Comparison of Leadership Styles and Perceived Ability to Meet the Psychological and

Social Support Needs of Employees Who Show High or Low Levels of Engagement

Submitted by

Karyn Jean Edwards

A Dissertation Presented in Partial Fulfillment

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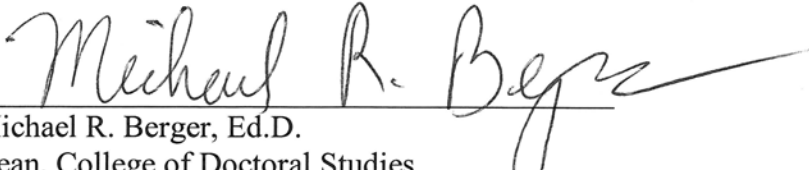Approved

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Comparison of Leadership Styles and Perceived Ability to Meet the Psychological and

Social Support Needs of Employees Who Show High or Low Levels of Engagement

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Abstract

The purpose of this quantitative, causal-comparative study was to explore to what extent leadership style effects perceived ability to meet the psychological needs and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. The theoretical foundations for this study include Leader-Member Exchange Theory (LMX) and self-determination theory (SDT). The sample included ($N = 342$) employees in a corporate hospitality organization with two primary locations in the US. Four instruments measured the variables in this study; the Multifactor Leadership Questionnaire (MLQ 5X-Short), the Utrecht Work Engagement Scale, the Work-Related Basic Psychological Need Satisfaction Scale and finally, the Management Standards Indicator Tool, subscale of managerial support. There was a statistically significant leadership style effect on the combined dependent variables, $F(4, 646) = 24.07$, $p = .000$, Pillai's Trace = .259, partial $\eta^2 = .130$. There was a statistically significant engagement effect on the combined dependent variables, $F(2, 322) = 33.949$, $p = .000$, Pillai's Trace = .174, partial $\eta^2 = .174$. There was a statistically significant main effect of engagement on psychological needs, $F(1, 323) = 67.942$, $p = .000$, partial $\eta^2 = .174$, and on social support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. There was a statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p = .009$, partial $\eta^2 = .029$, and on social support, $F(2, 323) = 43.716$, $p = .000$, partial $\eta^2 = .213$.

Keywords: Hospitality, Leadership, Engagement, Social Support, Psychological Needs, Geographic Dispersion

Dedication

This dissertation is dedicated to my parents Ann and Neal McLaughlin. My parents set the foundation for my education and the importance of perseverance. I also want to dedicate this work to my family, Scott, Jacob and Allyson Edwards. I hope that the sacrifices they made in separation and time during this process will be positive memories on what it takes to achieve long term goals.

Acknowledgments

My gratitude goes to my dissertation committee, specifically to Dr. Zaikina-Montgomery, who provided true partnership, sincerity and encouragement throughout the dissertation journey. I also want to thank Dr. Marshall who stepped in to help without hesitation when I needed it most, and to Dr. Smith provided sage advice on the complexity I was undertaking throughout the process. My sincere gratitude also goes to Stephanie Lykins for being a champion for original research and an advocate in all pursuits; she is fantastic leader. I am also grateful for the many participants that generously agreed to take time away from work to complete the questionnaire to support my data collection effort. I also want to appreciate Angelica Farias-Gardner inspiring me and for her and help with editing and content feedback. I also thank my friends and family who have supported me with a kind word of encouragement or an idea.

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Chapter 1: Introduction to the Study

Introduction

The requirements of a leader have evolved as organizational hierarchies migrate toward agile, matrixed and often geographically dispersed structures (Avolio, Sosik, Kahai, & Baker, 2014; Fusco, O'Riordan, & Palmer, 2015). This is especially true in the hospitality industry, where employees support physically dispersed geographic properties and global marketing and technology requirements (Marr, 2016). The hospitality industry is expected to grow six percent by the year 2024, adding close to a million new jobs in the United States. (Bureau of Labor Statistics, 2016; Yi-Lin, Dev, & Chintagunta, 2015). In an industry that is growing, the performance of a team, specifically in the ability to innovate and solve problems, requires leaders that can drive results through effective working relationships with employees (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Studying an organization, in the hospitality industry, with employees that work in multiple locations, with both a heavy service and professional technology footprint, is timely and relevant to understanding how the needs of individuals are changing (Birdie & Jain, 2015).

