Loneliness and Perceived Social Support in the Workplace of the School Principal

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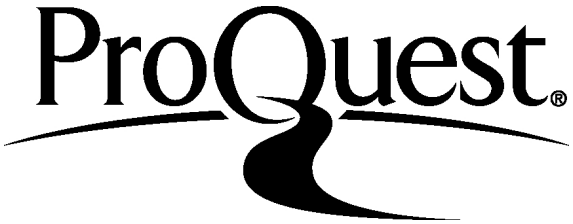

Abstract

In their role as organizational leader, school principals may confront issues of professional isolation that can lead to feelings of loneliness. The purpose of this study was to determine if principals' perceptions of social support were predictive of levels of loneliness. Using a survey instrument, data were collected to determine participants' perception of social support and level of loneliness. Data analysis determined that perceived social support acted as a moderate, negative predictor of loneliness. Further analysis identified perceived support from teachers as being a stronger predictor than perceived support from either superintendents or other principals. The discussion concludes with the possibility for greater appraisal support for principals in the form of constructive performance feedback. Recommendations for further research are given.

Keywords: social support, loneliness, school principal, administration

Dedication

Life is often unpredictable, filled with anticipation and anxiety over the paths we choose to walk down. But if you are lucky, you may find yourself falling into a remarkable moment of clarity; a brief second in time when lying on the ground and staring up at the stars is suddenly all you ever needed. And if one is very lucky, you will find yourself sharing that moment with another person, a person who understands the magic in the difference between coincidence and fate. But, if you are truly lucky, you find someone like Paula, and every moment after becomes a remarkable one. This work is dedicated to those moments in life, and to Paula, my person.

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When you enroll in a program that uses a cohort model, you become close with the other members of your cohort, and a doctoral program is no exception. I could not have made it to this point without the support of my fellow cohort members. The friendship and support that we built within our group has meant a great deal to me over the past several years, and I am grateful for each and every one of you.

To my family, to Carter, Megan, Amanda, and Addie, and to mom and dad, thanks for all the emotional support. Even when I was writing summaries of literature reviews on a totally different continent, I knew I could always count on you to be there when I needed a smile or a video blog update.

Finally, to my kids, Luc, Ashley and Maddie. You are three of the best things that ever happened in my life. You are smart, caring, wonderful little people that make every day of my life worthwhile. I will always love you, and I am excited to see what adventures you will tackle in your own lives.

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Chapter 1: Introduction to the Study

This quantitative research study explored whether perceived social support is predictive of loneliness in school principals. For the purposes of this study, social support was defined as the transmission of informational, instrumental, emotional, and/or appraisal support from one individual or group to another. Evidence of perceived social support was collected using the School Principal Social Support Scale, a survey instrument designed by the researcher for the purposes of this study. Loneliness was defined as the unpleasant or uncomfortable set of feelings that arises from a perceived qualitative or quantitative discrepancy in social relations. Evidence of loneliness was measured by the UCLA Loneliness survey. The study is predicated upon the hypothesis that higher levels of perceived social support would be predictive of lower levels of loneliness, an assumption supported by a review of the relevant literature. The following sections of Chapter 1 introduce the study and present the rationale for completing it.

Statement of Problem

School principals are expected to provide leadership and direction while simultaneously performing managerial and instructional responsibilities in an environment with a high degree of public visibility. At the same time, school principals face a high degree of structural and psychological isolation. Structural isolation results from the reality that there is only one principal per building, reducing the contact that principals have with their peers (Barnett, 1989). Psychological isolation may result from the supervisory position of the principal over their teaching faculty and staff. This can create a barrier that prevents the formation of meaningful

relationships between teachers and principals (Herlihy & Herlihy, 1980). Psychological isolation can also result from the position of the principal as the "gatekeeper" between external stakeholders (e.g., school board, superintendent, parents, community members) and internal stakeholders (e.g., teachers, students), leading the principal to feel as if they do not belong to either group (Kelchtermans, Piot & Ballet, 2011). The combination of structural isolation and psychological isolation can lead to a sense of loneliness.

While research findings provide evidence that some principals experience loneliness as a result of their profession (Boerema, 2011; Daresh, 1986; Herlihy & Herlihy, 1980; Howard & Mallory, 2008; Kelchtermans, Piot, & Ballet, 2011; Weindling & Earley, 1987), there is relatively little research that explores the strategies or methods that may alleviate these feelings. One potential avenue of exploration lies in examining the role of social support to mitigate loneliness in the workplace. Although not an explicit study of school principals, the work of Perlman and Peplau (1984) provides the explanatory framework used in this study for exploring the phenomenon of loneliness. The authors presented loneliness and social support as generally opposite concepts, that loneliness was likely associated with a perceived lack of social contact but that "further methodological and conceptual analyses of the links between loneliness and social support are needed" (p. 18-19). What is unclear, however, is whether school principals who perceive a greater amount of social support in their profession are more or less likely to experience feelings of loneliness.

Purpose Statement

The purpose of this quantitative research study is to determine whether a relationship exists between loneliness and perceived social support in the workplace of public school principals. Through the administration of a survey instrument that collected data on the two key variables of loneliness and social support, an analysis was performed determining the extent and nature of their relationship. Based upon the data analysis, the discussion focuses on the implications for reforming school organization to relieve, in some measure, the experience of loneliness in the profession. This has the potential to benefit the study participants directly, since a greater understanding of the relationship between social support and loneliness suggests that constructive feedback regarding a principal's professional performance may have the potential to alleviate loneliness in the workplace.

Theoretical Framework

Loneliness. Perlman and Peplau (1982) identified eight theoretical approaches to the study of loneliness: psychodynamic, phenomenological, existential, sociological, interactionist, cognitive, privacy, and systems. While similarities exist amongst the various approaches, each views loneliness from a unique theoretical and methodological lens. The psychodynamic, phenomenological, existential, and interactionist approaches derive their viewpoints from clinical work; while the privacy and systems approaches derive their viewpoints directly from theory. In contrast, the sociological approach relies on social analysis theory while the cognitive approach derives its views from non-clinical research.

This proposal approaches the study of loneliness from the cognitive perspective, which is commonly used in non-clinical research. This perspective emphasizes "cognition as a mediating factor between deficits in sociability and the experience of loneliness" (Peplau & Perlman, 1982, p. 128), placing a significant emphasis on the lonely individuals' subjective perception of their experience. Similarly, Sermat (1978) defined loneliness as:

> An experienced discrepancy between the kinds of interpersonal relationships the individual perceives himself as having at the time, and the kinds of relationships he would like to have, either in terms of his past experience or some ideal state that he has actually never experienced (p. 274).

This definition is characteristic of the cognitive perspective and contends that loneliness occurs as a result of a *perceived* discrepancy between desired and achieved levels of social contact. This approach is closely tied with non-clinical, empirical survey research methodology (Perlman & Peplau, 1982). For this reason, the use of survey instrumentation was selected as an appropriate measurement tool for gathering data on loneliness for this quantitative study.

Social support. House (1981) argued that the conceptualization of social support necessitates an understanding of "*who* gets *how much* of *what kinds* of support *from whom*, regarding *which problems*" (p. 39). Although the majority of these variables can change from study to study (e.g. who is receiving support, who is giving support, etc.), the specific types of social support generally fall into one of four distinct, but related categories: (1) emotional support, (2) instrumental support, (3) informational support, and (4) appraisal support (p. 24).

Each of these types of support is an essential part of the total amount of social support received by an individual. Thus, social support has been defined as the flow of emotional, instrumental, informational, and/or appraisal support from one individual or group to another (House, 1981).

Emotional support is received by an individual in the form of "empathy, caring, love and trust" (House, 1981, p. 24). In contrast to emotional support, instrumental support is transmitted from one person to another through specific behaviors, such as helping someone with their work or providing financial assistance. Informational support provides data about how to cope with personal and environmental problems, but differs from instrumental support in that the information, in and of itself, is not helpful. Instead, informational support requires the individual to act upon the information in order to obtain a positive gain. Finally, appraisal support provides data relevant to a person's self-evaluation and may be explicitly or implicitly evaluative in nature. Performance evaluations, constructive feedback, and verbal or written assessments of actions or decisions made are all examples of appraisal support. In this study, the overall amount of social support received by an individual is measured as a subjective perception, using a quantitative survey methodology.

Connecting social support and loneliness. There is evidence to suggest that a conceptual link exists between perceived social support and loneliness. Orak, Baskoy, Serdaroglu, and Ugur (2015) found a significant negative correlation between perceived levels of social support and loneliness among caregivers of bedridden patients. Likewise, Lasgaard, Nielsen, Eriksen and Goossens (2010) found a significant negative correlation between perceived

social support and loneliness in adolescent boys with autism spectrum disorders. Finally, Nicpon, et al. (2007) identified a significant negative correlation between social support and loneliness among college freshmen. Given the similar results of these studies gathered from widely different populations, it would seem likely that perceived social support and loneliness share a conceptual link with one another. That is, low levels of perceived social support are generally predictive of higher levels of loneliness. The aim of this study is to determine the extent to which this theoretical model holds true for a population of school principals.

Definition of Terms

Loneliness - the unpleasant experience that occurs when a school principal perceives their network of social relations as deficient in some important way, either qualitatively or quantitatively (adapted from Perlman & Peplau, 1982, p. 4).

Social Support - the flow of emotional, informational, instrumental, and appraisal support from one individual or group to another (House, 1981, p. 26).

Emotional Support - a type of social support that involves empathy, caring, love, and trust (House, 1981, p. 24).

Informational Support - a type of social support that provides a person with information that can be used to cope with personal and environmental problems (House, 1981, p. 25).

Instrumental Support - a type of social support that involves instrumental behaviors that directly help the person in need (House, 1981, p. 25).

Instrumental Behavior - a supportive action that accomplishes a specific task, such as helping

someone with their work or paying a bill for someone (House, 1981, p. 25).

Appraisal Support - a type of social support that (implicitly or explicitly) involves the transmission of information relevant to self-evaluation and performance (House, 1981, p. 25).

