs are met that matters. Such perceptions can make the difference between burnout resulting in teacher intent to leave or organizational commitment with positive outcomes for students and school climate (Ford et al., 2019). Perceptions of perceived support can lessen the stress associated with how demanding the profession of teaching is (Hakanen et al., 2006).

Based on a review of the extant literature, below I propose a model of support for teacher psychological needs and teacher intent to leave the school or profession (Figure 1). The proposed model is multilevel, due to the nested structure of schools organization, and based on prior research about the multilevel nature of teacher psychological needs (Ford et al., 2019). In this case, support for teacher psychological needs has two distinct levels: perceptions of support at the individual teacher level and support at the organizational level (school level). At the individual level (within schools), teachers each have their own perception of psychological need saturation. The interactions between the principal and teacher, both formal and informal, provide an important example of how individual teachers perceive support for their psychological needs (Leithwood et al., 1999; Leithwood et al., 2010). As each individual teachers has their own

perceptions of support, they also have their own thoughts about leaving their school or profession. Similarly, at the school level (between schools), teachers draw upon and are affected by collective states of the school, such as school climate and collective trust, and these too can be viewed as supports of a kind. Below, I discuss each facet of BPNT, autonomy, competence, and relatedness, and how they act as supports at both the individual and collective levels.

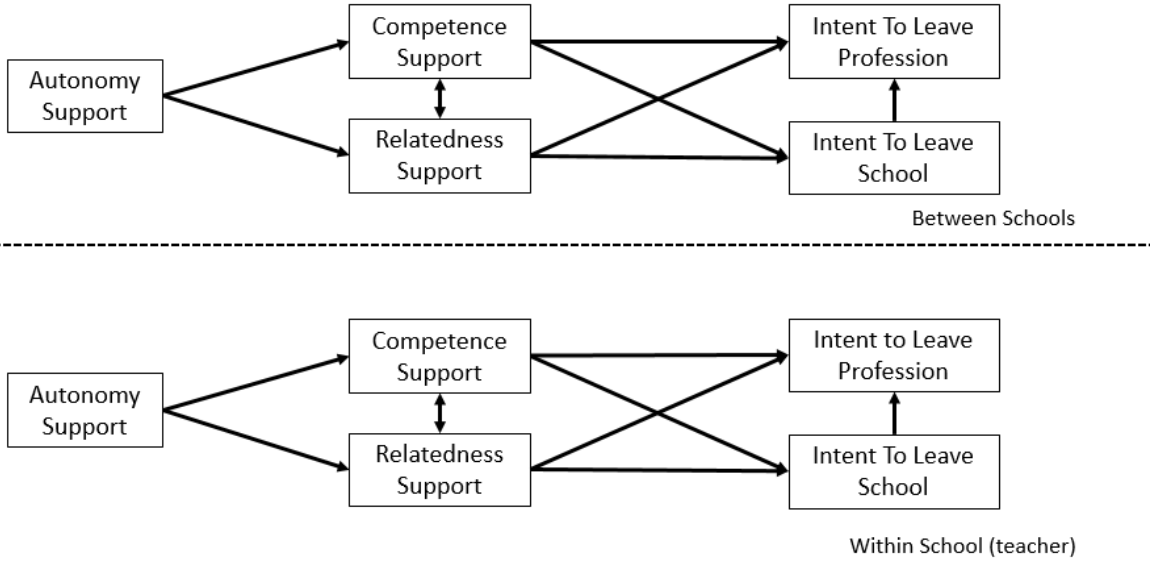

Figure 1. Initial Proposed Path Model of the Relationship between Support for BPNT and Teacher Intent to Leave the School and/or Profession

Basic psychological need support: autonomy. Autonomy is a basic psychological need that, when present, has the potential to foster intrinsic motivation (Deci & Ryan, 2002). One definition of autonomy support is as an environmental condition fostered through an organization's systems and processes that seeks to regulate a desired outcome (Assor et al., 2002). In educational research, an autonomy-supportive school environment has been commonly operationalized as a school with an Enabling School Structure (ESS; Wu, Hoy, Tarter, 2013). Enabling structures are features of an organization's formalization and centralization that

employees see as helping rather than hindering them in their work. ESS functions on a continuum from a hindering environment to an enabling one, which consequently affects teacher perceptions of autonomy support. School leaders have direct influence on the organization's rules and procedures that shape how supportive the school structure is of teacher voice and choice. Autonomy-supportive structures offer choice and provide relevance; enabling principals often welcome the collaborative input of teachers (Wu et al., 2013). These structures nurture intrinsic motivation and self-regulation (Assor et al., 2002). School leaders who utilize shared decision-making foster trust within the school environment, which research has shown, leads to increased organizational commitment and decreased teacher burnout (Forsyth et al., 2011; Van Maele & Van Houtte, 2015). Fostering commitment to the school has been found to decrease teacher intentions of leaving (Conley & You, 2009; 2018).

Similarly, teacher individual perceptions of an autonomy-supportive environment provide another dimension of the support of this psychological need. Since teacher intent to leave the school or profession is a resolve situated in individuals, examining the relationship of autonomy support at the teacher level and not just the aggregate level is important. Individual teacher perception of autonomy support is commonly measured by means of the Psych Need Satisfaction (PNS) scale (Gagné, 2003). This measure highlights individual teacher perceptions of independence and volition in performing functions and responsibilities associated with their profession.

The concept of autonomy support has been studied in teachers as it relates to student motivation and student learning. An environment that is autonomy-supportive has been shown to internalize motivation and increase student engagement (Reeve & Jang, 2006). There is also evidence that autonomy support includes fostering independent thinking, providing choices for

attaining goals, and structuring language that is not controlling (Deci, Eghrari, Patrick & Leone, 1994; Jang et al., 2010; Reeve & Jang, 2006). Autonomy, and consequently ESS, are smothered in environments where authority is dictatorial, causing individuals feel unrelated to tasks where external motivators are overly used (Amabile, Dejong, & Lepper, 1976; Assor et al., 2002; Wu, et al., 2013). These types of school structures are found to be hindering and coercive to the individuals and goals of the school (Wu et al., 2013).

Academic success, which fosters teacher sense of effectiveness, is found to be a product of autonomy-supportive schools (Johnson, 2006; Niemiec & Ryan, 2009). Environments that use rigid strictures or external motivators such as rewards or punishments are debilitating to overall performance. However, Ryan and Deci (2002) have found that providing independence to one's tasks can increase one's internal motivation and performance. School leaders are central to nurturing teacher independence by providing choice in terms of how tasks are accomplished. Independence is one of the concepts that ESS seeks to foster through rules and regulations that are flexible guides which are used to solve problems (Wu et al., 2013).

Specifically within the model, autonomy support is expected to lead to school climates where competence and relatedness support can thrive. Several SDT researchers have recently theorized that autonomy support operates as an activator to hypothesized secondary needs of competence and relatedness (Deci & Ryan, 2016; Reeve, 2006; Ryan & Deci, 2017). However, Adams and Khojasteh (2018) argue to the contrary: "…all three types of need-support appear to be inextricably related to a larger social context" (p. 391). In contrast, previous studies have found that although there is some overlap in need satisfaction outcomes, relatedness and competence support may demonstrate subordinate relationships to the need of autonomy (Urbanaviciute et al., 2018; Van den Broeck et al., 2016).

Autonomy refers to self-regulation, that is, being fully willing and volitional, which allows individuals to be authentic. According to Ryan and Deci (2017), autonomy-supportive environments would foster more authentic self-expression and lessen feelings of being contingently valued or pressured to think in certain ways. In this way, I argue that autonomy-supportive climates can foster strengthened relational support. Similarly, the argument could be made for competence support. If individuals are able to be authentic, acting genuinely within the workplace, they are more willing to learn from development opportunities rather than feeling the need to be dishonest and insincere. Thus, autonomy-supportive organizational conditions could lead to increased support for both relatedness and competence. Based on this discussion, the following two hypotheses are advanced:

Hypothesis 1: Teacher perceived autonomy support both at the individual and collective level is positively related to competence and relatedness-support.

Hypothesis 2: Autonomy support as a school condition and individual perception is antecedent to both competence support and relatedness support.

Basic psychological need support: competence. The support of a teacher's feelings of competence as they relate to his or her teaching is critical to one's motivation. This does not entail lowering the standard expected from teachers but rather promoting teacher agency and high expectations. According to Deci (1971), individuals who receive positive feedback on their task performance experience increased intrinsic motivation in performing the task. Teaching involves significant effort and often self-sacrifice. School leaders can support teachers in their perceptions of competence by recognizing and affirming them in their efforts (Lambersky, 2016).

In addition to meaningful affirmation, school leaders can support teacher competence through organizational structures such as on-going and relevant professional development opportunities (Goddard et al., 2000). These opportunities are maximized when focused on student learning and when they give teachers the opportunity to collaborate (Borko, 2004). This not only supports teacher competence but also provides opportunities for relational support through the collegiality of teachers learning, setting goals, and improving their teaching (Ryan & Deci, 2000). Professional development opportunities provide significant potential for school leaders to increase support for teacher perceptions of competence as most professional development that is provided to teachers is infrequent, disjointed, and not what teachers identify as most needed to improve their practice (Ford & Ware, 2018).