More than $15 billion dollars are spent annually in the United States on skill building related to leadership competencies (Bersin, 2014). Leadership competencies include both the ability to achieve business results and the interpersonal and social skills required to connect with employees (Lombardo & Eichinger, 2009). The behaviors that leaders exhibit when influencing followers in pursuit of achieving goals is referred to as a leadership style (Hamstra, Van Yperen, Wisse, & Sassenberg, 2014). Leadership styles are associated with positive and negative work outcomes based on employee's

perceptions of daily interactions with leaders; these interactions are the foundation of engagement or disengagement (Avery, McKay, & Wilson, 2007; Fusco et al., 2015; Kahn, 1990; Kovjanic, Schuh, & Jonas, 2013). The Full Range Leadership model includes the styles of transformational, transactional and passive-avoidant (Bass & Avolio, 1994; Skogstad, Hetland, Glaso, & Einarsen, 2014b). These styles of leadership are not mutually exclusive and leaders use a combination of styles depending on circumstance (Kahai, Jestire, & Rui, 2013; Rowold, 2014). Employee engagement is positively related to business outcomes such as productivity, intent to stay and lower absenteeism (Chaudhary, Rangnekar, & Barua, 2011). Despite discussions in past literature on the full-range leadership model, the articles located failed to describe how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. The topics explored in this study aimed to compare how leadership styles (transformational, transactional and passive-avoidant), effect the perceived ability of the leader to meet psychological needs (autonomy, competence, and relatedness) and provide social support that consequently encourages or discourages engagement in the workplace (Schreurs, van Emmerik, Van den Broeck, & Guenter, 2014).

Burch and Guarana (2014) examined the influences of transformational leadership and leader-member exchange (LMX) on employee engagement for employees of a multinational technology firm and found that the relationship between the employee and leader is paramount and that transformational leadership is an effective leadership style.

Vogelgesang, Leroy, & Avolio (2013) studied the effects of leader integrity to work engagement and performance on military cadets and found that a leader's perceived integrity is an antecedent to employee engagement. An employee's direct leader is consistently reported as the main point of connection between the organization and the employee (Breevaart et al., 2014; Song, Kolb, Lee, & Kim, 2012). The direct leader offers opportunities, assignments, development, and growth that fosters a connection and influences engagement to the organization, department, and team (Kahn, 1990; Loi, Chan, & Lam, 2014; Shuck & Wollard, 2010).

As organizations look for ways to hire the best talent regardless of where they reside, and technology advances to make working anywhere simple, employees are increasingly working remotely, not collocated with colleagues in a central work location (Avolio et al., 2014; Hoch & Kozlowski, 2014; Magni, Maruping, Hoegl, & Proserpio, 2013; Quisenberry & Burrell, 2012; Segura, Sarkani, & Mazzuchi, 2013). The U.S. Census Bureau reports that working from home and remote from co-workers is steadily increasing in the United States (Mateyka, Rapino, & Landivar, 2012). Geographic dispersion introduces additional barriers to building effective relationships at work (Avolio et al., 2014; Quisenberry & Burrell, 2012). Time zone variations limit the number of shared working hours in a day, physical distance limits face-to-face interaction and both of these factors can interfere with building rapport and relationships within a team (Avolio et al., 2014; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). The same techniques that leaders apply in face-to-face interactions may need adjustment when team members are not in the same physical work location (Avolio et al., 2014; Gajendran & Joshi, 2012; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

Researchers have studied a broad variety of psychological and social variables that exist in the relationship between a leader and their team members. Alacron & Lyons (2011) studied the relationship between the three factors of employee engagement; vigor, dedication and absorption, and job satisfaction and determined that they are different constructs by studying undergraduates, and a sample of working professionals across a variety of industries. Kovjanic Schuh, Jonas, Van Quaquebeke, & Van Dick (2012) sampled a broad cross-section of workers in Germany and found that meeting psychological needs (autonomy, competence, relatedness) was positively related to job satisfaction and that transformational leadership styles were most effective in meeting psychological needs. Alessandri, Borgogni, Schaufeli, Caprara, & Consiglio (2015) examined the role of employee engagement and self-efficacy on job performance among employees who worked in the security industry and found that positive self-efficacy leads to engagement. Milam (2015) studied employee engagement and the role organizational factors have in facilitating the environment to optimize performance from a sample of employees in education, finance, and healthcare, and found that employees high in the personality trait of conscientiousness tend to be the most engaged. Khan, Talat, and Azar (2015) studied employees in the banking industry to determine the impact of factors that affect organizational commitment on employee engagement and found that factor such as training, rewards, communication and teamwork were positively related to engagement. Employee engagement is positively related to productivity and reduced turnover in organizations (Chaudhary et al., 2011).