Research Questions

The research study is guided by the following four research questions:

1) For a population of school principals, is perceived social support predictive of loneliness?
2) For a population of school principals, is the perceived level of social support provided by the superintendent predictive of loneliness?
3) For a population of school principals, is the perceived level of social support provided by teachers predictive of loneliness?
4) For a population of school principals, is the perceived level of social support provided by other school principals predictive of loneliness?

Hypotheses

This study determined the extent to which levels of perceived social support were predictive of loneliness among a population of school principals. To that end, the study was guided by the following hypotheses:

Null Hypothesis 1: Total perceived social support is not predictive of the level of loneliness experienced by school principals.

Alternative Hypothesis 1: Total perceived social support is predictive of the level of loneliness experienced by school principals.

Null Hypothesis 2: Perceived social support provided by the superintendent is not predictive of the level of loneliness experienced by the school principal.

Alternative Hypothesis 2: Perceived social support provided by the superintendent is predictive of the level of loneliness experienced by the school principal.

Null Hypothesis 3: Perceived social support provided by teachers is not predictive of the level of loneliness experienced by the school principal.

Alternative Hypothesis 3: Perceived social support provided by teachers is predictive of the level of loneliness experienced by the school principal.

Null Hypothesis 4: Perceived social support provided by other school principals is not predictive of the level of loneliness experienced by the school principal.

Alternative Hypothesis 4: Perceived social support provided by other school principals is predictive of the level of loneliness experienced by the school principal.

Significance of the Study

The significance of this study lies in its attempt to conceptually link the concept of social support with that of loneliness in school principals, a population with a demonstrated lack of empirical research in this field. The study adds to the current body of research on loneliness and social support in general. Insights gained from the data analysis and discussion sections have the potential to shed light on the way in which principals perceive their professional social support

structure as well as the types of social support that have the greatest positive impact on school principals. This kind of insight may provide school districts with information about how to better support and retain school administrators. As Weiss (1982) stated, "study of the situational and characterological determinants of loneliness may suggest both situational changes and personal therapies that can help the lonely" (p. 79).

Target Population and Setting

This study, situated in the northeastern region of the United States, included participants from the states of New Hampshire, Maine, Massachusetts, and Rhode Island. Within these four states, there are approximately 3,463 elementary, middle, and secondary schools. The schools are spread across different geographic locales representing rural, suburban, and urban environments; though the majority of schools are located within rural areas. Most of the schools employ a building principal, therefore, the target population was roughly equal to the total number of schools. No sampling procedure was used to identify a particular sample. Instead, in an effort to gather data from the largest sample possible, the entire population was invited to participate in the study.

Summary

A quantitative, survey-based study was conducted in order to determine whether a significant predictive relationship exists between perceived social support and loneliness. This relationship can provide valuable information for stakeholders interested in reducing or eliminating feelings of loneliness experienced by school administrators. There is potential to

extend this research beyond the northeastern region of the United States. Further research could be conducted with principals from other regions within the United States, or in other countries that employ similar hierarchical organizational structures within their school systems. One of the major benefits to completing this study (and future studies) lay in the potential for determining whether low levels of perceived social support were predictive of feelings of loneliness. Given the connection between loneliness and its related psychological and physical consequences, this study provides evidence for schools to use in developing a supportive environment for school principals.

Chapter 2: Literature Review

School principals occupy a demanding, highly-visible position within the public school organization. Although the saying "it is lonely at the top" is a common one, there has been very little research to explore the phenomenon of loneliness within the professional environment of the principal. Even less research has been done to identify specific coping strategies and support structures which would alleviate or eliminate feelings of loneliness on the job. The following literature review explores the theoretical underpinnings of loneliness and social support and presents a rationale for treating these two constructs as conceptually related. It concludes with a discussion of the available research on loneliness and social support within the context of the school principal.

What is Loneliness

At one point or another, in adolescence or adulthood, everyone has experienced the uncomfortable feeling of loneliness (Peplau & Perlman, 1982). The widespread nature of the phenomenon is one of the reasons it has received so much attention from researchers. More important, however, is the fact that loneliness can have life threatening consequences such as alcoholism, physical illness, and suicide (Peplau & Perlman, 1982). In a comprehensive review of five separate studies, van Dulmen and Goosens (2013) found that individuals between the ages of 7 and 20 who showed chronically high loneliness exhibited reduced physical and psychological health, including increased depressive symptoms and suicide attempts. The authors also noted that those who experienced increasing loneliness with age were more likely to

suffer decreased physical and psychological health. Similarly, in a study of adults, Hawkley and Cacioppo (2007) found that loneliness had the ability to accelerate the rate of physiological decline with increasing age. These consequences underlie the very real importance of research that aims to better understand the antecedents, experience, and prevention of acute and/or chronic loneliness.

Loneliness itself can be understood in terms of three basic concepts. First, loneliness is the result of specific deficiencies in a person's social relationships (Peplau & Perlman, 1982). Second, loneliness is a subjective experience that is not synonymous with objective social isolation (e.g. a person can be alone without being lonely). And third, loneliness is an unpleasant and distressing experience. Despite the unpleasant and potentially life-threatening consequences of loneliness, Peplau and Perlman (1982) noted that "some writers, such as Moustakas (1961), believe that loneliness can lead to personal growth and creativity" (p. 6). Although references to this line of inquiry are found in philosophical and clinical discussions, the authors noted that "it is of only secondary importance to the current research being done on loneliness" (p. 6).

The Cognitive Theory of Loneliness

There have been dozens of different definitions of loneliness advanced in the research literature. Although most definitions tend to agree with the basic concept that loneliness arises from social deficiencies, theoretical differences arise around the particular nature of the deficiency (Peplau & Perlman, 1982). One particular theoretical approach is the cognitive theory of loneliness. The cognitive theory views loneliness as the result of *perceived* deficiencies in

social relationships and emphasizes the role that cognitive processes play in the antecedents and experience of loneliness (Peplau & Perlman, 1982).

There have been several proponents of the cognitive theory of loneliness. Sermat (1978) described loneliness as a perceived discrepancy between actual relationships and desired relationships. Similarly, Lopata (1969) defined loneliness as "a sentiment felt by a person . . . [experiencing] a wish for a form or level of interaction different from one presently experienced" (as cited in Peplau & Perlman, 1982, p. 4). Likewise, de Jong-Gierveld (1978) viewed loneliness as a disagreeable lag between realized and desired relationships. In summary, each of these viewpoints is characteristic of the cognitive theory of loneliness in that they describe the influence that cognitive perception has on the experience of loneliness.

The subjective nature of loneliness and the emphasis on individual perception raises particular conceptual and methodological issues for the researcher who wishes to study loneliness. As Peplau and Perlman (1982) noted, "there are no foolproof objective signs of loneliness . . . [researchers] must rely on people's statements about their internal experiences, or attempt to infer loneliness from clusters of symptoms" (p. 69). Weiss (1982) advocated for the use of a multiple-item, empirical survey instrument as a means for measuring loneliness.

> The multiple item test would seem less vulnerable to idiosyncrasies of interpretation and response and so more likely to be both reliable and valid. It would also facilitate discrimination of degrees of loneliness and make possible factor analytic search for component of loneliness (Weiss, 1982, p. 73).

The cognitive theory has become associated with empirical, survey-style research and the use of multiple-item tests have the ability to empirically measure loneliness as a unidimensional or multidimensional phenomenon (Russell, 1982).

What is Social Support

As House (1981) noted, most people have an intuitive sense of what is meant by social support. However, when pressed for specifics, the concept gives rise to many conflicting ideas and definitions. For researchers interested in the empirical study of social support, it proves necessary to move beyond a general sense in an attempt to provide a functional definition of the phenomenon. As it turns out, there are several different components of support that together constitute an overall conception of what is meant by *social* support. For example, Newcomb and Bentler (1986) defined social support as "an interwoven network of personal relationships that provide companionship, assistance, attachment, and emotional nourishment to the individual" (p. 521). More specifically, Pinneau (1975) distinguished between three different components of social support:

> Tangible *support is assistance through an intervention in the person's objective environment or circumstances, for example: providing a loan of money or other resources. . . .* Appraisal *or* information *support is a psychological form of help which contributes to the individual's body of knowledge or cognitive system, for example: informing the person about a new job opportunity, explaining a method for solving a problem. . . .* Emotional *support is the communication of information which directly*

meets basic social-emotional needs, for example: a statement of esteem for the person, attentive listening to the person" (cited in House, 1981, p. 16-17).

Similarly, Caplan and Killilea (1976) identified four different social support systems that served to (1) improve adaptive competence, (2) promote emotional mastery, (3) offer guidance, and (3) provide feedback (cited in House, 1981, p. 17).

Drawing from the definitions of Pinneau, Caplan and Killilea, and others, House (1981) developed a broad, conceptual model for social support. House (1981) believed that a complete model for social support would answer the question of "who received what kinds of support from whom regarding which problems?" (p. 22). Central to this question is a categorical framework for understanding the types of social support that can be provided from one person to another. To that end, House (1981) identified four different (but overlapping) types of social support: (1) emotional support, (2) informational support, (3) instrumental support, and (4) appraisal support.

House (1981) identified emotional social support as the most important of the four types of social support, noting that it appeared in almost every other classification scheme. Emotional social support involves the aspects of empathy, caring, love, and trust. Zellars and Perrewé (2001) stated that "at a global level, emotional social support includes talking, listening, and expressing concern or empathy for a distressed individual" (p. 459). The authors focused on the emotional social support systems of employees within organizations. They described four classifications of emotional social support: conversations with positive content, conversations with negative content, non-job-related conversations, and empathic conversations. The

differences in the conversational content appear to be significant, as positive content conversations were negative predictors of exhaustion levels, while negative content conversations were identified as positive predictors of exhaustion levels.

Informational social support involves the transmission of information from one person to another that can be used in coping with personal and environmental problems (House, 1981). Informational social support is unique in that the information, in and of itself, is not helpful, but rather provides the means by which the person receiving the information can help themselves. Nelson and Brice (2008) cited examples of informational social support as including advice, guidance, suggestions, directives, and information. However, the authors indicated that "the relevance of the source and types of support is dependent upon the persons involved and the kind of support required by them" (p. 72).