In this study, school level teacher competence is measured through teacher perceptions of collective efficacy (CTE). Self-efficacy is the belief in one's capacity to perform a task with competence (Bandura, 1977). According to Hoy and Kupersmith (1985), collective efficacy is the combined perceptions of teachers that the school will have positive effects on desired student outcomes. Such beliefs affect how much effort individuals expend persevering through difficulties and the amount of resilience they have despite failures (Bandura, 1997). Teacher collective efficacy represents the building-wide perception of teacher preparedness to face the multi-faceted challenges in the profession. At the teacher level of this study, teacher perceptions of competence will be measured using the Psych Needs Satisfaction (PNS) survey focusing specifically on items measuring how capable individual teachers feel in fulfilling the demands of their position. This scale focuses on how prepared they feel in teaching as well as other assigned duties.

Teacher perception of competence support is affected by many factors within the school. For example, teachers feel more competent and have greater efficacy in schools with higher student achievement. Adams and Forsyth (2006) state that student achievement is greatly affected by teacher perceptions of collective efficacy. As Deci and Ryan (2008) point out, competence support is an environmental factor that individuals perceive as advantageous to higher school achievement. Herein lies one of the difficult issues within teacher turnover. Teachers are likely to feel less competent in schools with poorer performing students as compared to schools with higher performing students. Academic achievement is vastly affected by other mediating variables such as the socioeconomic status of the student population (Adams & Forsyth, 2006). Potentially, less competent teachers working in higher performing schools experience greater competence support compared to teachers of higher competence employed in lower performing schools. Since teachers in lower performing schools may not quickly experience the success of their students, it is ever more critical that they perceive competence support from their administrators. This leads to Hypothesis 3 below.

Hypothesis 3: Teacher perceived competence support at both the individual and collective levels is negatively related to teacher intent to leave the school and the profession.

Basic psychological need support: relatedness. Teacher need for relatedness to other teachers and the school is the final of the three basic psychological needs. The perception of relatedness, or belongingness, refers to the basic need for one to interact with, be connected to, and experience caring from and for other people (Baumeister & Leary, 1995). This psychological need is crucially connected to competence and autonomy (Ryan & Deci, 2000, p. 68). Because building climate is not a function of a single person, the need for relatedness and the importance of acknowledging that need cannot be overlooked. According to the major tenants of SDT,

intrinsic motivation grows when individuals ascertain a sense of security, attachment, and belonging to their environment (Ryan & Deci, 2000). A key manifestation and/or resource associated with relational support is trust. According to Hoy and Tarter (2004) trust is "…one party's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open" (p. 253). Trust has long been thought to be critical to the school's function and necessary for student learning to occur (Bryk & Schneider, 2002; Goddard et al., 2001; Hoy, 2002; Simon & Johnson, 2015).

Relational support for teachers is a product of student-teacher, teacher-teacher, and principal-teacher interactions that fosters a sense of attachment to the school as well as its goals. Teaching is a highly demanding profession carried out in what is typically a high-stress environment characterized by high-stakes accountability, inadequate pay, bureaucratic school rules and regulations, and student discipline issues (Ford & Ware, 2018; Grayson & Alvarez, 2008). Student, teacher, and principal interactions shape how individual teachers perceive relational support within the school environment. Perceived relational support helps to defray the effects of these stressors (Bryk & Schneider, 2002; Ford & Ware, 2018; Forsyth et al., 2001, Skaalvik & Skaalvik, 2014).

School leaders can leverage relational support perceived by teachers through opportunities to feel like a team with their coworkers rather than working in isolation. Affirmations given by principals or other teachers support teachers by bringing recognition to the hard work and progress they have made in the school. School leaders can provide professional development opportunities that foster collaborative thinking and promote a sense of comradery. Additionally, interactions between teachers and principals need to leave teachers with the sense that their leaders are trustworthy. Principals need to conduct themselves in a way that they are

seen to be open, honest, benevolent, competent, and reliable (Forsyth et al., 2011; Hoy & Tarter, 2004). In supporting teacher needs for relatedness, school leaders can decrease teacher burnout, increase organizational commitment, and ultimately reduce teacher intent to leave (Ford et al., 2019).

Figure 2, then, is a summation of the previous discussions of the study path model and includes the variables meant to operationalize autonomy, competence, and relatedness support at both the individual and collective levels. As an individual teacher perception, relational support is measured in this study via Teacher Workplace Connectedness (TWC) which specifically focuses on individual perceptions of collegiality and association one feels to the school, staff, and students. TWC measures general integration in the network within the school and whether or not teachers have someone to turn to when they face challenges (Marshall, Michaels, & Mulki, 2007). Individual perceptions of connectedness among school staff culminate in a school-level collective measure of relatedness—trust. A term defined by Forsyth, Adams, and Hoy (2011), collective trust is "a stable group property rooted in the shared perceptions and affect about the trustworthiness of another group or individual that emerges over time out of multiple social exchanges within the group" (p. 22). Collective Faculty Trust (FTCOL) between students, teachers, and administration is both an indicator of a relational supportive climate within a school, but also a source of support for teachers at the same time. This leads to one final hypothesis:

Hypothesis 4: Teacher perceived relatedness support both at the individual and collective level is negatively related to teacher intent to leave the school and the profession.

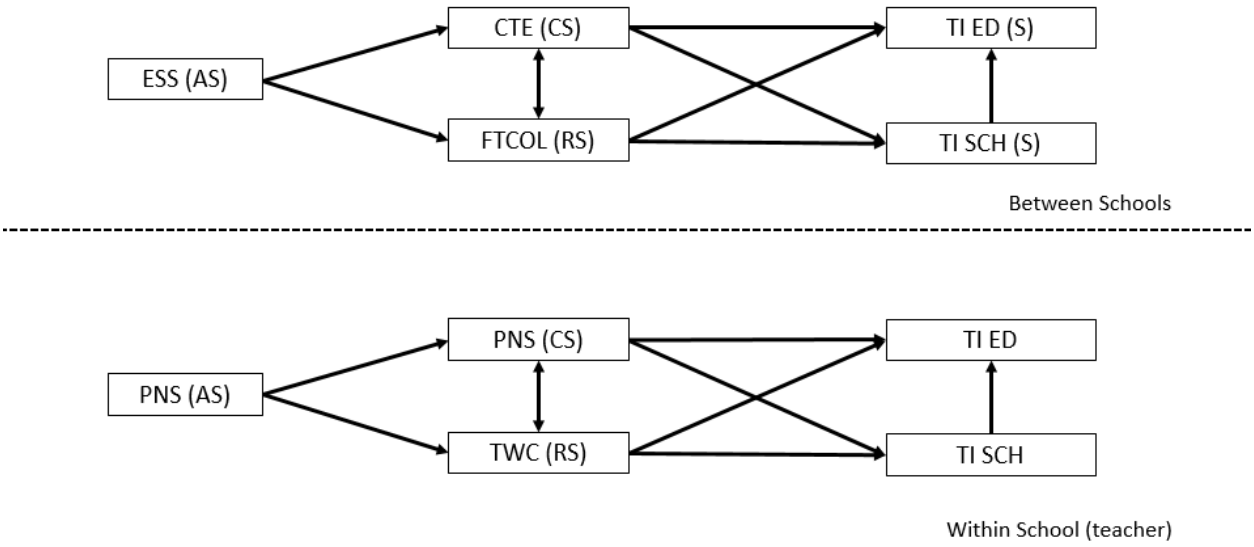

Figure 2. Proposed Multilevel SEM Including Proxies for Examining Support of BPNT Variables on Teacher Intent to Leave the School or Profession.

Note. ESS (AS)-Enabling School Structure representing autonomy support, CTE (CS)-Collective Teacher Efficacy representing competence support, FTCOL (RS)-Collective Faculty Trust representing relational support, TI ED (S)-Teacher Intent to Leave Education at the school level, TI SCH (S)- Teacher Intent to Leave the School at the school level, PNS (AS)-Psych Need Satisfaction representing autonomy support, PNS (AC)-Psych Need Satisfaction representing competence support, TWC (RS)-Teacher Workplace Connectedness representing relational support, TI ED-Teacher Intent to Leave Education at the teacher level, TI SCH-Teacher Intent to Leave the School at the teacher level.

Summary of the Theoretical Framework

Self-Determination Theory (SDT) is the lens used in this study seeks to explain how social conditions of a school interact with psychological factors to alter teacher affective states and lead to decreased turnover intention. BPNT outlines how individuals are able to self-regulate when certain basic psychological needs have been met (Deci & Ryan, 2002). BPNT is the best fit of all SDT mini-theories since teachers, for the vast majority, enter the profession for altruistic reasons. BPNT focuses on providing the nutriments which lead to continued intrinsic motivation for teachers in their work. I theorize that school leaders can decrease teacher turnover intentions by

leveraging teacher perceptions of support for these nutriments identified by BPNT—autonomy support, competence support, and relatedness support. This study focuses on perception of needs because, ultimately, it is how teachers perceive their psychological needs being met that matters. Autonomy-supportive structures offer choice and provide relevance, often seeking collaborative input of the teachers. Competence support involves promoting teacher agency and high expectations, while recognizing and affirming teachers in their efforts. Relatedness support entails promoting a sense of belongingness by fostering interactions, connections, and caring experiences from and for other people. I propose a theoretical model to be tested using a multilevel path model examining these supports both within teachers and between schools. At the teacher level, I identify the Psych Need Satisfaction scales for autonomy and competence and the Teacher Workplace Connectedness scale for relatedness as measures to determine the support for each individual need. At the school level, I identify the Enabling School Structures, Collective Teacher Efficacy, and Collective Faculty Trust scales to determine the support for autonomy, competence, and relatedness respectively. Each of these proxies used are well established within the literature. The proposed path posits that autonomy support is an antecedent condition to both competence and relatedness support, which in turn affect teacher intentions of leaving the school and/or profession.