In the workplace, employee engagement is shown to depend on a variety of factors (Alacron & Lyons, 2011; Khan et al., 2015; Milam, 2015; Robertson & Cooper,

2010). However, determining the factors that influence employee engagement was outside of the scope of this study. For the purposes of this research, employee engagement was treated as a preexisting trait, similar to how naturally occurring independent variables are researched. The literature to date failed to compare transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry.

This chapter provides the framework for the present study and a brief introduction to prior research on the topics included. This chapter also introduces the rationale for examining the variables presented in the problem statement. This chapter concludes with a presentation of the research questions and hypothesis, discusses the purpose and significance of the study, defines key terms, discusses assumptions and limitations, and reviews the research methodology and design. With physical work locations changing, and the requirements of a leadership evolving to support agile, matrixed and often geographically dispersed organizational team structures, future researchers will benefit from the results of a study on social support, psychological needs and geographic dispersion as a set of factors that impact employees with both high and low engagement in the hospitality industry (Fusco et al., 2015; Mateyka et al., 2012; Schreurs et al., 2014). The findings from this study will also benefit the organization included in the research with information about the current engagement of their workforce, based on perceptions of meeting psychological needs, the styles of leadership demonstrated in the work environment, and the impact of geographic dispersion on psychological needs.

Background of the Study

Transformational, transactional and passive-avoidant styles of leadership are some of the most commonly studied in literature (Bass & Avolio, 1994; Skogstad et al., 2014a). According to Leader-member exchange theory (LMX), a leader forms a unique relationship with each employee that develops and matures from knowing little about one another to a trusted partnership (Burch & Guarana, 2014; Graen, 1976). The interactions of the leader and employee are influenced by a network of other relationships within the organizational hierarchy, which influence the perceived ability of the leader to meet psychological needs (autonomy, competence, relatedness) and provide social support to the employee (Graen & Uhl-Bien, 1995).

Leadership support for the psychological needs (autonomy, competence, relatedness) of employees is the basis of Self-Determination Theory (SDT) (Deci & Ryan, 2000; Williams et al., 2014). According to SDT, employees have psychological needs in the workplace that drive their engagement and performance; specifically related to autonomy, competence, and relatedness (Deci & Ryan, 2000; Kovjanic et al., 2013). The personal connections built at work create social support networks that reduce the sense that work-related challenges must be addressed alone, and provide comfort to the individual and team through a collective sense that the obstacles they face are shared (Avanzi, Schuh, Fraccaroli, & van Dick, 2015; Trepanier, Fernet, & Austin, 2013). When employees feel, they have supportive relationships, and they are adding value to the organization, greater performance in the quantity and quality of work results (Kovjanic et al., 2013).

Engagement at work is demonstrated when employees offer emotional, cognitive and psychological expressions of themselves in the performance of their roles (Kahn, 1990). Discretionary effort is the extent to which employees will stretch their skills, offer time and effort to help the organization and their co-workers (Frenkel, Restubog, & Bednall, 2012). This type of effort is important for organizations to harness for work outcomes and to attract and retain talented employees as a competitive advantage (Chaudhary et al., 2011). Early in the 21st century, employees who work remotely from their leader and team have become more common in organizations (Birdie & Jain, 2015; Mateyka et al., 2012; Schweitzer & Duxbury, 2010). Geographic dispersion affects how relationships are formed among co-workers and between leaders and followers; adding obstacles to meeting psychological and social needs (Hoch & Kozlowski, 2014; Magni et al., 2013; Quintana, Park, & Cabrera, 2015; Quisenberry & Burrell, 2012).