Instrumental social support involves the transmission of support in the form of behaviors designed to provide a form of aid. "Individuals give instrumental support when they help other people do their work, take care of them, or help them pay their bills" (House, 1981, p. 25). Shakespeare-Finch and Obst (2011) described instrumental support as "pertaining to the provision of services" (p. 484). The authors identified instrumental social support as being the most conceptually different from emotional social support. Their model suggested subsuming informational support within instrumental support and appraisal support within emotional support. However, subsuming these two categories could potentially lead to a loss of diversity within a data set or study.

Finally, appraisal support involves the transmission of a specific kind of information that is directly related to a person's self-evaluation. House (1981) noted that this information could be explicitly or implicitly evaluative in nature. Additionally, appraisal support demonstrates a level of overlap with emotional social support. For example, a supervisor who provides performance feedback to an employee is demonstrating a form of appraisal support. However, the employee may perceive the feedback as a sign that their supervisor cares about them and the work they are doing. The perception of caring on the part of the employee expands the appraisal support to include a form of emotional support. Conversely, an employee who receives particularly harsh or negative feedback may perceive the appraisal as a sign that their supervisor has little regard for them, indicating a lack of emotional support. House (1981) cautioned researchers to be aware of the potential for overlap between emotional support and the other three forms of support.

Connecting Social Support and Loneliness

Social relationships are an important, and often essential, aspect of daily human life. As Peplau (1985) noted, "the co-existence of work on social support, loneliness and social isolation attests to the vital importance of social relations" (p. 269). The fact that both loneliness and social support rely on the perceptions of a person's social relationships suggests the existence of a relationship between the two concepts. Newcomb and Bentler (1986) stated:

> Both constructs seem to be addressed to determining the quality of one's attachment system or social network. Loneliness measures tend to focus on the absence of such

> attachment, whereas social support measures attempt to assess the presence and quality of such connections (p. 520).

Citing the work of Rook (1984), Newcomb and Bentler (1986) acknowledged the existence of considerable overlap between loneliness and social support. However, they pointed out that differences between the two concepts exist, centered mainly on distinctions between "different deficits in social exchanges, different implications of self-labeling, and different personal and public connotations" (p. 521).

In conducting a hierarchical factor analysis on a variety of loneliness and social support measures, Newcomb and Bentler (1986) determined a second order factor of Attachment to Social Network that underlied the first-order constructs of loneliness and social support. This suggested that the different measures of social support and loneliness were related to a general tendency to connect with a personal social system. In response to this connection, the authors noted:

> It thus appears that much of the literature generated independently to study loneliness or social support is in fact researching two endpoints of a single, general continuum of attachment (Newcomb & Bentler, 1986, p. 532).

While the authors further hypothesized that social support could have the potential to decrease loneliness, they concluded that the current data did not support a conceptual model in which support generated a decrease in loneliness. Instead, the data simply supported a strong equivalence between the two concepts.

In exploring the connection between social support and loneliness, it may be important to understand the specific relational deficits that show the most direct connection with the experience of loneliness. Peplau (1985) noted the importance of a taxonomy of relationship functions in determining what types of relational deficits could lead to loneliness. This kind of taxonomy could "help to clarify the difference (if there is one) between loneliness and perceived social support, since the two might be linked to different relationship functions" (Peplau, 1985, p. 274). Peplau (1985) concluded by stating:

> It is not clear whether researchers should be encouraged to use the concepts of loneliness and perceived social support in more restricted and differentiated ways, or to treat them essentially as synonyms. A key empirical question is whether scores on measures of loneliness and perceived social support are consistently highly correlated. In other words, are both measures identifying the same individuals as having problematic social ties? (p. 280).

Since then, several studies have shown empirical associations between measures of loneliness and social support (e.g. Chen, Hicks, & While, 2014; Jirka, Schuett, & Foxall, 1996; Nicpon et al., 2007). One research study in particular has shown support for a model in which social support is predictive of levels of loneliness (Marin, Hagberg, & Poon, 1997). However, much of the research is highly specific within a particular field (e.g. gerontology, nursing, obstetrics) which limits the overall generalizability of the results to other populations.

Social Support, Loneliness, and the School Principal

School principals are one particular population that may experience larger than average levels of loneliness, professional isolation, and alienation as a result of their professional environment (Ashton & Duncan, 2012; Barnett, 1989; Boerema, 2011; Crawford, 2012; Daresh, 1986; Daresh & Male, 2000; Dussault & Barnett, 1996; Dussault & Thibodeau, 1996; Howard & Mallory, 2008; Mercer, 1996; Pigot-Irvine, 2004; Playko, 1991; Webster, 1989; Weindling & Earley, 1987). However, despite the evidence that many principals face higher than average levels of loneliness, there has been little attempt to explore this phenomenon empirically. There are only four studies in the published literature that treat the loneliness of school principals as a primary variable. Of the four studies, one was conducted in Belgium and the other three were conducted in Turkey. Not a single one included participants from the United States.

Kelchtermans, Piot, and Ballet (2011) conducted a secondary analysis of studies on Flemish primary schools in Belgium. Their analysis attempted to capture the emotional complexities of the principal's work environment by viewing the position of the principal as a gatekeeper between internal and external stakeholders. Through the use of qualitative, narrative data, the authors found two emerging themes in the principal's experience as a gatekeeper: "first, being caught in a web of conflicting loyalties and second, the struggle between loneliness and belonging" (p. 93). The authors noted that principals felt a desire to be part of a team, but that their position as administrator created a "structural loneliness" that prevented them from having direct peers within their immediate organization (p. 101). The authors further noted the creation of distributed leadership teams as one way in which principals attempted to escape the structural

loneliness of their position. Principals also attempted to go outside their organization for support. The authors found that principals were motivated to attend in-service courses more for the chance to interact with other principals than for the actual content of the course.

Yilmaz (2008) conducted a study of 548 principals in Central Anatolia, Turkey in order to determine whether a relationship existed between loneliness, organizational commitment, and life satisfaction. The author identified a positive correlation between loneliness and compliance levels of organizational commitment and a negative correlation between loneliness and the internalization and identification levels of organizational commitment. The author further noted that loneliness and life satisfaction significantly accounted for organizational commitment, stating that "a possible explanation for this is that psychological support is given to those school managers whose loneliness levels are high and whose life satisfaction levels are low" (p. 1085).

Izgar (2009) conducted a quantitative, survey study of 232 school principals in Turkey. The study explored levels of depression and loneliness in school principals, and analyzed the data to determine the effects of gender and educational level on each of the constructs. Using Pearson-product moments to determine correlation (p = .05), the author found a significant relationship between loneliness and depression in school principals. Further analysis using simple linear regression showed that loneliness scores were predictive of 15.3 percent of depression. Gender and educational levels were found to have no significant differences.

Sarpkaya (2014) conducted a quantitative study of 286 principals in Aydin, Turkey to determine the level of loneliness experienced by school principals and the relationship between

loneliness and self-rated levels of work performance. The author found the average level of loneliness experienced by school principals to be low, citing high parental support for education and high-student achievement as possible explanations for low levels of loneliness. The data also supported a relationship between loneliness and self-performance. Low-levels of loneliness (in terms of social deprivation and social relationships) were negatively correlated with self-performance, suggesting that principals who experience greater degrees of loneliness are less likely to view their own performance favorably. The author goes on to state that "considering the fact that emotional deprivation and companionship dimensions affect principal's performance, they should be given psychological support in order to eliminate the feeling of loneliness" (p. 972).

There is significantly less research exploring the role that social support plays in the professional environment of the school principal. Only one study was found in the published literature that treated social support as a primary variable. Wong and Cheuk (2005) conducted a quantitative survey study of 44 kindergarten principals in Macau to determine the impact of social support on job-related stress. Building from House's (1981) model of social support, the authors utilized just the emotional and informational dimensions of social support in their study. The authors chose to limit their view of the source of support to include just the principal's supervisor. Their results showed that emotional support from a supervisor played a role in buffering the adverse effects of job stress. However, the authors found that informational support did *not* play a role in buffering the adverse effects of job stress on job satisfaction. If

principals perceive the transmission of informational support as an indication that their supervisor has little confidence in their abilities, it could explain why the informational support had no effect on reducing the adverse effects of job stress on negative emotions and job satisfaction. In this case, the principal's perception of the support transforms the informational support into a form of appraisal support. This provides an excellent example of what House (1981) referred to when he described the ability of one individual's perception of support to overlap across multiple dimensions.

Chapter 3: Methodology

The purpose of this study was to determine whether a statistically significant relationship exists between perceived social support and loneliness in a population of school principals. The first chapter provided a rationale for the study while the second chapter situated the study within a larger theoretical framework. This chapter presents the components of the study itself; the research design and procedures, the primary variables, the instrumentation, and the methods of analysis. The proposed study design analyzed a set of variables to test the theoretical assumption that a lack of perceived social support in the workplace was predictive of higher levels of loneliness in school principals.

Research Design

In an effort to test the hypothesis that a lack of perceived social support is predictive of loneliness, a cross-sectional survey was distributed to a large population of principals in the northeastern region of the United States. The purpose of survey research is to "generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior" (Creswell, 2014, p. 157). An online service was used to host and administer the survey and collect the resultant data. The advantages to using online survey administration include relatively low cost and time demands and the ability to export the data in a format that can be easily analyzed via software programs such as Microsoft Excel or PASW.

Each participant was informed of the full purpose of the study and their rights as participants through the use of a cover letter in the invitation email (see Appendix A). The researcher recognized the potential for emotional distress that might accompany questions

related to loneliness and/or a lack of social support. To minimize the potential distress, every effort was made to ensure the survey yielded the most information with the least amount of invasiveness. At any point, participants could voluntarily choose to end the survey without completing the questions. Since the data collection was done through an online service, each participant was able to complete the survey on their own time in a place that was comfortable for them. While the potential for emotional distress existed, the literature review showed that many school principals are already facing emotional distress as a result of the loneliness that can accompany their professional position. Thus, the minor risks involved in conducting this study were balanced by the potential for the data to alleviate future emotional distress. The IRB committee recognized the minimal risk for harm and found the overall study to be exempt from full review.