Chapter 4: Method

The purpose of this study was to gather preliminary empirical evidence of the relationships between various leader supports for teacher psychological needs—outlined by Basic Psychological Needs Theory, a sub-theory of Self-Determination Theory—and how these supports are related to teacher intent to leave the school and/or profession. I theorized a model of support for teacher psychological needs and its relationship to teacher intent to leave and empirically test this model via a non-experimental multilevel path analysis research design. The following research questions framed this research study:

1. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the school?
2. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the profession?

The goal of this study was to provide school leaders with attainable improvements designed to increase the support of their teachers and, in turn, reduce teacher intent to leave their school or the profession altogether. The primary interest was to determine the degree to which the support of teacher basic psychological needs affects the teacher intent to leave the school and/or profession. The proposed path model in Figure 1 was developed and theorized based on the review of literature and posited a model of the relationship of support for teacher psychological needs and teachers' intent to leave for both the school or profession. For each of these supports, proxies were used to measure teacher perceptions of support for their basic psychological needs, as were presented in Figure 2.

A second interest was examining the hypothesized primacy of autonomy support as it relates to both competence support and relatedness support. Autonomy was of specific interest as it can either inhibit or foster one's intrinsic motivation and it is argued that efforts to support

teachers' competence or relatedness are secondary to autonomy support. Primacy associated with autonomy was a distinguishing characteristic of this study because in environments that are perceived as hindering towards autonomy, any support for relatedness or competence could be diminished. The model shown in Figure 2 was empirically tested using a nonexperimental multilevel path analysis. This is a non-experimental research design because these variables cannot be manipulated by the researcher; instead correlations between the hypothesized predictor variables and outcomes are examined using cross-sectional data.

District Context

Research participants were teachers within an urban school district in the Midwest. As is typical with most districts, the educational setting is hierarchical in nature where teachers have defined levels of authority provided through building level principals as well as district level administration. The school district is located in a city with a metropolitan population of approximately 950,000 residents. At the time of the study, the district served approximately 42,000 students across 88 sites. Of the 42,000 students, approximately 31% identify as African-American, 29% as Caucasian, 25% as Hispanic, 8% as Native American, and 2% as Asian. Within the district, 83% of students qualified for the free or reduced lunches. Nearly 2,400 teachers are employed by the district. Teachers average 10 years of teaching experience and approximately 25% of teachers hold advanced degrees.

Data Source

The study utilized school-level aggregate data and teacher-level data from the aforementioned district. The data for this empirical investigation were collected via teacher surveys from different schools by a local education policy center, in its ongoing study of school and district capacity. Teacher data were collected by means of an electronic survey system

(Qualtrics), specifically distributed to certified teachers in 73 schools during the 2016-2017 academic year. Teachers were randomly sampled and randomly assigned to Survey form A or B, and sent a link via email. Teacher perceptions of the satisfaction of their basic psychological needs were measured at both the school and teacher level (See Appendix A). One thousand five hundred fifty-six teachers responded for an overall response rate of 68%.

Measures and Instrumentation

This study was conducted with proxy measures of support of psychological needs. I reasoned, based on the empirical research that Enabling School Structure, Collective Teacher Efficacy, and Collective Faculty Trust, could serve as proxy indicators for autonomy, competence, and relatedness respectfully. Additionally, these supports were measured at the teacher level by means of the Psych Needs Satisfaction for autonomy and competence scales, and Teacher Workplace Connectedness which represented proxies for the psychological needs supports. Thus, the scales individually measured the extent to which teachers' basic psychological needs had been met within the proposed multilevel model. According to Drost (2011), data obtained from social science research are influenced by error in measurement. Thus, it was imperative that the reliability of these measurements be analyzed to check item consistency and to establish a baseline for validity assessment. Because these measures are all well-established, historical statistics and evidence of validity and reliability are readily available. However, for this study, the reliability of each of the inventories was also checked by calculating Cronbach's alphas (Cronbach, 1951). Each measure is described in more detail below. Additionally, descriptive statistics for each of the items are included in Table 1 following the description of the measurements. See Appendix A for all items included in these scales.

Enabling School Structure. Autonomy support between schools was measured with the Enabling School Structure Scale developed by Hoy and Sweetland (2000, 2001). This nine item inventory was measured by a 6 point Likert scale, where 1 was strongly disagree and 6 was strongly agree. These items were designed to determine the respondent's view on how administrators hinder or support teachers in their roles by means of bureaucratic centralization and formalization. This scale may also measure the relationship between the teacher and principal. It can be argued that this is a legitimate proxy measure for autonomy support because the items focus on administrators "enabling teachers to do their jobs" and "the authority of the principal is used to support teachers." These examples demonstrate the perception for how teachers view administrative support for teachers. The reliability for this inventory and sample was calculated using Cronbach's Alpha which was .975. Intraclass correlation (ICC) analysis found that 24.9% of the variance in Enabling School Structure was at the school level ($p<.001$). Evidence of validity for the scale can be found in previous studies as well (Hoy & Sweetland, 2000; Hoy & Sweetland, 2001).

Collective Teacher Efficacy. Competence support between schools was measured using the Collective Teacher Efficacy scale developed by Goddard and his colleagues (2001). The seven item inventory used a 6 point Likert scale, where 1 was strongly disagree and 6 was strongly agree. It is argued that a measurement of teacher efficacy is a valid indicator of collective teacher competence beliefs. Items that demonstrate teacher competence support included "teachers in this school are able to get through to the most difficult students" and "teachers in this school have the skills to deal with student disciplinary problems." The reliability for this inventory was measured using Cronbach's Alpha which was .933. ICC analysis provides evidence that 22.5% of the variance in Collective Teacher Efficacy was at the school level ($p <$

.001). Evidence of reliability and validity for the scale can be found in previous studies as well (Goddard, Hoy, & Hoy 2000; Goddard, Tschannen-Moran, & Hoy, 2001).

Collective Faculty Trust. School level relatedness support was measured with the Omnibus Trust Scale, in particular the Collective Faculty Trust scale (Hoy & Tschannen-Moran, 1999). This seven item inventory used a 6 point Likert scale, where 1 was strongly disagree and 6 is strongly agree. It is reasoned that collective trust is a legitimate indicator of how related teachers feel towards colleagues. Items include "teachers in this school typically look out for each other" and "teachers in this school have faith in the integrity of their colleagues." The reliability for this inventory was indicated by a Cronbach Alpha of .937. ICC analysis suggests that 20.9% of the variance in Collective Faculty Trust was at the school level ($p < .001$). Evidence of reliability and validity for the scale can be found in previous studies as well (Hoy & Tarter, 2004; Hoy & Tschannen-Moran, 1999).

Psych Need Satisfaction for Autonomy and Competence. Autonomy support and competence support for the teacher level was measured using the Psych Needs Satisfaction scale (Chen et al., 2015). This eight item inventory used a 6 point Likert scale, where 1 was strongly disagree and 6 was strongly agree. The first four questions focus on teacher perception of autonomy support, and the last four focus on teacher perception of competence support. An example item measuring autonomy support was "I feel my choices in my job express who I really am." Additionally, an example item measuring competence support was "At work, I feel capable at what I do." The reliability for these inventories was indicated by Cronbach's Alphas of 0.750 for autonomy support and 0.844 for competence support. Evidence of reliability and validity for the scale can also be found in previous studies (Chen et al., 2015; Del Valle et al., 2017; Tian et al., 2014).

Teacher Workplace Connectedness. Relatedness support at the teacher level was measured using the Teacher Workplace Connectedness survey (Appendix A). The eight item inventory used a 6 point Likert scale, where 1 is strongly disagree and 6 is strongly agree. It is argued that TWC is a valid proxy for how teachers feel in relation to their colleagues and is an accurate measure for this psychological need support (Marshall, Michaels, & Mulki, 2007). Items that demonstrate this concept include: "I have people I can turn to at work" and "I have co-workers available whom I can depend on when I have a problem." This measure accounted for the teacher level of relatedness support and was used in relationship to the outcome variables of teachers' intent to leave the school or profession. The Cronbach's Alpha for this sample was .904. Evidence of validity for the scale can be found in previous studies as well (Hoy & Tschannen-Moran, 2003; Lepine, 2017; Marshall, Michaels, & Mulki, 2007)

Teachers' intent to leave the school or profession. Turnover intention measures the likelihood and frequency of teachers considering leaving their school to either pursue another job in education or to leave the profession entirely. The measure consisted of six items adapted from Meyer et al. (1993), replacing "nursing" with "teaching" and "organization" with "school." These items are similar to frequently used scales in education studies (see, e.g., Martin et al., 2012; Sass et al., 2010; Wang et al., 2015). Three items probed teacher intention to leave their school, and three items probed teacher intention to leave the profession altogether. ICC analysis revealed that 10% of variance was at the school level for teacher intention to leave the school ($p < .001$), but only 1.9% for teacher intention to leave the profession, which was not statistically significant. Thus, teacher intention to leave the profession was not included in the school level path model. These measures used a 6 point Likert scale. Examples of items include "How frequently do you think about leaving your school?" and "How likely is it that you would explore

other career opportunities outside of education?" The reliability coefficients for these scales (Cronbach's Alphas) were .856 for teacher intent to leave the school and .861 for teacher intent to leave the profession respectively. Evidence of validity for the scale can be found in previous studies as well (Martin et al., 2012; Sass et al., 2010; Wang et al., 2015).

Control variables. Certain control variables were included within the model to account for possible alternative explanations. I controlled for student math achievement from the previous year due to evidence that some characteristics of school climate like achievement are related to organizational commitment and consequently teacher intent to leave (Conley & You, 2019; Deci & Ryan, 2008; Ford et al., 2019). Examples of this effect can be seen in teachers feeling more competent in teaching when their students perform better, regardless of whether this was due to teacher competence levels. Thus, controlling for math achievement is likely to produce a more accurate analysis of the three variables. Table 1 displays the descriptive statistics for all of the study measures mentioned above.