Survey design is frequently utilized as a method of data collection when studying leadership. Bass and Avolio's (2004), Multifactor Leadership Questionnaire is a commonly utilized instrument to study leadership styles. Similarly, the most common survey deployed to review employee engagement in the literature is the Utrecht Work Engagement Scale (UWES-17) (Schaufeli & Bakker, 2003). The Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) (Van den Broeck, Vansteenkiste, DeWitte, Soenens, & Lens, 2010) is consistently used to assess psychological needs (autonomy, competence, relatedness). The UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT), is utilized less often and measures seven dimensions of the work environment including job demands, social support, and working relationships (Cousins et al., 2004; Edwards, Webster, Van Laar, & Easton, 2008). Use of

these instruments in isolation is incapable of adequately providing data for the variables in this study, however, when used in conjunction, the scales provide the necessary data to respond to the research questions in this study. In addition, no studies located to date have utilized all four of these scales to assess how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. A visual summary of the instruments used in this study can be reviewed in Table 7.

Problem Statement

As workplace dynamics change, the study of leadership and followership is critical for supporting organizations as they develop talent to maintain a competitive advantage (Christian, Garza, & Slaughter, 2011; Kovjanic et al., 2013; Macey & Schneider, 2008; Song et al., 2012). The problem that guided this study was: it is not known how transformational, transactional, and passive-avoidant leaders compare in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry.

 The sample group for this study included employees who worked in information technology and corporate marketing in a hospitality organization with locations across two main sites in the United States. These two employee groups were selected because much of the work in corporate hospitality focuses on data analytics, gleaned from information technology and marketing to consumers (Marr, 2016). The study findings

can extend to support organizations with responsibility for technology and marketing within corporate environments across multiple physical locations. Employees who have technical skills in information technology and in technical professional positions, such as marketing, are in high demand across a variety of industries (Bureau of Labor Statistics, 2016). This study contributed to increasing knowledge about teams that are not collocated. Working virtually is a trend that is increasing in the 21st century (Birdie & Jain, 2015; Mateyka et al., 2012). Geographically dispersed teams are more challenging to lead and motivate (Avolio et al., 2014; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Making connections, both psychological and social, when employees are remote is bringing a new set of dynamics to teams and leadership (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Building the connection between the employee, the leader, and virtual team members requires more effort to engage and different management strategies (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

Purpose of the Study

The purpose of this quantitative, causal-comparative study was to explore to what extent transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. The population included approximately 1,300 employees of a hospitality organization dispersed across locations in the United States; one primary location in the southwestern U.S., the other in the Mid-Atlantic region of the country, and finally employees who are working across many locations in the U.S., known as field employees. The sample

included approximately 800 employees who work in the technology and marketing teams. This sample was selected because the employees who support technology and marketing are core to the global demands and evolving business requirements of the hospitality industry (Marr, 2016).

Employees completed survey instruments to determine their level of engagement, fulfillment of their psychological (autonomy, competence, relatedness), and social support needs, and determined the leadership style of their leader. Bass and Avolio's (2004) Multifactor Leadership Questionnaire (MLQ-5X) measured leadership styles on a full range of uses from ineffective leadership approaches, that avoid making decisions or taking action, known as passive-avoidant, to common approaches to correcting errors, explaining expectations and designing reward systems, techniques typical of transactional leadership, and finally highly charismatic leadership, which encourages intellectual stimulation and employee development, known as transformational leadership. The independent variable of employee engagement was measured by the scores retrieved from the Utrecht Work Engagement Scale (UWES-17), which was developed by Schaufeli and Bakker (2003) to determine engagement based on vigor, dedication and absorption (Song et al., 2012). The dependent variable of psychological needs (autonomy, competence, relatedness) was measured by scores retrieved from the Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) developed by Van den Broeck et al., (2010) and designed to measure autonomy, competence and relatedness (Chiniara & Bentein, 2016; De Cooman, Stynen, Van den Broeck, Sels, & DeWitte, 2013; Schreurs et al., 2014). The dependent variable of social support was measured by scores retrieved from the U.K. Health and Safety Executive (HSE) Management

Standards Indicator tool (MSIT), which measures seven dimensions of the work environment including job demands, social support, and working relationships (Cousins et al., 2004; Edwards et al., 2008).

Research Question(s) and Hypotheses

Transformational, transactional, and passive-avoidant are distinct styles of leadership (Bass & Avolio, 2004). Comparing a leader's ability to meet psychological needs (autonomy, competence, relatedness) and social support needs, on the basis of leadership style for employees who work on virtual teams in geographically dispersed locations and show high or low levels of engagement was the focus of this study. The survey instruments used were based on scholarly work; reliable and valid. A visual representation of the instruments is included in Table 7. Surveymokey.com was utilized to gather data from employees, which included employees that were collocated and those that are geographically dispersed from their leader and team, working in the hospitality industry.