Sample and Sampling

The minimum sample size necessary to complete the requisite data analysis was 119 participants based upon a power analysis using G*Power. This assumes a statistical test using multiple linear regression with 3 predictors (the three different sub-scales identified in the independent variable of perceived social support), an alpha equal to 0.05, and a power of 0.95. In order to reduce the negative impact of potentially high non-response rates, the invitation to complete the survey was distributed, via email, to the principals of all public schools within the target region, representing approximately 3,463 individuals. Additionally, principal associations in each state were contacted and several agreed to participate in the distribution of the survey

link to their respective memberships. Of the total population, 390 individuals participated, representing a response rate of 11.3%.

Instrumentation

Data was collected by means of a questionnaire containing 64 items. The first eight items represented simple demographic questions such as age range, gender, and years of service in profession. The next 36 items represented the School Principal Social Support Scale (SPSSS), which was used to measure the independent variable of perceived social support. Items on the SPSSS are written as statements such as "my superintendent listens to my concerns." These items are measured on an ordinal scale in which participants select O (I often feel this way), S (I sometimes feel this way), R (I rarely feel this way) and N (I never feel this way). The SPSSS was designed by the researcher and based on work done by Malecki, Demaray, and Elliot (2000) with children and adolescents. Because the instrument was created by the researcher for the purposes of this study, it had no demonstrated history of validity or reliability scores. However, data from the current study was used to determine an approximate assumption of the validity and reliability of the survey. This is discussed in detail in Chapter 4.

The final 20 items on the questionnaire comprised the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), which was designed to measure the dependent variable of loneliness. Items on the UCLA Loneliness Scale are written as statements such as "my interests and ideas are not shared by those around me." These items are measured using the same continuous scale as the SPSSS, ensuring a level of continuity between the two instruments. An evaluation of the

validity, reliability, and factor structure of the instrument showed high internal consistency (α coefficient ranging from .89 to .94) and test-retest reliability (r= .73), as well as strong evidence for convergent validity and construct validity (Russell, 1996, p. 20).

Operational Definition of Variables

Perceived social support represented the independent variable in the study and loneliness represented the dependent variable. This categorization of variables arises from the hypothesis, in which a perceived lack of social support was assumed to be predictive of loneliness.

Independent variables. There are four independent variables that were measured in this study through the use of the survey instrument. The first independent variable is the total perception of social support. The second independent variable is the perception of social support provided by the superintendent. The third independent variable is the perception of social support provided by teachers. The fourth independent variable is the perception of social support provided by other school principals. The first independent variable is measured on a continuous scale from 24 to 96. The other three independent variables are measured on a continuous scale from 8 to 32. Low scores represent low perceived social support and high scores represent high perceived social support.

Dependent variable. The dependent variable in the study is the level of cognitive loneliness experienced by each school principal. It is measured as a unidimensional variable without any additional subscales. The scoring on the instrument that measures this variable is

continuous, and has a range of values between 20 and 80. On this scale, low scores represent low levels of loneliness, whereas high scores represent high levels of loneliness.

Data Analysis

Initial data analysis identified the characteristics of the sample by analyzing the various demographic variables, looking at frequencies and descriptive statistics. Then, the individual scales that represent the total survey instrument were analyzed to determine validity and reliability. This was especially important for the School Principal Social Support Scale, since this particular instrument was developed specifically for this study and had no history of validity or reliability to depend upon. This analysis was completed before moving on to the primary purpose of the research study with respect to answering the research questions.

Primary data analysis focused on analyzing whether total perceived social support is predictive of loneliness, and whether the different sub-scales of perceived social support (as provided by superintendents, teachers, and other principals) would show the same predictive relationship. This comes directly from the four research questions that were stated in Chapter 1. To answer the first question, a single linear regression was performed to determine whether total perceived social support was predictive of loneliness. In order to answer the other three questions, a multiple linear regression analysis was performed to determine the extent to which each sub-scale would be predictive of loneliness. This analysis is presented in detail in Chapter 4.

Limitations of the Study

There are certain aspects of this study that have been limited by the researcher in order to ensure that the process is able to proceed in a timely manner with the available resources. The study focused on public school principals. The viewpoints of private school administrators, while valuable, were not taken into account as a part of this study. The study took place solely within the northeastern region of the United States, limiting the generalizability of the results. Teachers and superintendents have the potential to provide valuable information regarding the type and quality of social support that principals receive, however, this study focused exclusively on the *perceptions* that are held by school principals. Finally, this study employed methodology that is purely quantitative in nature, although similar research questions could be asked from a qualitative or mixed-methods perspective. This methodological choice was made in order to focus on the predictive nature of the variables.

Chapter 4: Data Analysis

This quantitative research study utilized a survey questionnaire made up of two separate instruments (the UCLA Loneliness Scale and the School Principal Social Support Scale) in order to determine whether there is a predictive relationship between perceived social support and loneliness in the professional environment of the school principal. The following sections provide a detailed treatment of the data collection and analysis including survey response rate, descriptive demographics of the sample, validity and reliability measurements of the instruments, and the results of both single and multiple linear regression used to test the hypotheses.

Survey Distribution and Response Rate

The survey questionnaire was uploaded to the web-service SurveyMonkey and a unique hyperlink was generated to access the survey. Email addresses for public school principals were gathered from three northeastern states via the respective departments of education. A cover email (Appendix B) containing the survey link was sent to each individual with corresponding information in the database. In this way, approximately 2,100 emails were sent inviting individuals to participate in the research study by completing the survey. In one state, several regional principal associations agreed to distribute the survey link. Additional emails were sent out by the associations themselves inviting their members to participate in the study. One statewide principal association in a fourth northeastern state also agreed to distribute the survey link to their membership, however the researcher has no information on the total number of emails that were generated by the association. It is estimated that approximately 3,000

individuals were sent a copy of the survey link across the four northeastern states. The online survey questionnaire remained active for a period of 30 days. During this time, 390 surveys were completed, representing a 13% response rate. However, 25 surveys included missing data. At least 30 participants directly emailed the researcher and 15 specifically asked for summary copies of the data analysis and results.

Validity and Reliability of Instrumentation

Participants completed both the UCLA Loneliness Instrument and the School Principal Social Support Scale. The UCLA Loneliness Instrument had previously been shown to possess a high level of validity and reliability, as noted in Chapter 3. The current study confirmed this as well, demonstrating a high internal consistency ($\alpha = 0.97$) in line with prior measurements of the 20-item instrument.

The School Principal Social Support Scale was designed by the researcher, and thus had no history of validity or reliability prior to its use in the current study. Before being administered to participants, a draft copy of the instrument was sent to a small handful of school principals who volunteered to analyze the instrument and provide feedback regarding the content, wording, and structure of each item. This feedback helped to eliminate questions that were poorly worded or did not accurately take some facet of the profession into account, thereby increasing the overall face validity of the instrument.

After completion of the data collection, a test of the reliability of the School Principal Social Support Scale was completed using Cronbach's Alpha. Overall, the 24 item instrument

demonstrated a high degree of internal consistency ($\alpha = 0.89$). Further, each of the three 8 item sub-scales showed a high degree of internal consistency; Superintendent Support ($\alpha = 0.91$), Teacher Support ($\alpha = 0.84$), and Other School Principal Support ($\alpha = 0.93$).

Finally, the construct validity of the School Principal Social Support Scale was measured using factor analysis. Factor analysis was determined to be an appropriate test given that the sample size exceeded 300 cases, the ratio of sample to variable was approximately 16:1, and an analysis of the correlation matrix (Appendix D) showed that each variable correlated with at least one other variable at a level of .3 or greater. Additionally, the Kaiser-Meyer-Olkin measure of sampling adequacy was .87 (above the recommended value of .6) and Bartlett's test of sphericity was significant (χ^2 (276) = 5953.368, $p < 0.001$). Factor analysis was performed using Varimax rotation and Kaiser normalization to determine whether items from the School Principal Social Support Scale would load onto three distinct factors. The rotated factor matrix (Appendix D) showed that each item did indeed load onto three factors, each of which corresponded to the three sub-scales of the survey. An analysis of the initial eigenvalues showed that the first three factors accounted for 62.86% of the total variance (Table 1). The results of the factor analysis suggest that there is strong support for the construct validity of the School Principal Social Support Scale.

Table 1

Initial Eigen-values

Factor	Total	% of Variance	Cumulative %
1	4.200	31.973	31.973
2	2.683	20.421	52.394

3	1.375	10.465	62.859

Missing Data and Outliers

Of the total sample, 25 returned surveys included varying levels of missing response data. None of the surveys included missing demographic information. A check of the original data file and the online database revealed that the missing data was most likely the result of a participant choosing not to answer a particular item and not from any experimental or researcher error. A total of 20 completed surveys included missing data from both the loneliness scale items and the social support scale items and were deleted listwise from the data file prior to analysis. The remaining five surveys were missing the entire set of items from the loneliness scale, and given that this research study's primary interest is in identifying a potential connection between loneliness and perceived social support, the decision was made to also delete these cases listwise from the data file, leaving 365 cases in the total sample.

Three different statistical methods were used to determine the presence of outliers in the dataset. First, the dependent variable (loneliness) and the independent variable (perceived social support) were standardized to produce two new z-score variables using equation 1.

$$z = \frac{x-\mu}{\sigma} \quad (1)$$

Any cases that demonstrated a standardized score greater than 3 or less than -3 were considered to be outliers. This method revealed four specific cases as outliers. However, both the loneliness and social support variables demonstrated a moderate level of skewness, so rather than rely solely on the z-score method of outlier determination, the variables were plotted against one

another in a box-plot. The box-plot revealed the presence of an additional 12 outliers, none of which overlapped with the four outliers that were determined from the standardized z-scores. As a third and final check for outliers, a preliminary linear regression analysis was performed and the residuals were analyzed case-wise. This method revealed two outliers with residuals that fell outside three standard deviations of the mean. One of these outliers overlapped with one of the outliers identified from the standardized z-score analysis. The outliers from all three statistical tests were combined together to form a single set of 17 cases identified as the outliers from this research study.