Table 1. *Descriptive Statistics for Study Variables*

Measure	N	Mean	Standard Deviation
1. Psych Need Satisfaction- Autonomy	781	3.6652	0.9957
2. Psych Need Satisfaction-Competence	781	4.8968	0.8991
3. Teacher Workplace Connectedness	781	4.9047	0.8818
4. Teacher Intent to Leave the School- Teacher Level	781	3.1087	1.4188
5. Teacher Intent to Leave Education- Teacher Level	781	2.7967	1.3429
6. OCCT Math 2015-2016	73	685.1646	43.6217
7. Collective Faculty Trust	73	4.6638	0.4170
8. Enabling School Structure	73	4.3358	0.6191
9. Collective Teacher Efficacy	73	4.5249	0.4751
10. Teacher Intent to Leave the School- School Level	73	3.1088	0.6206

Analytical Approach

In this study, I sought to measure the effects of three psychological need support variables on the outcome variables of teacher intent to leave the profession and teacher intent to leave the school. For the analysis of the proposed model, a multilevel path model was used. The Statistical Package for the Social Sciences (SPSS) was utilized for the descriptive statistics as was shown in Table 1.

The overall approach for this study was that of a multilevel path model. A path analysis using Mplus version 8.2 was run at both the teacher level and at the school level to account for the variation that exists within a school and between schools. The multilevel nature of the model is necessary to account for the variation that exists within the nested structure common in

educational settings. For the purpose of this study, one level accounted for individual teacher responses and another accounted for school level variables. In the multilevel path model, I began by testing the hypothesized relationships and then by testing rival explanations, particularly models that treated autonomy as equal (not antecedent) to competence support and autonomy support. All variables were observed and normally distributed—no latent variables were used in the analysis.

Chapter 5: Results

The purpose of this study was to gather preliminary empirical evidence of the relationships between various leader supports for teacher psychological needs—outlined by Basic Psychological Needs Theory, a sub-theory of Self-Determination Theory—and how these supports are related to teacher intent to leave the school. The zero-order correlations for both the teacher level and school level are displayed in Table 2 and Table 3 respectively. Statistical significance of the correlations are also included. The tables demonstrate that the relationships among all variables are, in almost all cases, significantly correlated.

Table 2. *Correlation Table for Teacher-Level Study Variables*

Measure	*1*	*2*	*3*	*4*	*5*
1. Psych Need Satisfaction-Competence (PNS_C)	-----				
2. Teacher Workplace Connectedness (TWC)	.238**	-----			
3. Psych Need Satisfaction-Autonomy (PNS_A)	.380**	.317**	-----		
4. Teacher Intent to Leave the School- Teacher Level (TISCH_T)	-.272**	-.325**	-.515**	-----	
5. Teacher Intent to Leave the Profession- Teacher Level (TIED_T)	-.216**	-.250**	-.473**	.499**	-----

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

Overall, the zero-order correlations for the teacher-level variables are all moderate. Measures for autonomy, competence, and relatedness each show significant positive correlations with one another (PNS_C & TWC, r=.238, $p < .01$; PNS_C & PNS_A, r = .380, $p < .01$; TWC & PNS_A, r = .317, $p < .01$). Each of the three also demonstrated significant negative correlations to the outcome variables of teachers' intent to leave the school or profession. The strongest negative correlation for intent to leave the school was with autonomy support (PNS_A, r = -.515, $p < .01$). Similarly, the strongest support associated with intent to leave the profession was also

autonomy (PNS_A, r = -.473, $p < .01$), although stronger still was the association between intent to leave the school on intent to leave the profession (TISCH_T, r = .499, $p < .01$). It is intuitive that those planning to leave the school might also be intending to leave the profession as well.

Table 3. *Correlation Table for School-Level Study Variables*

Measure	*1*	*2*	*3*	*4*	*5*	*6*
1. Enabling School Structure (ESS)	-----					
2. Collective Teacher Efficacy (CTE)	.565**	-----				
3. Collective Faculty Trust (FTCOL)	.581**	.820**	-----			
4. Teacher Intent to Leave the School-School Level (TISCH_S)	-.383**	-.352**	-.327**	-----		
5. Teacher Intent to Leave the Profession- School Level (TIED_S)	-.155**	-.009	-.039	.407**	-----	
6. OCCT Math 2015-2016 (MATH)	.058	.348**	.288**	-.406**	-.064	-----

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

The school level associations in Table 3 reveal similar results. Particularly strong was that between autonomy and relatedness scales (ESS, r = .820, $p < .01$). Each of the basic psychological needs demonstrated a negative correlation with teacher intent to leave the school (ESS, r = -.383, $p < .01$; CTE, r = -.352, $p < .01$; FTCOL, r = -.327, $p < .01$). Additionally, these needs demonstrated similar negative associations with intent to leave the profession, although not all were significant (ESS, r = -.155, $p < .01$; CTE, r = -.009, $p = .806$; FTCOL, r = -.039, $p = .271$). Two of the three psychological needs were not significantly related to teacher intent to leave the profession at the school level, however, this was likely due to the fact that in the final model this outcome variable was removed due to a lack of variance at the school level.

The multilevel model proposed explores the relationship between the support of teacher psychological needs of autonomy, competence, and relatedness and the outcomes of teacher

intent to leave the school or profession. Intraclass correlation coefficients (ICC) were calculated for all outcome variables within the model to determine the amount of variance at each level. Teacher intent to leave the profession with ICC of 1.4% was not included in the school level analysis as not enough variance existed at that level for analysis to yield any meaningful findings (p = .256). The ICCs for the other outcome variables demonstrated were FTCOL (20.9%), CTE (22.5%), ESS (24.9%) and TISCH (18.8%), all statistically significant.

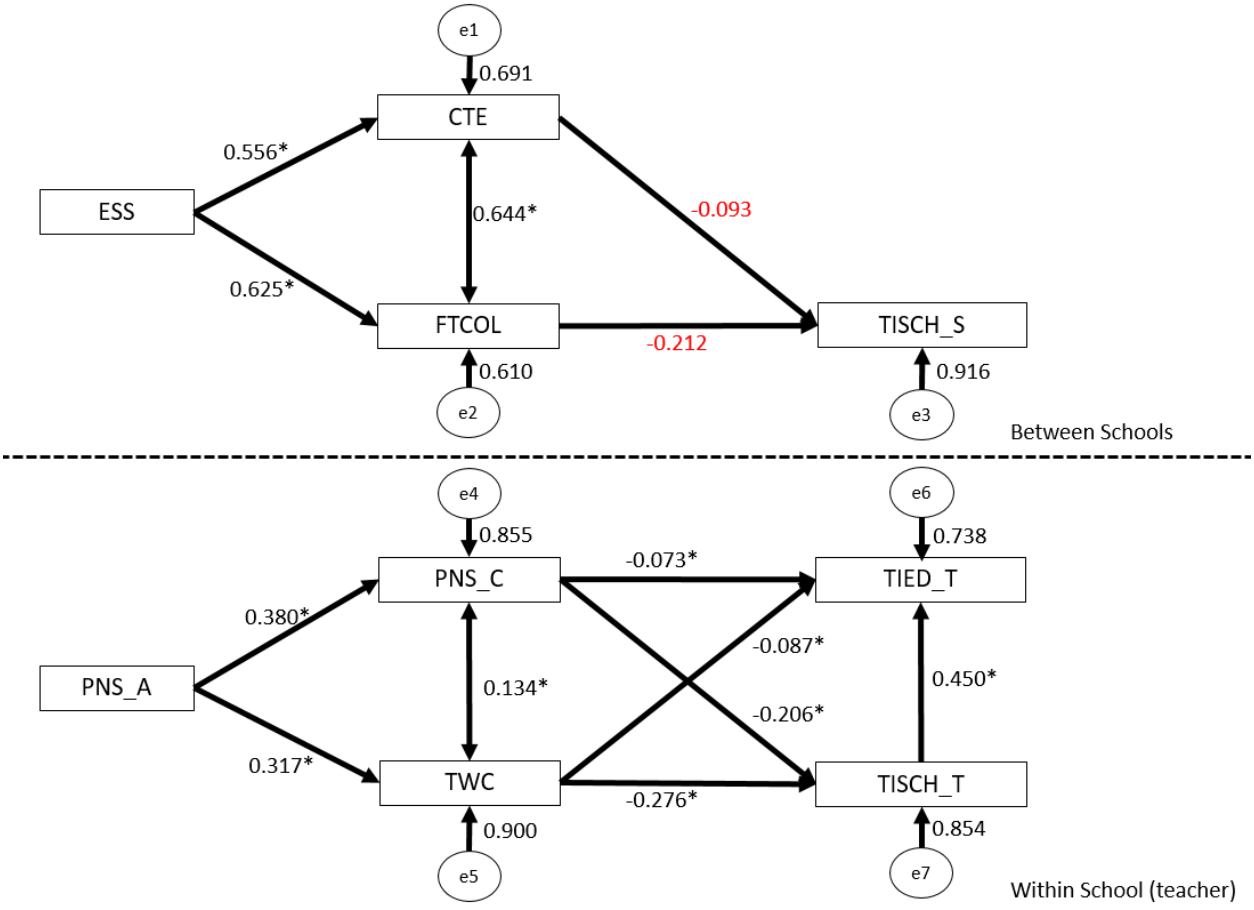

Figure 3. Initial Multilevel Path Model of Teacher Psychological Supports and Affective Outcomes.