The independent variables are leadership style, employee engagement, and geographic location. The dependent variables are psychological needs (autonomy, competence, relatedness) and providing social support. Tables 1-6 display a visual organization of the variables based on the research questions. The following research questions guided this quantitative, non-experimental, causal-comparative study:

RQ1: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

Table 1

Research Question 1: Geographic Location Mid-Atlantic (IV$_3$)

		Leadership Style (IV$_1$)		
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV$_2$)	Highly Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)
	Low Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)

Table 2

Research Question 1: Geographic Location Southwest (IV$_3$)

		Leadership Style (IV$_1$)		
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV$_2$)	Highly Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)
	Low Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)

Table 3

Research Question 1: Geographic Location Mid-Atlantic (IV$_3$)

		Leadership Style (IV$_1$)		
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV$_2$)	Highly Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)
	Low Engaged Employee	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)	Perceived ability to provide social support (DV$_1$)

H1$_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to provide social support.

H1a: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to provide social support.

H2$_0$: There is not a statistically significant effect among leaders on perceived ability to provide social support by geographic location.

H2a: There is a statistically significant effect among leaders on perceived ability to provide social support by geographic location.

H3$_0$: There is not a statistically significant effect among leaders on perceived ability to provide social support to employees with high and low engagement.

H3a: There is a statistically significant effect among leaders on perceived ability to provide social support to employees with high and low engagement.

H4$_0$: There is not a statistically significant leadership style effect by geographic location on perceived ability to provide social support interaction.

H4a: There is a statistically significant leadership style effect by geographic location on perceived ability to provide social support interaction.

H5$_0$: There is not a statistically significant leadership style by employee engagement effect on perceived ability to provide social support interaction.

H5a: There is a statistically significant leadership style by employee engagement effect on perceived ability to provide social support interaction.

H6₀: There is not a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H6a: There is a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H7₀: There is not a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

H7a: There is a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

Table 4

Research Question 2: Geographic Location Mid-Atlantic (IV₃)

| | | Leadership Style (IV₁) | | |
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV₂)	Highly Engaged Employee	Perceived ability to meet psychological needs (DV₂)	Perceived ability to meet psychological needs (DV₂)	Perceived ability to meet psychological needs (DV₂)
	Low Engaged Employee	Perceived ability to meet psychological needs (DV₂)	Perceived ability to meet psychological needs (DV₂)	Perceived ability to meet psychological needs (DV₂)

Table 5

Research Question 2: Geographic Location Southwest (IV$_3$)

		Leadership Style (IV$_1$)		
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV$_2$)	Highly Engaged Employee	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)
	Low Engaged Employee	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)

Table 6

Research Question 2: Geographic Location Field (IV$_3$)

		Leadership Style (IV$_1$)		
		Transformational Leader	Transactional Leader	Passive-avoidant Leader
Employee Engagement (IV$_2$)	Highly Engaged Employee	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)
	Low Engaged Employee	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)	Perceived ability to meet psychological needs (DV$_2$)

H8$_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H8a: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H9$_0$:   There is not a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H9a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H10$_0$:   There is not a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H10a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H11$_0$:   There is not a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H11a: There is a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H12$_0$:   There is not a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H12a: There is a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H13[0]: There is not a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H13a: There is a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14[0]: There is not a statistically significant leadership style, by employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14a: There is a statistically significant leadership style by, employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

Advancing Scientific Knowledge

This study supported existing research by investigating how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. Prior research has shown that transformational leaders are effective in fostering follower engagement (Dvir, Eden, Avolio, & Shamir, 2002; Tims, Bakker, & Xanthopoulou, 2011; Zhu, Avolio, & Walumbwa, 2009). Transactional leaders that utilize contingent reward are also effective in facilitating follower engagement (Breevaart, et al., 2014). Passive-avoidant leadership is considered the most ineffective leadership style, shows a negative impact on job

satisfaction over time and includes counterproductive work behaviors such as withdrawal, passivity and reduced attendance (Skogstad et al., 2014b).