Two analyses were performed in order to determine whether to keep the outliers with the original dataset or to discard them. First, the demographic variables of the 17 outliers were analyzed to determine whether dramatic variances in demographics would exist between the outliers and the overall sample, however no significant variance was discovered. Second, a preliminary linear regression analysis was performed using the full data sample and then again without the presence of the outliers. A comparison of the two situations did not reveal any significant difference. As a result, the outliers were kept with the total sample and were not discarded. It is possible that some participants experienced extreme levels of loneliness as a result of outside factors such as depression, which could explain the presence of some of the outliers.

Descriptive Demographics

Participants were asked to respond to a set of demographic questions, the results of which are presented in Table 2. The majority of the sample fell within the 35 to 45-year-old range (39.2%) and was almost perfectly split in half by gender (51% female, 49% male). The vast majority of the respondents identified themselves as Caucasian/White (98.5%) with Hispanics (0.5%) and Blacks (0.3%) representing the remaining percent. Over half the sample (57.9%) indicated that the highest degree they had earned was a Master's degree. More than a third of the respondents (37.4%) indicated that they had been a principal for 5 years or less while a similar number (36.2%) indicated that they had been with their current district for 5 years or less. Interestingly, only 23 respondents (5.9%) indicated that they had been a principal for more than 20 years, while 63 respondents (16.2%) indicated that they had been with their current district for more than 20 years, suggesting that several of these participants were employed with the same district before they became a principal. The majority of respondents were employed in the role of elementary school principal (46.2%), followed by secondary principal (26.9%) and middle school principal (16.9%). Finally, nearly half the respondents (49.2%) indicated that they worked within a rural district, followed by those who indicated they worked for a suburban district (37.2%) and an urban district (13.6%).

Table 2

Descriptive Demographics of Study Sample

	Frequency	Percent
Age Range		
25 – 35	17	4.4
35 – 45	101	25.9
45 – 55	153	39.2

55 – 65	104	26.7
65 or older	15	3.8
Gender		
male	191	49.0
female	199	51.0
Race/Ethnicity		
Caucasian/White	384	98.5
Hispanic	2	0.5
Black	1	0.3
Asian/Pacific Islander	0	0.0
Arab	0	0.0
Latino	0	0.0
Highest Degree		
Bachelors	3	0.8
Masters	226	57.9
CAGS	113	29.0
Doctorate	48	12.3
Length of Career as Principal		
1 – 5 years	146	37.4
6 – 10 years	107	27.4
11 – 15 years	75	19.2
16 – 20 years	39	10.0
More than 20 years	23	5.9
Length of Employment in Current District		
1 – 5 years	141	36.2
6 – 10 years	77	19.7
11 – 15 years	66	16.9
16 – 20 years	43	11.0
More than 20 years	63	16.2
School Type		
Elementary	180	46.2
Middle	66	16.9
Secondary	105	26.9
K-12	8	2.1
Other	31	7.9
School Locale		
Rural	192	49.2
Suburban	145	37.2

Urban	53	13.6

Measurement of Variables

The dependent variable, loneliness, was measured using the UCLA Loneliness Scale which comprised items 34 through 53 of the survey. Each item was scored on a scale of 1 to 4 and the items were summed together to create a total score that ranged from 20 to 80. Low scores on the scale are representative of lower levels of loneliness while high scores are representative of higher levels of loneliness. The mean score was 35.25 with a standard deviation of 13.35. An independent samples t test ($t(363)=1.97$, $p=0.05$) determined that a significant difference existed between the loneliness scores of males ($M=33.86$, $SD=12.756$) and females ($M=36.60$, $SD=13.80$).

The independent variable, perceived social support, was measured using the School Principal Social Support Scale, which comprised items 10 through 33 of the survey. Each item was scored from 1 to 4 and summed together to create a scale with a range of 24 to 96. Low scores on the scale are representative of lower levels of perceived social support while high scores are representative of higher levels of perceived social support. The mean score was 77.33 with a standard deviation of 9.35. An independent samples t test ($t(363)=.158$, $p=.874$) revealed no significant difference between the amount of perceived social support between males ($M=77.25$, $SD=9.29$) and females ($M=77.41$, $SD=10.50$).

Each of the three individual sub-scales of the School Principal Social Support Scale were measured on a scale of 8 to 32, with low scores representative of lower perceptions of social

support and high scores representative of higher perceptions of social support. The mean score on the sub-scale Perceived Superintendent Support was 26.72 with a standard deviation of 4.83. The mean score on the sub-scale Perceived Teacher Support was 26.49 with a standard deviation of 3.44. The mean score on the sub-scale Perceived Other Principal Support was 24.12 with a standard deviation of 5.44. When gender was compared, there were no significant differences between males and females on any of the three sub-scales. Table 3 shows the mean scores for the loneliness variable, the total social support variable, and the three sub-scales of the social support variable, broken down by demographic category.

Table 3

Mean Scale Scores by Demographic Category

	Loneliness	Total Perceived Social Support	Perceived Superintendent Support	Perceived Teacher Support	Perceived Other Principal Support
Gender					
Male	33.86	77.16	26.77	26.45	24.08
Female	36.60	76.82	26.65	26.54	24.15
Age Range					
25-35	37.31	77.50	26.44	26.12	24.94
35-45	34.98	77.69	26.88	26.65	24.41
45-55	36.05	77.34	27.00	26.56	24.29
55-65	34.84	75.81	26.33	26.07	23.65
65 or older	29.53	75.80	25.33	27.93	22.53
Degree Level					
Bachelors*	51	75.33	26.00	23.67	25.67
Masters	36.22	75.83	26.44	26.27	23.69
CAGS	32.89	78.84	27.58	26.79	24.46
Doctorate	35.84	78.11	25.91	27.04	25.16
Years as principal					
1-5	36.22	77.87	27.72	26.26	24.61

6-10	35.31	75.40	25.94	26.23	23.23
11-15	33.01	77.23	25.67	27.49	24.42
16-20	36.34	77.18	26.87	25.87	24.45
More than 20	34.39	77.87	27.00	27.13	23.74
Years in district					
1-5	36.75	75.88	26.69	25.90	23.64
6-10	36.24	76.10	26.44	26.11	23.55
11-15	32.39	77.89	26.62	27.09	24.98
16-20	33.85	78.67	27.16	27.00	24.51
More than 20	34.76	78.33	26.83	27.28	24.63
School Type					
Elementary	37.92	78.09	26.77	26.65	24.95
Middle	32.53	78.13	27.02	26.73	24.76
Secondary	32.67	75.13	26.54	26.07	23.00
K-12	36.71	77.00	27.00	27.14	22.86
Other	33.83	74.50	26.13	26.37	22.00
School Locale					
Rural	36.60	75.48	26.59	26.10	23.32
Suburban	34.04	79.32	27.07	26.96	25.29
Urban	33.77	75.92	26.10	26.64	23.65

**sample size less than 5*

A descriptive analysis of the individual survey items was completed in order to determine the mean score for each item. This analysis explored whether differences existed between the mean scores of individual items and whether these differences were significant in terms of understanding the interaction between perceived social support and loneliness. Items associated with perceived emotional support were linked with the highest mean scores while items associated with perceived appraisal support were linked with the lowest mean scores. The implications of this analysis are explored in further detail in Chapter 5. Table 4 shows the mean

scores for each of the individual items on the School Principal Social Support Scale, ranked in order from highest perceived support to lowest perceived support.

Table 4

Median Scores for Individual SPSSS Items

SPSSS Item	Median Score
My superintendent listens to my concerns	4
My superintendent provides useful information when I need it	4
My superintendent trusts me	4
Other school principals listen to me when I'm frustrated	4
The teacher under my supervision trust me to make good decisions	4
The teachers under my supervision take on additional responsibilities when asked	4
My superintendent helps me make decisions	3
My superintendent helps me solve problems	3
My superintendent provides access to helpful resources	3
My superintendent provides feedback on my performance	3
My superintendent tells me when I've done something well	3
Other school principals care about my well being	3
Other school principals direct me to helpful resources	3
Other school principals help me solve difficult problems	3
Other school principals provide me with useful information	3
Other school principals show me how to approach different situations	3
Other school principals tell me when I've done something well	3
The teachers under my supervision care about my well being	3
The teachers under my supervision give me information in a timely manner	3
The teachers under my supervision give me useful feedback on my performance	3
The teachers under my supervision openly communicate with me	3
The teachers under my supervision tell me when I've done something well	3

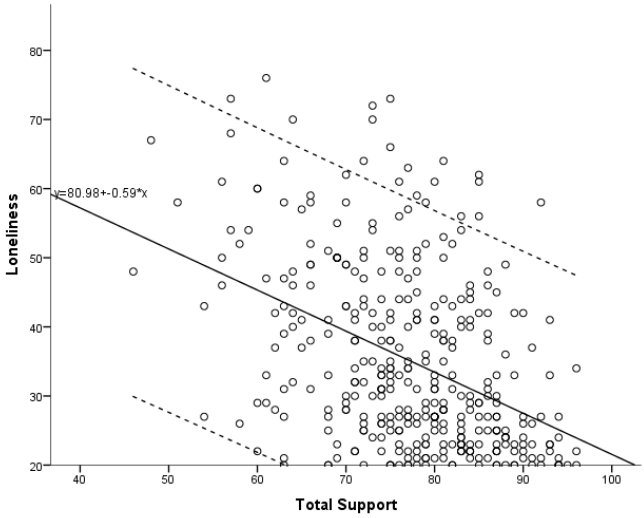
The teachers under my supervision volunteer to help with tasks	3
Other school principals give me feedback about my performance	2

Hypothesis One

The first hypothesis posited a predictive relationship between the independent and dependent variables; in other words, low levels of perceived social support would be predictive of higher levels of loneliness. A single linear regression established that perceived social support statistically significantly predicted loneliness, $F(1, 361) = 79.19$, $p < 0.0001$, and that perceived social support accounted for 17.8% of the explained variance. The predictive relationship is a moderate one. The regression equation was: loneliness = 80.98 – (.594 x perceived social support). A scatterplot of perceived social support versus loneliness showing the regression line and the 95% confidence interval lines is displayed in Figure 1.