Note. *Correlation is significant at the 0.01 level (2-tailed). Items denoted in red are nonsignificant relathionships. Fit statistics: CFI = .698, TLI = -.614, and RMSEA = .272. ESS=Enabling School Structure representing autonomy support, CTE=Collective Teacher Efficacy representing competence support, FTCOL=Collective Faculty Trust representing relational support, TISCH_S=Teacher Intent to Leave the School at the school level,

PNS_A=Psych Need Satisfaction representing autonomy support, PNS_C=Psych Need Satisfaction representing competence support, TWC=Teacher Workplace Connectedness representing relational support, TIED_T=Teacher Intent to Leave Education at the teacher level, TISCH_T=Teacher Intent to Leave the School at the teacher level.

Initial results from the multilevel path model are shown in Figure 3. Detailed tables underlying Figure 3 can be found in tables A1, A2, and A3 in the Appendix. Full teacher level results are presented in Table A1, school level in Table A2, and the variance explained for all outcome variables in path analysis in Table A3. The initial hypothesized model was a poor fit which is shown through the corresponding fit statistics (CFI = .698, TLI = -.614, and RMSEA = .272).

Due to the poor fit from the initial hypothesized model, adjustments were made to remove many insignificant paths and alter several others, and this led to the final, best fitting model. Direct paths from autonomy support to intent to leave variables were added at both teacher and school levels. Establishing a good model at the school level involved accounting for other important school level variables, in this case math achievement, on the teacher intent to leave the school (MATH, $\beta = -.424$, $p < .001$). As higher student achievement was strongly associated with socioeconomic status, I trimmed SES from the models to avoid multicollinearity. Without accounting for this, the tested models were a much poorer fit in relation to the final model.

The results of this final multilevel path model are shown in Figure 4 below. Detailed tables underlying Figure 4 can be found in tables A4, A5, and A6 in the Appendix. Full teacher level results are presented in Table A4, school level in Table A5, and the variance explained for all outcome variables in path analysis in Table A6. The model was overall a strong fit which is shown through the corresponding fit statistics (CFI=.991, TLI=.957, and RMSEA=.042).

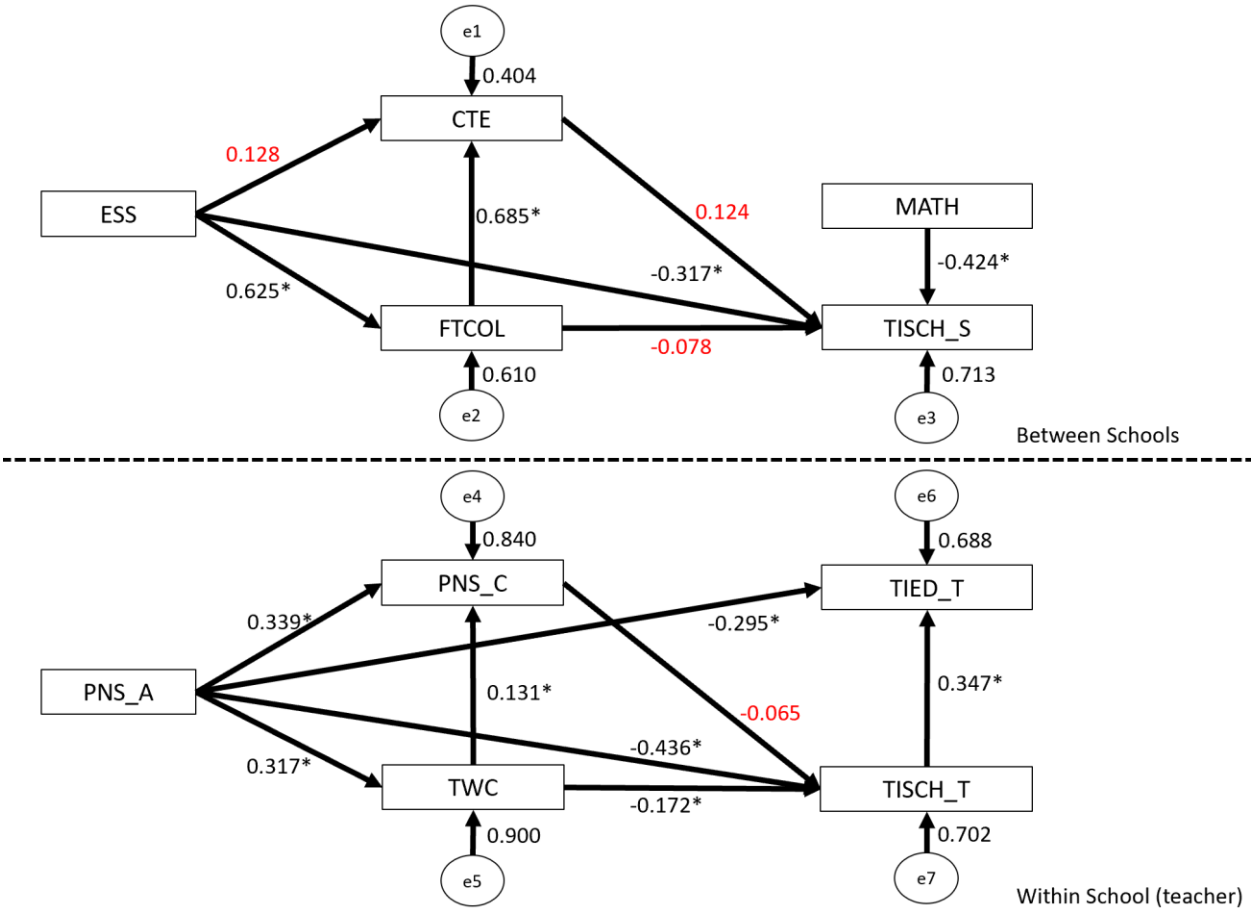

Figure 4. Final Multilevel Path Model of Teacher Psychological Supports and Affective Outcomes.

Note. *Correlation is significant at the 0.01 level (2-tailed). Items denoted in red are nonsignificant relathionships. Fit statistics: CFI = .991, TLI = .957, and RMSEA = .042. ESS=Enabling School Structure representing autonomy support, CTE=Collective Teacher Efficacy representing competence support, FTCOL=Collective Faculty Trust representing relational support, TISCH_S=Teacher Intent to Leave the School at the school level, PNS_A=Psych Need Satisfaction representing autonomy support, PNS_C=Psych Need Satisfaction representing competence support, TWC=Teacher Workplace Connectedness representing relational support, TIED_T=Teacher Intent to Leave Education at the teacher level, TISCH_T=Teacher Intent to Leave the School at the teacher level.

Autonomy Support

Hypothesis 1: Teacher perceived autonomy support both at the individual and collective level is positively related to competence and relatedness-support.

The results of the model are consistent with the expectation of the support of teacher autonomy being positively related to the support of competence at the teacher level, while the school level results did not demonstrate meaningful relationship for both, but rather only relatedness support. At both levels of the model, autonomy support demonstrates a positive relationship to relatedness support (PNS_A, β = .317, $p < .001$ on TWC; ESS, β = .625, $p < .001$ on FTCOL) and a negative relationship to teachers intent to leave the school (PNS_A, β = -.436, $p < .001$ on TISCH_T; ESS, β = -.317, $p = .011$ on TISCH_S) and profession (PNS_A, β = -.436, $p < .001$). However, in testing rival explanations, I tested the direct relationship of autonomy support to teacher intent to leave the school at both levels, and found that these relationships were stronger than the indirect effects through competence and relatedness at the teacher and school levels (PNS_A, β = -.436, $p < .001$; ESS, β = -.317, $p = .011$). The indirect effect of autonomy on intent to leave the school through the relatedness support was weaker (β = -.055, $p < .001$) when compared to its direct effect (β = -.436, $p < .001$). At the teacher level, autonomy support also shows a moderate effect on teacher intent to leave education with -.295 (PNS_A, β = -.436, $p < .001$ on TISCH_T); (PNS_A, β = -.295, $p < .001$ on TIED_T).

Primacy of Autonomy

Hypothesis 2: Autonomy support as a school condition and individual perception is antecedent to both competence support and relatedness support.

Overall, our final model fit statistics provide the strongest evidence for the primacy of autonomy (CFI = .991, TLI = .957, and RMSEA = .042), which was tested against a rival model in which the three psych need supports were simply correlated. In the final path model, Enabling School Structure accounted for 62.5% percent of the variance in Collective Faculty Trust at the school level. At the teacher level, Autonomy Need Satisfaction accounted for 33.9% of the

variance in Competence Need Satisfaction and 31.7% of the variance in Teacher Workplace Connectedness (PNS_A, β = .317, $p < .001$ with TWC); (PNS_A, β = .339, $p < .001$ with PNS_C). The only relationship not substantiated by the model was at the school level between Enabling School Structures and Collective Teacher Efficacy (ESS, β = .128, $p = .199$), but this does not directly provide evidence one way or another for the primacy hypothesis.

These findings suggest that autonomy support is better theorized as a predictor of support of competence and relatedness, in addition to the previously outlined findings for teacher intent to leave the school or profession. While findings also suggest that autonomy support is a strong direct predictor of teachers' intent to leave, perhaps more noteworthy is that model fit suggests that autonomy support does seem to precede to some degree the other basic psychological needs of competence and relatedness.

Competence Support

Hypothesis 3: Teacher perceived competence support at both the individual and collective levels is negatively related to teacher intent to leave the school and the profession.