The past research included several gaps in understanding how leadership styles (transformational, transactional, passive-avoidant) compare in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, and geographical dispersion (Birdie & Jain, 2015; Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). Organizations are relying more on virtual teams for innovation and diversity of ideas (Gajendran & Joshi, 2012). Geographic dispersion has been shown to have a negative effect on performance and satisfaction, particularly if traditional hierarchal leadership styles (transformation, transactional) are utilized (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). The employee's perception of the leader's ability to meet psychological needs and facilitate social support on a team is an important consideration in making connections with the drivers of engagement (Deci & Ryan, 2008). However, there has been limited review of the influence of geographic dispersion and virtual teams on perceptions of leadership effectiveness based on comparison of style (transformational, transactional and passive-avoidant) in perceived ability to meet psychological needs (autonomy, competence, relatedness) and providing social support to employees that demonstrate high and low levels of engagement (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010).

According to Leader-Member Exchange Theory (LMX), relationships are based on familiarity and connection between the leader and the employee and they range on a continuum from stranger to partner, with the latter being beneficial to organizational

outcomes (Graen, 1976; Graen & Uhl-Bien, 1995). The premise of LMX is that leaders form relationships that support the emotional and psychological needs of each employee uniquely (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Graen, 1976). The dyad of a leader and employee and in-group/out-group social system has an influence on the emotional psychological needs of an employee and their engagement in the workplace (Goh & Wasko, 2012). Leaders are increasingly responsible for connecting with employees who are geographically dispersed from their location (Hoch & Kozlowski, 2014). Research on leaders who have responsibility for forming a relationship with team members who are geographically dispersed has been scarce and application of LMX has received limited exploration in literature to date (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Hoch & Kozlowski, 2014). The results of the proposed investigation supported scientific knowledge about the comparison of leadership styles (transactional, transformational and lassie-faire) and their effects on meeting psychological needs (autonomy, competence, relatedness) and receiving social support based on geographic dispersion by exploring the conditions that support high and low levels of engagement in the workplace.

Significance of the Study

Employees who are invested in their work and the goals of their organization, give extra effort, put forward personal drive and energy over sustained periods, and intertwine part of their identity with an organization. (Brajer-Marczak, 2014; Consiglio, Borgogni, Di Tecco, & Schaufeli, 2016; Kovjanic et al., 2013). Employees want to have influence over how their work is accomplished (Consiglio et al., 2016; Baldoz, Koeber, & Kraft, 2001). Understanding what drives a high level of commitment to an

organization and the resulting benefits of engagement has become an important consideration for organizations as the workforce evolves in the 21st century (Brajer-Marczak, 2014; Consiglio et al., 2016). Adding to the challenge of social connection and engagement, employees may not be in the same physical location as their leader or team; the global economy and technological advances are making geographic dispersion of teams more common (Fusco et al., 2015; Mateyka et al., 2012; Schreurs et al., 2014).

The hospitality industry is growing and currently employs over 200 million people globally, with 2 million people employed in the U.S. (American Hotel & Lodging Association, 2016; Gaille, 2014). The global nature of the workforce is bringing the world much closer, fundamentally altering the workplace (Birdie & Jain, 2015). This globalization that has networked virtual and dispersed employees has not been accompanied by an understanding of the social and psychological needs to create an effective work environment (Birdie & Jain, 2015). Employees have psychological needs (autonomy, competence, relatedness) and a need for social support in the workplace that drives their engagement and performance (Consiglio et al., 2016; Kovjanic et al., 2013). Each relationship between an employee and their leader uniquely matures until partnerships are formed in dyadic interactions (Gajendran & Joshi, 2012; Graen, 1976; Graen & Uhl-Bien, 1995). The dyad continues to be shaped by other social relationships within organizations that influence the interactions between the leader and the employee (Graen & Uhl-Bien, 1995). In an organization that has employees and leaders working in different locations, there was an added complexity to forming relationships, meeting psychological needs (autonomy, competence, and relatedness) and providing social support (Gajendran & Joshi, 2012; Segura et al., 2013; Quisenberry & Burrell, 2012).