Figure 1

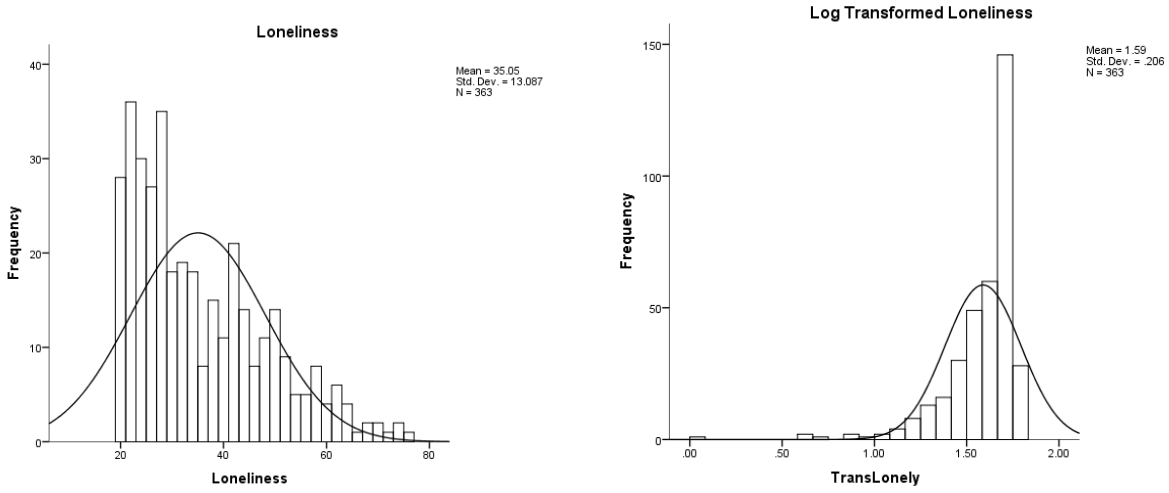
Scatterplot of Total Perceived Social Support vs. Loneliness



An analysis of the normality of the dependent variable of loneliness showed the data was positively skewed, potentially adversely affecting homoscedasticity. To determine whether this affected the regression model, a logarithmic transformation was applied to the loneliness variable in order to produce a more normalized distribution, as shown in Figure 2. A single linear regression was performed, this time using the log transformed version of the loneliness variable. Linear regression of the transformed data showed that perceived social support was able to statistically significantly predict the log transformed loneliness, $F(1, 361) = 63.95$, $p < 0.0001$, though it accounted for a slightly smaller percentage of the variance at 14.8%. The regression equation is: log transformed loneliness = .928 + (.009 x perceived social support). This analysis provides further support for the significance of the predictive relationship between loneliness and perceived social support.

Figure 2

Histogram of Loneliness and Log Transformed Loneliness



When disaggregated by gender, a simple linear regression showed a statistically significant relationship between perceived social support and loneliness for both male, $F(1, 178) = 51.82$, $p < .001$, $R^2 = .225$, adj $R^2 = .221$, and female participants $F(1, 183) = 26.47$, $p < .001$, $R^2 = .126$, adj $R^2 = .122$. The regression equation for male participants is loneliness = 85.27 – (.66 x perceived social support) and the regression equation for female participants is loneliness = 76.09 – (.51 x perceived social support). This suggests that the relationship between loneliness and perceived social support is slightly stronger in male principals than female principals.

Hypotheses Two through Four

The second, third, and fourth hypotheses posited predictive relationships between the loneliness of school principals and the perceived social support of teachers, superintendents, and other school principals. A multiple regression analysis was run to determine what, if any, predictive relationship existed between these three independent variables and the dependent variable of loneliness. Prior to running the multiple regression analysis, the data was checked against several assumptions to determine the appropriateness of the statistical test. Both the independent and dependent variable were measured along a continuous scale, a requirement for running multiple linear regression. The assumption of autocorrelation did not appear to be violated, as the Durbin-Watson statistical test returned a value of 1.16 (values lower than .8 generally imply the presence of autocorrelation). The independent variables did not meet the initial assumption of multicollinearity, as the Pearson Bi-Variate analysis returned correlations that were higher than .08. However, when the Tolerance was examined, defined as $T = 1 – R^2$

for the first step linear regression, the values returned were greater than 0.2, suggesting that the violation of multicollinearity was minor and the statistical analysis proceeded. The final assumption test focused on the normality of the data. Unfortunately, this assumption failed as the data displayed moderately positive skew with respect to the dependent variable and moderately negative skew with respect to the independent variables. Logarithmic transformations were applied to both the dependent and independent variables, but these transformations did not appear to have a significant impact on the model. Given the large sample size, the insignificant impact of data transformations, and the reality of using real-world data (as opposed to idealized data), the multiple linear regression analysis proceeded despite the violation of normality. However, the researcher recognizes the impact that this has on the data analysis, and that this violation represents a potential limitation of the study results.

Each of the three independent variables statistically significantly predicted loneliness, $F(3, 359) = 34.42$, $p < .0001$, adj. $R^2 = .217$. All three variables added statistically significantly to the prediction, $p < .05$. Regression coefficients and standard errors can be found in Table 4. The results of the multiple regression analysis show that perceptions of social support provided by superintendents, teachers, and other school principals are statistically significant moderate inverse predictors of loneliness. However, from the standardized regression coefficients (Table 4) it would appear that perceptions of social support provided by teachers is a stronger predictor of loneliness than either perceptions of social support provided by superintendents or other school principals.

Table 5

Summary of Multiple Regression Analysis

	B	SE_b	*B*
Intercept	91.568	5.597	
Perceived superintendent support	-.602	.128	-.223*
Perceived teacher support	-1.313	.185	-.344*
Perceived other principal support	-.234	.117	-.097*

Note. ***** $p < .05$; *B* = unstandardized regression coefficient; SE_b = standard error of the coefficient; β = standardized coefficient

Summary

Analysis of the survey instruments found both the UCLA Loneliness Survey and the School Principal Social Support Scale to be valid and reliable instruments. In particular, the School Principal Social Support Scale, which was designed for this study, demonstrated high Cronbach alphas and significant factor loadings with respect to the instrument's three sub-scales. The analysis of the single linear regression indicated a moderate, inverse relationship between perceived social support and loneliness for school principals, while an analysis of the multiple linear regression showed that perceived social support provided by superintendents, teachers, and other school principals all statistically significantly contribute to the model (although perceived social support from teachers appeared to play a stronger part). A further analysis of the implications of these findings are presented in Chapter 5, along with a discussion of the appropriateness of the model and suggestions for further research.

Chapter 5: Findings and Interpretation

This research study began by noting the oft-quoted phrase "it's lonely at the top," suggesting that individuals who take on the role of organizational leader may experience higher levels of loneliness. The data and subsequent analysis gathered by this quantitative study provide insight into school principals' perceptions of the supportive nature of their professional environment and its impact on loneliness. The following sections of Chapter five explore the relationship between loneliness and perceived social support in light of the data that were collected and place the overall analysis within the wider context of research in educational administration.

Research Question 1

For a population of school principals, is perceived social support predictive of loneliness?

The data analysis showed support for the alternative hypothesis; that perceived social support is predictive of loneliness. A simple linear regression determined that a significant inverse relationship existed between perceived social support and loneliness, with total perceived social support accounting for 17.8% of the variance. However, the wide spread of data points from the regression line suggests that this relationship is, at best, a moderate one. While it is impossible to say that one variable is the direct cause of the other, the data suggests that school principals who experience higher levels of perceived social support within their professional environment are more likely to exhibit lower levels of loneliness. This is consistent with research findings that found a significant negative correlation between social support and

loneliness in populations of caregivers of bedridden patients (Orak, Baskoy, Serdaroglu, and Ugur, 2015), adolescent boys with autism spectrum disorders (Lasgaard, Nielsen, Eriksen, and Goossens, 2010), and college freshmen (Nicpon et al., 2007).

Research Question 2

For a population of school principals, is perceived social support provided by the superintendent predictive of loneliness?

The data analysis showed support for the alternative hypothesis; that perceived social support provided by superintendents is predictive of the level of loneliness experienced by school principals. Analysis of multiple linear regression demonstrated that perceived social support provided by the superintendent was a statistically significant, moderate negative predictor of loneliness. The data suggests that school principals who perceive higher levels of social support from their superintendent are more likely to experience lower levels of loneliness. Superintendents are often in a position to provide feedback and information and, as Dussault and Thibodeau (1996) noted, principals may experience loneliness and isolation as a result of a lack of support, information and/or feedback. Likewise, Draper and McMichael (1998) noted feelings of abandonment in principals who perceived a lack of support from their school's central office. The data from this study supports these previous findings and suggests a direct connection between the role of the superintendent and its impact on the emotional well-being of the school principal.

Research Question 3

For a population of school principals, is perceived social support provided by teachers predictive of loneliness?

The data analysis showed support for the alternative hypothesis; that perceived social support provided by teachers is predictive of the level of loneliness experienced by principals. Multiple linear regression demonstrated that perceived social support provided by teachers was a statistically significant, moderate negative predictor of loneliness. Indeed, perceived support provided by teachers was the strongest predictor of loneliness when compared against perceptions of support provided by superintendents and other principals. The data suggests that principals who perceive higher levels of social support from the teachers under their supervision are more likely to experience lower levels of loneliness. It is particularly interesting that this relationship is stronger than the one ascribed to perceptions of superintendent support. This suggests that principals may value the support they receive from their teachers more than the support they receive from the superintendent. Or, given the likelihood that principals spend more time in an environment with the teachers than the superintendent, a lack of support from this group may have a greater impact on the principals' emotional and/or mental well-being. Previous studies have indicated that some characteristics of the relationship between the principal and their teachers can result in feelings of isolation (Boerema, 2011; Daresh and Male, 2000; Evetts, 1994; Mercer, 1996; Webster, 1989). Although loneliness and isolation are two separate concepts, they may play a role in influencing one another and it is possible that high

levels of perceived social support may act as a buffer between the isolation of the principal's professional role and feelings of loneliness. This relationship between loneliness, professional isolation, and social support bears importance for further research and study.