A prominent finding is the lack of effect that competence support has on teacher intent to leave. These findings suggest that this hypothesis was not supported at either the teacher level or the school level. The relationships between Enabling School Structure and Collective Teacher Efficacy (CTE, β = .124, $p = .199$) along with Psych Need Satisfaction for Competence and the teacher level intent to leave the school (PNS_C, β = -.065, $p = .076$) were all non-significant.

Relatedness Support

Hypothesis 4: Teacher perceived relatedness support both at the individual and collective level is negatively related to teacher intent to leave the school and the profession.

At the teacher level, relatedness support did demonstrate a negative relationship with teacher intent to leave the school (TWC, $\beta = -0.172$, $p < .001$ with TISCH_T), but not the profession. No such relationship existed at the school level; (FTCOL, $\beta = -0.078$, $p = .666$). Another result of interest was that both at the school and teacher levels, there was an association between relatedness flowing toward competence (FTCOL, $\beta = .685$, $p < .001$ with CTE; TWC, $\beta = .131$, $p = .005$ with PNS_C), suggesting to some degree that relatedness support might, in fact, be antecedent condition to competence support.

Summary of Results

The model had an overall strong fit to the data, which is shown through the corresponding fit statistics. The final model did not include teacher intent to leave the profession at the school level due to lack of variance between schools for this outcome. Results of the multilevel path analysis suggests autonomy support has a positive relationship with competence support and relatedness support at the teacher level. At the school level, autonomy support was positively related to relatedness support, but the relationship to competence support was not significant. Autonomy support also had a direct negative relationships with both teacher intent to leave the school and profession at the teacher level. At the school level, autonomy support had the lone significant relationship with teacher intent to leave the school. Interestingly, relational support had a positive relationship with competence support at both levels of the study. Additionally, although not hypothesized, teacher intent to leave the school had a positive relationship with teachers ultimately intending to leave the profession.

Chapter 6: Discussion

Scholarship examining the nature of the relationship between organizational conditions in schools and teachers intent to leave their school or the profession abounds in the literature (Borman & Dowling, 2008; Ingersoll, 2001; Simon & Johnson, 2015). However, little research has examined the effects of supporting teacher basic psychological needs of autonomy, competence, and relatedness (the nutriments of intrinsic motivation) and the consequences this has for teacher decisions to remain in school or the profession. The purpose of this study was to gather preliminary empirical evidence of the relationships between various leader supports for teacher psychological needs and their relationship to teacher intent to leave the school and/or profession. A model of support for teacher psychological needs and its relationship to teacher intent to leave proposed and empirically tested via a nonexperimental multilevel path analysis. The following research questions framed this research study:

1. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the school?
2. What is the relationship between leader support for teacher autonomy, competence, and relatedness and teacher intent to leave the profession?

In this final chapter, I first summarize the findings according to the order of the stated hypotheses, and discuss these findings with respect to the existing literature. I then discuss the theoretical and practical implications of this study and conclude with study limitations.

Autonomy Support

Hypothesis 1: Teacher perceived autonomy support both at the individual and collective level is positively related to competence and relatedness-support.

School as a place of employment is an arena which, depending on its structures, can undoubtedly foster or frustrate teacher needs for autonomy, competence and relatedness. According to deCharms (1968), human motivation requires that individuals perceive themselves as causal agents. Autonomy is a critical nutriment towards fostering intrinsic motivation experienced as proactivity, development, and learning (Deci et al., 1996). School structures and leadership approaches can have important consequences for teacher perceptions of autonomy (Bass, 1999; Deci & Ryan, 2008; Hoy & Sweetland, 2000; 2001) and, concomitantly, far-reaching consequences for motivation and job satisfaction. This study build on this prior research by extending the examination of these effects toward teachers school level and professional turnover intent, a problem plaguing many districts especially in urban areas and certain subject areas (Learning Policy Institute, 2017; Perda & Ingersoll, 2013).

In regards to Hypothesis 1, autonomy support did demonstrate the hypothesized positive relationship to competence and relatedness support as was shown in the teacher level of the analysis. At the school level the relationship between autonomy support and relatedness support was sustained, however, the relationship to competence support was not supported. These findings additionally related to conclusions about Hypothesis 2, which are discussed in detail in the following section.

Previous research has shown that autonomy support includes fostering independent thinking, providing choices for attaining goals, and structuring language that is not controlling (Deci, Eghrari, Patrick & Leone, 1994; Jang et al., 2010; Reeve & Jang, 2006). According to Hetland et al. (2011):

> "…a threat to the need for autonomy in a work setting can have many negative consequences for employees; however, it is also a potential loss for the organization

> beyond the individual loss through lack of employee motivation, adverse health effects such as burnout, and possible loss of key personnel (p. 519)

The study findings seem to support these overall conclusions. At both levels of the analysis, a direct negative relationship between autonomy support and teacher intent to leave the school was found. Autonomy support was shown to have a negative relationship at the teacher level for teacher decisions to leave the profession, and it is also noteworthy that the other two supports were not found to directly influence teacher intent to leave the profession; perceptions of autonomy support at the teacher level were the lone significant predictor of teacher intent to leave the profession.

Although direct effects of autonomy on intent to leave were not hypothesized, autonomy nevertheless surfaced as the strongest single indicator of teacher intent to leave at both levels and for both intent to leave the school and profession. At the teacher level, not only was the direct relationship between autonomy support and intent to leave the school found, but also the indirect effect through relatedness support, though this path was weaker. These findings suggest that while these psychological needs have a collective effect on teacher intentions to leave the school or profession, specific emphasis seems to be on the need to support teacher autonomy, and this conclusion aligns with previous studies for other occupations (Urbanaviciute et al., 2018; Van den Broeck et al., 2010).

These findings suggest that autonomy support for teachers could have far-reaching consequences for schools. Past research demonstrated that teacher turnover can negatively affect student achievement, teacher relatedness, and school effectiveness due to instability in the teacher workforce (Ronfeldt, Loeb, & Wyckoff, 2013; Watlington et al., 2010). By increasing support for autonomy, districts can retain the expertise that established teachers have attained

and expend fewer resources for the recruitment and training of a high-turnover teacher workforce (Ingersoll & Smith, 2003). More importantly, however, the importance of autonomy in intent to leave suggests that principals would be better off removing school structures that restrict and trust teachers to carry out their work, turning their focus instead to other important school matters. While removing restrictive work policies carries risk as well, the risks in this case seem greater to teacher attrition if these barriers are maintained instead of loosened.

Primacy of Autonomy

Hypothesis 2: Autonomy support as a school condition and individual perception is antecedent to both competence support and relatedness support.

This hypothesis was of particular importance in light of the fact that more research is needed on the comparison of effects for supporting the three individual psychological needs. Self-Determination Theory research does not typically place emphasis on the differences that exist in supporting the needs of autonomy, competence, and relatedness but it examines these differences in need satisfaction as a whole (Deci & Ryan, 2000; Johnston & Finney, 2010). The nuance of supporting these distinct needs seems important since each needs support may exhibit a different relationship to the others and to important outcomes such as turnover intent. The results suggest that this was indeed the case, to some degree. The needs supports were all related to one another, but had slightly different relationships with intent to leave. Of the three basic psychological needs proposed by SDT, supporting autonomy demonstrated primacy in regards to the subsequent support of relatedness and competence as proposed by Hypothesis 2. At the teacher level, autonomy not only had direct effects on intentions of leaving the school and profession, but also indirect effects through relatedness support. Previous studies have found that although there is some overlap in need satisfaction outcomes, relatedness and competence

support may demonstrate subordinate relationships to the need of autonomy (Urbanaviciute et al., 2018; Van den Broeck et al., 2016).

Perceived autonomy support has been examined in many fields from exercise science (Sylvester et al., 2018) to mental illness (Perlman et al., 2017). While a direct comparison of needs was not the focus of the literature, several suggestions can be drawn of how the psychological needs of autonomy, competence, and relatedness may interact. Sylvester et al. (2018) examined the outcomes of providing autonomous choice where other need supports are lacking. They found a positive relationship between providing options supporting individual autonomy and increased motivation. In yet another study, while autonomy support did not predict mental illness outcomes, the study did reveal that autonomy support was related to both competence and relatedness support (Perlman et al., 2017).

Similarly, the findings here support the results of these prior studies in three ways. First this study demonstrates a positive relationship between autonomy support and both of the other need supports of competence and relatedness. Second, as mentioned previously, perceived autonomy support was positioned as antecedent in the model, and model fit suggested this was the best representation of the relationship between autonomy, competence and relatedness support. According to Adams and Khojasteh (2018), "all three types of need-support appear to be inextricably related to a larger social context" (p. 391). This research supports a directional relationship which placed autonomy support as antecedent to support of the other two basic psychological needs. Several SDT researchers have recently explained that autonomy support operates as an activator to hypothesized secondary needs of competence and relatedness (Deci & Ryan, 2016; Reeve, 2006; Ryan & Deci, 2017).

Thirdly, the study revealed the several possible ways in which autonomy works to influence teacher turnover intention. While previously outlined in the discussion of Hypothesis 1, the direct effect of autonomy support in this study was the strongest predictor of the intent to leave outcomes. Thus, future studies that investigate the causes of teacher turnover intention may potentially be remiss in excluding autonomy support in their investigation.

Competence Support

Hypothesis 3: Teacher perceived competence support at both the individual and collective levels is negatively related to teacher intent to leave the school and the profession.

According to White (1959), competence as a need is an inherent desire to feel effective when dealing with one's environment. Contrary to Hypothesis 3, teacher competence support did not predict intent to leave the school or profession at either the teacher level or the school level. While significant zero-order correlations existed between these variables, when entered with the other psychological need supports in the path model, these associations went away. One possible explanation for this finding is that, according to Deci and Ryan (2000), competence is linked to any type of motivation while autonomy support is linked particularly to intrinsic motivation.