Styles of leadership, engagement, and psychological needs are well studied in the workplace as constructs (Bass & Avolio, 1994; Deci & Ryan, 2000; Kovjanic et al., 2012; Lynch, Plant, & Ryan, 2005; Skogstad et al., 2014b; Van den Broeck et al., 2010) however, gaps exist in literature on the interaction of theses variables and the influence of social support to the dynamic of virtual teams. Meeting the psychological needs of employees has been established as an important predictor of employee engagement (Deci & Ryan, 2000; Christian et al., 2011). The ability to work remotely, away from a traditional office is increasingly an option for employees based on advances in technology and is steadily increasing as an approach to hiring talent in organizations in the United States based on information from the US Census Bureau (Mateyka et al., 2012). Social support and psychological needs (autonomy, competence, relatedness) are part of the motivation that keeps employees engaged and offering their discretionary efforts to the benefit of the organization in the form of productivity and profitability (Consiglio et al., 2016). This study offered insights about the variables by comparing the influence of each on employees who show high and low levels of engagement. Specifically adding to the body of research about employees who are not collocated with their team or leader, separated by time zones and a large geographic area and in an industry, that includes both services and technology in the United States.

Rationale for Methodology

Quantitative methods utilize numeric systems to reveal relationships between variables and then apply a deductive process to support or refute hypotheses (Edmonds & Kennedy, 2013). Selecting a quantitative research design was based on the research questions in this study, which aimed to explore employee perceptions of their leader's

ability to meet psychological needs and provide social support based on leadership style and the individual's level of engagement. Quantitative methods generally define variables in advance and then quantify observations (Edmonds & Kennedy, 2013). The decision to use a quantitative method was based on the research questions and subsequent hypotheses (Jha, 2008).

A numeric data set resulted from the survey comprised of four instruments that measured the multiple variables and constructs associated with the topic of leadership, engagement, social support and psychological needs (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). The quantitative data collected revealed the incidence of and comparison between the dependent variables of social support and psychological needs (autonomy, competence, relatedness) based on the presence of the specific independent variables of employee engagement and leadership styles (transformational leaders compared with transactional and passive-avoidant) (Edmonds & Kennedy, 2013; Rudestam & Newton, 2001).

Nature of the Research Design for the Study

The research design provided a strategy that added beneficial evidence to the body of information on the subject of the study (Jupp, 2006). The design for this study was non-experimental causal-comparative, utilizing survey methodology. Data were collected from a specific population of 800 employees in the hospitality industry to gather their opinions and attitudes about the variables under study at a single point in time, using one of the most common approaches to non-experimental design, surveying (Edmonds & Kennedy, 2013). The four survey instruments captured data about employee engagement, leadership styles (transformational leaders, transactional, and passive-

avoidant), social support and psychological needs (autonomy, competence, relatedness) of geographically dispersed employees in the hospitality industry (Rudestam & Newton, 2001).

Non-experimental, causal-comparative designs are utilized when there is no control or manipulation of the independent variables (leadership style, engagement level, geographic location) and a degree of association is examined, because causal relationships can only be inferred from experimental research (Edmonds & Kennedy, 2013). Experimental design was not used because the study did not seek to manipulate the independent variables, but rather sought to understand how the variables were associated within the current organizational environment (Ranjit, 2014). Quasi-experimental approaches were not planned for this research, because there was no manipulation of the independent variable, survey methods generalized the results to the population rather than determine cause and effect (Ranjit, 2014). Additionally, the study aimed to offer the same opportunity for employees in the organizational areas identified to participate rather than have a control group established (Ranjit, 2014).

Causal-comparative designs are the most common type of design for non-experimental research (Edmonds & Kennedy, 2013). This design supports the problem statement, how do transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry? Employee engagement, geographic location, and leadership styles were the independent variables and psychological needs (autonomy, competence,

relatedness) and social support were the dependent variables. The non-experimental study relied on interpretations of the data through statistical analysis using MANOVA due to the number of independent and dependent variables (Edmonds & Kennedy, 2013). Tables 8 and 9 list assumptions for MANOVA and how they were met or tested in this study. Leadership styles (transformational leaders, transactional, and passive-avoidant), geographic location, and employee engagement were naturally found in the environment being researched. The variables under study may have been effected by interaction effects occurring in the work environment and were best researched using a non-experimental research design (Vogt, 2011).