Research Question 4

For a population of school principals, is perceived social support provided by other school principals predictive of loneliness?

The data analysis showed support for the alternative hypothesis; that perceived social support provided by other school principals is predictive of levels of loneliness experienced by school principals. Multiple linear regression indicated that perceived social support provided by other principals was a statistically significant, moderate negative predictor of loneliness. However, a comparison of the standardized regression coefficients showed that this relationship was significantly weaker than either perceived support from superintendents or from teachers. This is despite the evidence that many school principals experience a positive impact from interacting with other principals, both formally and informally (Barnett & Long, 1986; Boerema, 2011; Crawford, 2012; Dussault & Barnett, 1996; Howard & Mallory, 2008; Webster, 1989). It is possible that school principals experience a greater impact to their emotional well-being when they feel supported by their superintendent and teachers in comparison with other principals that they interact with. However, it may also be that the questions in the survey did not accurately capture the characteristics of the different kinds of supportive relationships that exist between

principals from different schools, levels, and/or environments. This may be one avenue for further research.

Recommendations

The data from this study reveals several important connections between the way in which principals perceive themselves as supported and their level of loneliness. Given the negative physiological, mental and emotional effects that prolonged feelings of loneliness can have, it is important that organizational reform focus efforts on reducing the impact that the professional environment has on exacerbating the potential loneliness of the position. Reducing this impact may increase positive characteristics as well (e.g. job satisfaction, job performance, retention rates, etc.), though this line of inquiry requires additional research. The data from this study revealed that the way in which principals perceive themselves as being supported in their professional environment can moderately predict their level of loneliness. Based on this data, increasing principals' perceptions of social support may be able to reduce their overall experience with loneliness.

In particular, how principals perceive themselves as supported by the teachers under their supervision had the greatest effect on predicting levels of loneliness. This suggests that any organizational reform with the stated goal of reducing loneliness must include faculty and staff as integral stakeholders within the process. An analysis of individual questions on the survey showed that the lowest scores were associated with perceptions of appraisal support and the highest scores were associated with emotional support. For example, the highest mean average

on the Teacher sub-scale was the statement [*t]he teachers under my supervision trust me to make good decisions* (mean of 3.58 out of 4), while the lowest mean average was the statement *[t]he teachers under my supervision give me useful feedback on my performance* (mean of 2.79 out of 4).

Given this, efforts to increase perceptions of teacher support could focus on the way in which teachers transmit constructive feedback about their principal's performance. Hymovitz (1976) suggested several potential ways in which this could be accomplished, such as the formation of advisory committees, conferences with teachers in whom the principal places a high degree of trust, the elicitation of organizational problem areas in regular conversations with staff, informal classroom visits with teachers (and students), and the use of role-playing, surveys, and questionnaires during faculty meetings. However, the author also cautioned that eliciting feedback is not without risk, noting that "[t]here will always be staff who demonstrate antipathy for authority just for the love of it" and that "the absence of mutual trust warps organizational relationships and distorts the credibility of any assessment design" (p. 27). Despite this risk, there remains a clear need for principals to have in place a reliable and valid system of feedback, not just for reducing loneliness and isolation, but also for the purpose of enhancing their leadership capabilities within the complex system of school organization (Goldring et al, 2009).

Principals' perceptions of social support provided by their superintendent also moderately predicted feelings of loneliness, suggesting that changes to the way in which superintendents provide support may have an impact on reducing the loneliness of the principal's position.

Similar to the results of the Teacher sub-scale, an analysis of the Superintendent sub-scale showed that the highest scores were associated with perceptions of emotional support while the lowest scores were associated with perceptions of appraisal support. For example, the highest mean score was associated with the statement *[m]y superintendent trusts* me (mean of 3.65 out of 4) while the lowest score was associated with the statement *[m]y superintendent provides feedback on my performance* (mean of 3.14 out of 4). The fact that this score is higher than the one on a similar statement in the Teacher sub-scale suggests that principals' hold a perception that performance feedback is more likely to come from the superintendent than the teachers they supervise.

The means by which communication occurs and the perceptions of what constitutes open communication may be a factor in eliciting or preventing teacher-driven appraisal support of principals. For example, 48% of respondents selected *often* when confronted with the statement *[t]he teachers under my supervision openly communicate with me*, while 49% of respondents selected *sometimes* when confronted with the same statement (just 2.5% of respondents selected rarely or never). This suggests that, for nearly half the principals who participated in the survey, there are times when the teachers in the building do not openly communicate with them. This finding supports data from the Teacher Voice Report (Quaglia, 2014), a survey of nearly 8,000 teachers, which found that only 48% of teachers felt there was effective communication in their school and only 60% believed that the building administration was willing to learn from staff. As the author pointed out:

> [w]hile relatively high numbers of staff said the administration is accessible and visible, far fewer said this translates into effective communication and professional understanding. It is not enough for administration to be present—they must create, and provide for, meaningful interactions with school staff, fostering an environment of open, honest, and supportive communication (p. 20).

In order for principals to elicit appropriate and effective appraisal support from the teachers under their supervision, it is necessary that open communication exist in a culture that values trust and respect. To increase the frequency and types of appraisal support that teachers provide, principals will need to put in place open lines of communication in order to facilitate constructive dialogue between these two groups of professionals which ordinarily operate in a hierarchical supervisor/supervised environment.

Efforts to increase perceptions of superintendent support could focus on increasing the means and frequency of feedback that superintendents provide to the principals under their supervision. Regular evaluations of principal performance including both constructive criticism and positive affirmations of performance may have the potential to reduce loneliness. Additionally, it is important that principals and superintendents have a mutual understanding of what organizational and leadership success looks like. Otherwise, it is possible that feedback may be misinterpreted in light of their differing perceptions.

Perceptions of support from other school principals did not have as strong a predictive relationship as that ascribed to superintendents and teachers, but it was significant nonetheless.

What is most telling about the data is that, again, principals perceived the highest levels of support as being associated with emotional support while the lowest levels were associated with appraisal support. This means that across all three sub-groups, the form of support that principals found to be most lacking was the type of support related to providing feedback about their job performance. Hymovitz (1976) suggested that eliciting performance feedback from other school principals could be accomplished through the use of inter-visitations, in which other principals with demonstrated records of success visit the school site and provide objective recommendations and criticisms. Interestingly, the survey item *[o]ther school principals listen to me when I am frustrated* had a mean score of 3.36, higher than some of the items from the Superintendent sub-scale. This confirms previous research findings which suggested that some principals find support by talking about the frustrations of their professional position with other school principals (Boerema, 2011; Howard & Mallory, 2008; Pigot-Irvine, 2004; Dussault & Barnett, 1996).

While some principals view themselves as being the ultimate decision maker in their school by adopting a "buck-stops-here" mentality (Mercer, 1996), it is clear from the data gathered by this study that the form of support most lacking from their position is an affirmation that the decisions they are making are having an effect. This study provides evidence that appropriate and constructive performance feedback may be able to provide a benefit in terms of reducing loneliness. However, in order for appraisal support to provide the most benefit, it is important that principals understand the potential pitfalls associated with its reception. Kluger

and DeNisi (1997) described several steps involved in providing feedback, including collection, collation, reception, and interpretation, noting that the last two held particular importance. Vhora and Singh (2005) stated that most feedback can be rendered useless if not enough time is spent in its analysis and interpretation. In a study of school principals, the authors noted several mental traps encountered with the reception of feedback, including avoidance, denial, rationalization, superficiality in the interpretation, overreaction, over-dramatization, and self-pity, which may have helped the recipients to avoid anxious feelings but also prevented them from experiencing the positive benefits normally associated with constructive performance feedback. Thus, it is important that school organizations interested in increasing the actual and/or perceived levels of appraisal support be cognizant of these potential mental traps and raise the awareness of the recipient in order to ensure that appraisal support results in the intended benefit.

Suggestions for Further Research

Previous research studies have shown a connection between the role of the school principal as supervisor/gatekeeper and feelings of professional isolation (Boerema, 2011; Daresh and Male, 2000; Evetts, 1994; Mercer, 1996; Webster, 1989). However, isolation or professional isolation is not necessarily the same concept as loneliness. Indeed, it is unclear whether there is a direct, quantitative relationship between feelings of loneliness and the professional isolation that may accompany the role of the school principal. This research study has shown support for the hypothesis that principal's perceptions of social support in their workplace can act as a

moderate predictor of feelings of loneliness. Given the large number of research studies that identify characteristics of isolation within the principal's professional environment, it is important that research be done to explore whether isolation and loneliness play the same role and whether or not perceptions of social support can act as a buffer between the isolation of the position and feelings of loneliness.

This study primarily concerned itself with perceptions of social support as provided by three main organizational stakeholders (superintendents, teachers, and other school principals). However, there are additional groups that interact with the school principal that may bear interest for further study, including the student body, parents, the community/taxpayers, church and civic organizations, and state and national lawmakers/policy-setters. Each of these groups has the potential to impact the professional life of the school principal, and it would be of note to expand this study to include these additional groups and identify whether perceptions of wider support continue to play a role in predicting feelings of loneliness.

Finally, this study collected data from the perspective of a single role (the school principal), identifying the independent variable as *perceived* social support, rather than *actual* social support. It would be extremely interesting to determine whether actual social support, as measured by the perceptions of the researcher rather than the participant, had the same impact on levels of loneliness. For example, it would be important for various stakeholders to understand whether particular types or avenues of support had an effect on whether a principal perceived themselves as being supported and whether this difference impacted the extent to which a

principal experienced loneliness in their position, particularly as this could have consequences for the way in which school organizations structure leadership roles with the goal of increasing administrator retention rates.

Potential Limitations

As with any large-scale research study, there are several potential limitations to this study that must be taken into account. This study attempted to collect data on loneliness, a phenomenon that when experienced in an intense and/or prolonged form can result in negative emotions that may impact an individual's motivation to self-report their experience. Thus, it is possible that a number of individuals did not participate in the survey because they were currently experiencing a moderate to high-degree of loneliness, resulting in a skewed data set. If this is the case, the current regression model may not accurately account for the total population set. However, without additional data, one can only speculate as to the impact that this might have on the extent or nature of the currently propose regression model. It is possible that additional data may have reduced the currently reported skew in the data, which was heavily weighted towards participants that displayed relatively little loneliness.