Another study focusing on organizational leadership found competence to be a weaker link, concluded that "...competence is in some manner different from the other two needs," and perhaps "relatedness and autonomy are even more socially founded and perhaps even more basic than competence" (Hetland et al., 2011, p. 517), and Urbanaviciute et al. (2018) agree with this assessment, achieving similar results in their study of competence support and turnover intent. Advancing the "management paradox" as outlined by De Cuyper and De Witte (2011), as individuals experience competence satisfaction their own perceived employability also increases, thus potentially increasing (or decreasing) turnover intention depending on the degree to which

they have a strong organizational attachment, or in response to other poor working conditions. This again, highlights the importance of the other two psychological needs in this process.

In future studies, it would be interesting to examine if student achievement is one potential mediator of the relationship between competence support and intent to leave the school, as student achievement can lead to one's increased perception of competence. A direct relationship to intent to leave, however, was not supported by the data. These findings do not necessarily diminish the importance of supporting teacher competence on teacher motivation overall, but in regards to the relationship between competence support and intent to leave, it was non-existent.

Relatedness Support

Hypothesis 4: Teacher perceived relatedness support both at the individual and collective level is negatively related to teacher intent to leave the school and the profession.

The perception of relatedness, or belongingness, refers to the basic need for one to interact with, be connected to, and experience caring for and from other people (Baumeister & Leary, 1995). This nutriment has been shown through previous research to increase intrinsic motivation, organizational commitment, and decreased turnover intention (Rathi & Lee, 2017; Ryan & Deci, 2002; Van den Broeck et al., 2016). This fourth hypothesis was based on previous research demonstrating a negative relationship between support of relatedness and intent to leave the school. While this hypothesis was supported at the teacher level, at the school level it was not. This relationship within the model suggested that when teachers feel the satisfaction of the basic need for relatedness they are likely to experience higher emotional attachment to the school which leads to decreased turnover intent. Aggregate variation in relational support however, did not end up explaining variance in school level variation in teacher intent to leave.

These findings indicated that relational support is a critical component for individual teachers feeling attachment to students, teachers, and the school, and this had consequences for teachers' thoughts about whether to stay or leave the school. Through the lens of SDT, individuals tend to drift away from environments that thwart need satisfaction (Deci & Vansteenkiste, 2004). School leaders should seek to foster environments which teacher have opportunities to collaborate with peers, providing a necessary support for relatedness. Teacher motivation is further internalized and a sense of belonging is fostered through the establishment of collective faculty trust (Forsyth, Adams, & Hoy, 2011). This just goes, however, beyond knowing peers, but working together toward common goals. In regard to both principals and other teachers, teachers need to experience their leader as benevolent, open, honest, reliable, and competent (Forsyth et al., 2011).

Summary of Findings

Findings from the results suggest that overall there is empirical evidence of the importance of teacher perceived support of psychological needs for teacher intent to leave the school and/or profession. Of the three basic psychological needs proposed by SDT, supporting autonomy was of particular importance to the subsequent support of relatedness and competence as well as turnover intention. The support of teacher competence as proposed by Hypothesis 3 was unfounded in relationship to corresponding intent to leave the school or profession at both the teacher level and the school level. These findings did not however diminish the importance of supporting teacher competence on teacher motivation and other desirable outcomes. A possible explanation could be that teacher perceptions of competence could lead to them feeling capable of new job opportunities with perceived better working environments.

The hypothesis about supporting teacher feelings of relatedness, while not supported at the school level, demonstrated an important relationship at the teacher level with regard to turnover intent. Interestingly, the final model suggested at both levels that perceptions of relatedness had a direct effect on perceptions of competence. This correlation was moderate and positive at the school level, and 68.5% of the variance in competence support was explained by relatedness support. Moving from the specific results of this study, I will conclude with a discussion of the important consequences for these findings have for theory as well as school practitioners.

Theoretical Implications

Basic Psychological Needs Theory (Ryan & Deci, 2002) explains that individuals need autonomy, competence, and relatedness in order for intrinsic motivation to be activated. While teacher turnover intent was the focus of this study, the extent to which an individual observes the support of these psychological needs generates motivation which may result lead to changes in important outcomes (Reeve, 2012). The majority of research on the three psychological need supports has involved either operationalizing the three as a collective effect or as a singular effect focusing on just one (or two) of the three. More research is needed to determine how these psychological needs interact or which, if any, might have a more important direct effect on one's motivation than the others. The findings here suggest that we continue to study the degree to which autonomy functions as antecedent to the other two or not, particularly in studies of intent to leave. Finally, these findings also suggest we unpack the teacher emotional states which precede turnover intent but follow need support. Other scholars have begun this work (see Ford et al., 2019), and the benefits of this work would be to better understand the different teacher

emotions that ultimately lead to increased or decreased teacher engagement in the school and/or profession.

Practical Implications

The most obvious practical implication is that policy makers and school leaders should view the support of these three basic psychological needs as a critical lever for alleviating the pervasive issue of teacher turnover in the context of their schools. This evidence, as well as other evidence in the literature, may suggest that specific leader attention given to the support of these needs can lead to increased retention of teachers in the school and profession. While other factors that lead to teacher attrition are important, like teacher salary, these policy levers are typically out of the hands of school leaders. Support for teachers' psychological needs, however, lie firmly within the sphere of principal control, and this makes them an important tool for leaders in affecting teacher emotions and turnover behaviors. Whether or not turnover is actually occurring, decreased thoughts of leaving on the part of teachers may lead to positive consequences for the school. Having teachers who want to be there is fundamentally different than having teachers who are disengaged and looking for another job. Evidence from this study suggests that most predominant of these needs is that of autonomy, however, emphasis should be given to supporting teacher relatedness to those within and outside of their building.

Limitations

In light of the theoretical and practical implications, it is important to recognize limitations of this study. The most obvious limitation was the study sample, and this effects the degree to which the findings are generalizable. These data were collected from a single urban district in the southwest which limits and cautions the applicability of findings to other contexts.

Further, the focal district and surrounding state have experienced significant turnover and teacher shortages that are not as pervasive in other districts and states.

While the scope was limited, a strength is that this district has a salary schedule that is consistent across all of its nested schools. Compensation has been seen to be an established motivating factor within the issue of teacher attrition (Ingersoll, 2001; Podolsky et al., 2016). While teacher pay certainly effects the studied issues, conducting this study in a single district allows us to effectively control for salary across all schools, thus removing potential omitted variable bias.

These data were collected in a single year, which poses another limitation in regards to teacher perceptions of support and intentions to leave. Further studies might use longitudinal data on support and turnover intention. They might also include actual turnover information on teachers, to see to what extent teachers followed through on their intent. Finally, while the study itself did not employ a causal design, a well-reasoned theoretical framework, using a rigorously designed path model does provide more than a simple correlational analysis of these variables. Further research to reproduce these resulted is warranted.

Conclusion

Despite these limitations, this study presented an opportunity to examine the merit of psychological need support in regards to teachers' intentions to leave their school and/or profession. While a certain amount of turnover could be described as healthy for any organization, the issue has moved beyond desirable turnover into a problem which is more pervasive in urban and high-poverty districts where highly desirable employees are leaving (DeAngelis & Presley, 2011; Ingersoll, 2001). The issue of teacher turnover has been pervasive and schools expend vast amounts of resources in reducing the flow of teacher that are leaving for

other schools or leaving the profession entirely (Darling-Hammond, 2003). The focal district in this study provides an ideal situation in which to study these effects, as it is a district with high turnover and also high student diversity and high poverty (Eager, 2015; NEA Research, 2015).

Instead of focusing on the causality behind past teacher departures, this study focused on the relationships between conditions of support that make teachers want to stay and engage more deeply in the daily rewards and challenges of their school. In this way, school leaders and policy makers can focus on proactive rather than reactive supports for alleviating teacher turnover. While research has shown myriad potential reasons for their exodus (Henke, Chen, & Geis, 2000; Ingersoll, 2001), school leaders may improve this exodus by spending time, awareness, focus, and support of their teacher needs for autonomy, competence, and relatedness.

Specific emphasis should be given in supporting school structures and decisions that are not constrictive to teachers' independence in performing the responsibilities related to their profession (Hoy & Sweetland, 2000; 2001). While any occupation comes with rules and regulations for how important job tasks are performed, school leaders can loosen bureaucratic structures while simultaneously providing clear rationales for why particular structures exist and why they are necessary. However, when possible, school leaders should provide opportunities for collective decision making; where possible, school leaders should trust the expertise of the teacher, as often times this carries more benefit to turnover than trying to tightly control what and how teachers teach.

While the task of teaching can be challenging at times, it is important that the school environment is supportive of teachers psychological needs in the everyday tasks and challenges associated with their profession. The evaluative process itself should be used as a tool to bring encouragement and affirmation to support self-perceptions of competence (Deci, 1971).

Professional development opportunities could be improved by being ongoing and collaborative, thereby strengthening both competence and relatedness. Even though the support of competence did not demonstrate a relationship affecting teacher turnover intentions, this characteristic is still shown to have far-reaching effects on intrinsic motivation among other desirable outcomes (Ryan & Deci, 2001).

The mutual trust between teachers and within the teacher-principal relationship can have far-reaching effects also (Adams & Forsyth, 2006; Forsyth et al., 2011). School leaders may further support this relational environment by exhibiting trustworthy characteristics in their leadership and decision making: benevolence, honesty, openness, reliability, and competence (Forsyth et al., 2011). The school environment and schedule should provide teachers with time to collaborate in their tasks with other educators so they have a sense of relatedness to those around them and connectedness to the task of teaching itself (Lepine, 2017).