Another potential limitation to the study was the reported racial/ethnic characteristics in the demographics of the sample. Nearly 98% of the sample reported themselves as white/Caucasian, which eliminated any ability to explore the impact that race and ethnicity might play in the connection between support and loneliness in the context of the principal's work environment. Additional demographic variables play a limiting role in the continued use of the

data, given the small number of individuals that fell within certain categories (specifically in the age ranges and the number of years in the role of the principal). Although these additional demographic variables did not play a limiting role in the immediate conclusions of this study, they do limit the potential to explore further conclusions with this data-set using specific demographics as model variables.

Finally, the conclusions of the study are potentially limited by the statistical assumptions used in determining the appropriateness of multiple regression as a model for exploring the study's hypotheses. While several of the assumptions in using multiple linear regression were met, the assumption of normality was not met and this has a potential impact on the possibility for error in the statistical model. Additionally, the scatterplot showed a high degree of data variability and the regression model accounted for less than 20% of the variance in the data. Low R^2 values are not uncommon in the social sciences research, particularly when one is working with real-world data from large populations, and the low variance is not necessarily an indication of the accuracy of the model. Instead, it suggests that perceived social support is only one potential variable impacting the phenomenon of loneliness, and that many other variables likely play a role.

Conclusion

Feelings of loneliness have significant potential to do harm to an individual, and even more so when they are felt over long periods of time. Loneliness can result in impaired physiological and mental health over time (Hawkley and Cacioppo, 2007; van Dulmen and

Goosens, 2013) and can lead to alcoholism, physical illness, depression, and attempts at suicide (Peplau and Perlman, 1982). School administrators are one particular group of professionals who may experience higher than average rates of loneliness as a result of professional isolation. This study was conducted in order to determine whether perceived levels of social support were predictive of levels of loneliness in public school principals. Subsequent data analysis using simple and multiple linear regression determined that a moderate, negative predictive relationship does exist between perceptions of social support and loneliness. Further, this relationship held true when analyzed for the sub-groups of teachers, superintendents, and other school principals, although perceptions of support provided by teachers had the strongest effect on the model.

When individual survey questions were analyzed, it was found that the lowest scores were associated with appraisal support, suggesting that efforts to decrease loneliness may be best targeted at increasing the ways in which different groups provide principals with feedback about their job performance. Further research efforts should focus on determining the extent and validity of this conclusion. Additionally, further research can, and should, explore the ways in which loneliness and isolation differ from one another in the context of the school principal and whether actual social support plays a greater role in the relationship than simply perceived social support. This study stands, primarily, as an exploratory research study and is limited by several factors, including the potentially skewed nature of the sample, the homogeneity of the sample with respect to race and ethnicity, and the particular assumptions used in choosing multiple

linear regression as a statistical model. Ultimately, it suggests the need for more data and a better understanding of the way in which school administrator's professional roles are impacted by variables such as social support, isolation, and loneliness. Further efforts to continue this line of research and expand on our understanding of the social and emotional aspects of school leadership are imperative.

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Appendix A: Cover E-mail

Dear Principal,

My name is Nathaniel Greene and I am a graduate student at Southern New Hampshire University. In conjunction with my dissertation, I am exploring the relationship between loneliness and social support in the workplace of the school principal. I would like to invite you to participate in this research study by completing an online survey questionnaire.

The survey will take approximately 10 minutes to complete. There is no compensation for responding. In order to ensure that all information will remain confidential, the survey will not ask you to identify your name in any way. If you choose to participate in this project, please answer all questions as honestly as possible and to the best of your ability. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist me with this research. The data collected will provide valuable information about the relationship between loneliness and social support in the workplace. If you would like a summary copy of this study, you may request one at the email address provided below. Completion and return of the survey questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please feel free to contact me at the email address listed below.

To access the survey, please go to the following address: (**insert survey link here)**.

Sincerely,

Nathaniel Greene
(nate.greene@snhu.edu)
Dr. Gibbs Kanyongo (Committee Chairperson)
(g.kanyongo@snhu.edu)

Appendix B: Survey Instrument

1. Please indicate your age range:
    a. 18-25
    b. 25-35
    c. 35-45
    d. 45-55
    e. 55-65
    f. 65 or older
2. Please indicate your gender:
    a. male
    b. female
3. How would you classify yourself?
    a. Arab
    b. Asian/Pacific Islander
    c. Black
    d. Caucasian/White
    e. Hispanic
    f. Latino
    g. Multiracial
    h. Other

4. What is the highest degree you have obtained?
    a. Bachelors Degree
    b. Masters Degree
    c. Certificate of Advanced Graduate Study (CAGS)
    d. Doctoral Degree
5. How long have you been a school principal?
    a. 1-5 years
    b. 6-10 years
    c. 11-15 years
    d. 16-20 years
    e. more than 20 years
6. How long have you been employed with your current district?
    a. 1-5 years
    b. 6-10 years
    c. 11-15 years
    d. 16-20 years
    e. more than 20 years
7. In what type of school are you the principal?
    a. elementary school
    b. middle school

c. high school

d. K-12 school

e. other

8. How would you classify the type of school district you work for?

a. rural

b. suburban

c. urban

9. In what state are you currently employed as a school principal?

a. Maine

b. Massachusetts

c. New Hampshire

d. Rhode Island

Indicate how often each of the statements below is descriptive of you.

O indicates “I often feel this way”

S indicates “I sometimes feel this way”

R indicates “I rarely feel this way”

N indicates “I never feel this way”

10. My superintendent listens to my concerns O S R N

11. My superintendent trusts me	O S R N
12. My superintendent provides useful information when I need it	O S R N
13. My superintendent provides access to helpful resources	O S R N
14. My superintendent helps me make decisions	O S R N
15. My superintendent helps me solve problems	O S R N
16. My superintendent provides feedback on my performance	O S R N
17. My superintendent tells me when I've done something well	O S R N
18. The teachers under my supervision care about my well-being	O S R N
19. The teachers under my supervision trust me to make good decisions	O S R N
20. The teachers under my supervision openly communicate with me	O S R N
21. The teachers under my supervision give me information in a timely manner	O S R N
22. The teachers under my supervision volunteer to help with tasks	O S R N
23. The teachers under my supervision take on additional responsibilities when asked	O S R N
24. The teachers under my supervision tell me when I've done something well	O S R N
25. The teachers under my supervision give me useful feedback on my performance	O S R N
26. Other school principals listen to me when I am frustrated	O S R N

27. Other school principals care about my well being	O S R N
28. Other school principals provide me with useful information	O S R N
29. Other school principals direct me to helpful resources	O S R N
30. Other school principals help me solve difficult problems	O S R N
31. Other school principals show me how to approach different situations	O S R N
32. Other school principals give me feedback about my performance	O S R N
33. Other school principals tell me when I've done something well	O S R N
34. I am unhappy doing so many things alone	O S R N
35. I have nobody to talk to	O S R N
36. I cannot tolerate being so alone	O S R N
37. I lack companionship	O S R N
38. I feel as if nobody really understands me	O S R N
39. I find myself waiting for people to call or write	O S R N
40. There is no one I can turn to	O S R N
41. I am no longer close to anyone	O S R N
42. My interests and ideas are not shared by those around me	O S R N
43. I feel left out	O S R N
44. I feel completely alone	O S R N
45. I am unable to reach out and communicate with those around me	O S R N
46. My social relationships are superficial	O S R N

47. I feel starved for company	O S R N
48. No one really knows me well	O S R N
49. I feel isolated from others	O S R N
50. I am unhappy being so withdrawn	O S R N
51. It is difficult for me to make friends	O S R N
52. I feel shut out and excluded by others	O S R N
53. People are around me but not with me	O S R N

Appendix C: Raw and Scaled Factor Loads

	Factor 1: Perceived Support from Other Principals		Factor 2: Perceived Support from Superintendent		Factor 3: Perceived Support from Teachers	
	Raw	Scaled	Raw	Scaled	Raw	Scaled
Other school principals show me how to approach different situations	.730	.906				
Other school principals help me solve difficult problems	.734	.902				
Other school principals direct me to helpful resources	.650	.852				
Other school principals provide me with useful information	.631	.846				
Other school principals care about my well being	.639	.787				
Other school principals listen to me when I am frustrated	.605	.773				
Other school principals tell me when I've done something well	.650	.705				
Other school principals give me feedback about my performance	.549	.615				
My superintendent helps me solve problems			.642	.841		
My superintendent provides useful information when I need it			.582	.812		
My superintendent provides access to helpful resources			.613	.794		
My superintendent helps me make decisions			.601	.790		
My superintendent listens to my concerns			.536	.754		
My superintendent tells me when I've done something well			.631	.728		
My superintendent provides feedback on my performance			.580	.683		

My superintendent trusts me	.416	.651		
The teachers under my supervision tell me when I've done something well			.533	.719
The teachers under my supervision care about my well being			.437	.673
The teachers under my supervision volunteer to help with tasks			.417	.671
The teachers under my supervision give me useful feedback on my performance			.454	.638
The teachers under my supervision trust me to make good decisions			.306	.586
The teachers under my supervision take on additional responsibilities when asked			.352	.581
The teachers under my supervision openly communicate with me			.313	.564
The teachers under my supervision give me information in a timely manner			.277	.504

Appendix D: Table of Correlations

Table of Correlations

		Loneliness	Superintendent Support	Teacher Support	Other Principal Support
Pearson Correlation	Loneliness	1.000	-.280	-.405	-.195
	Superintendent Support	-.280	1.000	.149	.159
	Teacher Support	-.405	.149	1.000	.249
	Other Principal Support	-.195	.159	.249	1.000
Sig. (1-tailed)	Loneliness	.	.000	.000	.000
	Superintendent Support	.000	.	.002	.001
	Teacher Support	.000	.002	.	.000
	Other Principal Support	.000	.001	.000	.
N	Loneliness	365	365	365	365
	Superintendent Support	365	365	365	365
	Teacher Support	365	365	365	365
	Other Principal Support	365	365	365	365