By attending to the needs of teachers in their own development, learning, and motivation, school leaders may have an important lever for change in their school and shift the focus from stemming attrition toward keeping the teachers you have happy and thriving. Supporting these needs may be able to pay large dividends which could affect not only individual teachers, but the overall functioning of the school itself. Leader support of teachers may ultimately lead to better relationships, more effective performance, and greater health and well-being of the teaching corps (Ford & Ware, 2018; Ford et al., 2019; Ryan & Deci, 2000).

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Appendix A

Enabling School Structure Measure

10 items, 1-6 scale, *strongly disagree* (score 1) to *strongly agree* (score 6), faculty respondent

1. Administrators in this school enable authentic communication between teachers and administrators.
2. The administrative hierarchy of this school enables teachers to do their jobs.
3. The administrative hierarchy promotes student achievement.
4. Administrative rules help rather than hinder.
5. The administrative hierarchy of this school facilitates the mission of this school.
6. Administrative rules in this school are used to help teachers improve.
7. The administrative hierarchy of this school encourages innovation.
8. Administrative rules in this school are not used as substitutes for professional judgment.
9. In this school, the authority of the principal is used to support teachers.

Faculty Trust In Colleagues Measure

7 items, 1-6 scale, *strongly disagree* (score 1) to *strongly agree* (score 6), faculty respondent

1. Teachers in this school trust each other.
2. Teachers in this school typically look out for each other.
3. Even in difficult situations, teachers in this school can depend on each other.
4. Teachers in this school do their jobs well.
5. Teachers in this school have faith in the integrity of their colleagues.
6. Teachers in this school are open with each other.
7. When teachers in this school tell you something, you can believe them.

Collective Teacher Efficacy Measure

7 items, 1-6 scale, *strongly disagree* (score 1) to *strongly agree* (score 6), faculty respondent

1. Teachers in this school are able to get through to the most difficult students.
2. Teachers here are confident they can motivate their students.
3. Teachers here never give up, even if a child doesn't want to learn.
4. Teachers here have the skills needed to produce meaningful student learning.
5. Teachers in this school believe that every child can learn.
6. Teachers in this school have the skills to deal with student disciplinary problems.
7. Teachers here are able to meet the specific learning needs of each child.

8. Turnover Intention Measure

2 items, 1-6 scale, *never* (score 1) to *very often* (score 6), faculty respondent

1. How frequently do you think about leaving your school? (Sch)

2. How frequently do you think about getting out of teaching? (Ed)

3. How likely is it that you would explore teaching opportunities at other schools? (Sch)

4. How likely is it that you would explore other career opportunities outside of education? (Ed)

5. How likely is it that you would leave your school in the next year? (Sch)

6. How likely is it that you would leave the education profession in the next year? (Ed)

Psych Need Satisfaction (autonomy and competence)

8 items, 1-6 scale, *strongly disagree* (score 1) to *strongly agree* (score 6), faculty respondent

1. I feel my choices in my job express who I really am.
2. (r) I feel pressured to do too many things in my job.
3. At work, I feel a sense of freedom in the things I undertake.
4. (r) My daily activities at work feel like a chain of obligations.
5. At work, I feel capable at what I do.
6. (r) I feel disappointed with my performance in my job.
7. When I am at work, I feel competent to achieve my goals.
8. (r) I have serious doubts about whether I can do things well in my job.

Teacher Workplace Connectedness

8 items, 1-6 scale, *strongly disagree* (score 1) to *strongly agree* (score 6), faculty respondent

1. I have people I can turn to at work.
2. I have one or more co-workers available who I talk to about day-to-day problems at work.
3. I have co-workers available whom I can depend on when I have a problem.
4. I have people supporting me at work.
5. I am well integrated with the department/school where I work.
6. I am kept in the loop regarding school social events/functions.
7. I am part of the school network.
8. I am regularly part of school social events.

Table A1: Initial Teacher Level Path Analysis Results

Teacher Level		Estimate	S.E.	Est./S.E.	Sig.
Psych Need Satisfaction-Competence	ON				
Psych Need Satisfaction- Autonomy		0.380	0.034	11.033	0.000
Teacher Workplace Connectedness		0.134	0.048	2.784	0.005
Teacher Workplace Connectedness-Relatedness	ON				
Psych Need Satisfaction- Autonomy		0.317	0.034	9.452	0.000
Teacher Intent to Leave the School- Teacher Level	ON				
Teacher Workplace Connectedness-Relatedness		-0.276	0.033	-8.494	0.000
Psych Need Satisfaction-Competence		-0.206	0.037	-8.494	0.000
Teacher Intent to Leave Education- Teacher Level	ON				
Teacher Workplace Connectedness-Relatedness		-0.087	0.037	-2.330	0.020
Psych Need Satisfaction-Competence		-0.073	0.033	-2.224	0.026
Teacher Intent to Leave the School- Teacher Level		0.450	0.034	13.111	0.000
Teacher Intent to Leave the School- Teacher Level	ON				
Teacher Workplace Connectedness-Relatedness		-0.276	0.033	-8.494	0.000

Table A2: Initial School Level Path Analysis Results

School Level		Estimate	S.E.	Est./S.E.	Sig.
Collective Teacher Efficacy	ON				
Enabling School Structure		0.556	0.103	5.409	0.000
Collective Faculty Trust		0.644	0.099	6.483	0.000
Collective Faculty Trust	ON				
Enabling School Structure		0.625	0.073	8.608	0.000
Teacher Intent to Leave the School	ON				
Collective Teacher Efficacy		-0.093	0.254	-0.367	0.713
Collective Faculty Trust		-0.212	0.277	-0.767	0.433

Table A3: Initial Multilevel Path Model Variance Explained by Level

Squared Multiple Correlations	Estimate	S.E.	Est./S.E.	Sig.
Teacher Level				
Psych Need Satisfaction-Competence	0.145	0.026	5.517	0.000
Teacher Workplace Connectedness- Relatedness	0.100	0.021	4.726	0.000
Teacher Intent to Leave the School- Teacher Level	0.146	0.023	6.289	0.000
Teacher Intent to Leave the Profession- Teacher Level	0.262	0.031	8.514	0.000
School Level				
Collective Faculty Trust	0.390	0.091	4.304	0.000
Collective Teacher Efficacy	0.309	0.114	2.704	0.007
Teacher Intent to Leave the School- School Level	0.084	0.073	1.147	0.251

Table A4: Final Full Teacher Level Multilevel Path Analysis Results

Teacher Level		Estimate	S.E.	Est./S.E.	Sig.
Psych Need Satisfaction-Competence	ON				
Psych Need Satisfaction- Autonomy		0.339	0.04	8.505	0.000
Teacher Workplace Connectedness		0.131	0.047	2.789	0.005
Teacher Workplace Connectedness-Relatedness	ON				
Psych Need Satisfaction- Autonomy		0.317	0.034	9.452	0.000
Teacher Intent to Leave the School- Teacher Level	ON				
Teacher Workplace Connectedness-Relatedness		-0.172	0.034	-4.996	0.000
Psych Need Satisfaction-Competence		-0.065	0.037	-1.773	0.076
Psych Need Satisfaction- Autonomy		-0.436	0.033	-13.057	0.000
Teacher Intent to Leave Education- Teacher Level	ON				
Psych Need Satisfaction- Autonomy		-0.295	0.04	-7.370	0.000
Teacher Intent to Leave the School- Teacher Level		0.347	0.039	8.918	0.000

Table A5: Final Full School Level Path Analysis Results

School Level		Estimate	S.E.	Est./S.E.	Sig.
Collective Teacher Efficacy	ON				
Enabling School Structure		0.128	0.100	1.284	0.199
Collective Faculty Trust		0.685	0.084	8.188	0.000
Collective Faculty Trust	ON				
Enabling School Structure		0.625	0.073	8.608	0.000
Teacher Intent to Leave the School	ON				
Collective Teacher Efficacy		0.124	0.173	0.713	0.476
Collective Faculty Trust		-0.078	0.182	-0.431	0.666
Enabling School Structure		-0.317	0.125	-2.541	0.011
OCCT Math 2015-2016		-0.424	0.094	-4.531	0.000

Table A6: Final Multilevel Path Model Variance Explained by Level

Squared Multiple Correlations	Estimate	S.E.	Est./S.E.	Sig.
Teacher Level				
Psych Need Satisfaction-Competence	0.160	0.026	6.204	0.000
Teacher Workplace Connectedness- Relatedness	0.100	0.021	4.726	0.000
Teacher Intent to Leave the School- Teacher Level	0.298	0.031	9.565	0.000
Teacher Intent to Leave the Profession- Teacher Level	0.312	0.032	9.85	0.000
School Level				
Collective Faculty Trust	0.390	0.091	4.304	0.000
Collective Teacher Efficacy	0.596	0.13	4.575	0.000
Teacher Intent to Leave the School- School Level	0.287	0.098	2.31	0.003

Appendix B

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Initial Submission Review Outcome

Date: February 23, 2018

Principal Investigator: Dr Timothy G Ford, Ph.D.

Study Title: Examining the Effects of Support of Teachers' Basic Psychological Needs on Turnover Intention

Review Date: 02/23/2018

I have reviewed your submission for the above-referenced study. I have determined this research does not meet the criteria for human subject's research. The proposed activity involves analyzing an existing, de-identified dataset. Therefore, IRB approval is not necessary so you may proceed with your project.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. Thank you.

Cordially,

Lara Mayeux

Lara Mayeux, Ph.D.
Chair, Institutional Review Board