The survey instruments planned for use were based on scholarly work, reliable and valid. They included Bass and Avolio's (2004) Multifactor Leadership Questionnaire, short form (MLQ-5X), the Utrecht Work Engagement Scale (UWES-17) developed by Schaufeli and Bakker (2003), the Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) developed by Van den Broeck et al., 2010, and the UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT) (Cousins et al., 2004). Table 7 summarizes the instruments used in this study. An online web-survey platform was utilized to gather data on 115 total questions from four surveys. Approximately 800 employees in the southwestern, Mid-Atlantic and field regions of the United States working in the hospitality industry were invited to participate. The sample included employees that were collocated and those that were geographically dispersed from their leader and team. The sampling technique utilized was purposive based on the small size of the organization and the desire to include employees from the business area that had the larger employee populations and the limited geographic locations of the

employees (Lavrakas, 2008). Appendix E includes a screen capture of the priori G*Power calculation for the sample. A limitation of purposive sampling is the subjectivity of the selection process and the limited inferences in relating the results to the rest of the organization (Lavrakas, 2008).

Definition of Terms

This study incorporates leadership styles (transformational, transactional and passive-avoidant), emotional needs and psychological needs in the workplace. These areas of study have terms that are frequently utilized. The following terms were used operationally in this study:

Employee engagement. Defined as a positive motivation and full psychological commitment towards work related activities that include high energy (vigor), pride (dedication) and engrossment (absorption) (Kahn, 1990; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002; Song et al., 2012). Engagement is associated with a positive state of mind and is demonstrated by employees through perseverance, despite difficulties, towards meeting the organization's goals and objectives, personal initiative, a sense of ownership and dedication to the work that they perform (Macey & Schneider, 2008; Schaufeli & Bakker, 2010). Kahn (1990) explains that engagement is the demonstration of how emotionally, cognitively and physically people express themselves in the performance of their roles.

Leadership styles. There are a number of different leadership styles, the most often referred to in research, include transformational, transactional and laisse-faire (a subset of transactional leadership) (Arnold, Connelly, Walsh, & Martin Ginis, 2015; Kovjanic et al., 2013). Transformational leadership was first introduced by Burns (1978)

as a type of leadership that engaged followers in order to foster the achievement of potential by meeting higher needs. The four elements of transformational leadership include inspiring and motivating employees towards a future vision, intellectual stimulation, competent and considerate of the uniqueness and value of each individual, and fostering an environment where employees contribute fully (Kovjanic et al., 2013). Transactional leadership has sub-styles that are defined by activities such as providing clear expectations (active), monitoring for mistakes (passive management by exception), avoidance (passive-avoidant) and rewarding achievements based on set goals (contingent reward) (Arnold et al., 2015). Passive-avoidant leadership is a subset of transactional leadership and is the absence of leader psychologically and often physically from work (Arnold et al., 2015). Passive-avoidant leaders are withdrawn from the leadership functions and demonstrate a pattern of inaction and avoidance of making decisions (Bass & Avolio, 1995a).

   Psychological needs. Self-determination theory predicates that there are psychological needs that motivate and drive behavior; they include autonomy, competence, and relatedness (Lynch et al., 2005; Van den Broeck et al., 2010). Autonomy is the psychological freedom associated with the ability to self-organize and choose when and how work activities are accomplished (Deci & Ryan, 2000; Kovjanic et al., 2012; Lynch et al., 2005; Van den Broeck et al., 2010). Competence is feeling effective and able to adapt to complexities when dealing in the work environment, being considered effective and finding an optimal challenge (Deci & Ryan, 2000; Lynch et al., 2005). Competence also includes the ability to pursue mastery and expand knowledge, skills, and abilities (Kovjanic et al., 2012). Relatedness is defined as having a sense of

belonging, connection to others and being a part of a group (Kovjanic et al., 2012; Lynch et al., 2005; Van den Broeck et al., 2010). Part of the importance of relatedness is a sense of community and feeling cared for, developing intimate relationships and reciprocal effect of caring for others in return (Deci & Ryan, 2000; Van den Broeck et al., 2010).

Social support. The existence of a reliable network of resources that enhance the wellbeing of an individual though expressing care and providing a buffer for workplace stressors is the premise of social support (Sarason, Levine, Basham, & Sarason, 1983; Schutte & Loi, 2014). Having a reliable source of assistance should help be needed, is the foundation of social support (Consiglio et al., 2016). Social support is demonstrated in the workplace through building a network of mutually beneficial relationships that facilitate trust and cooperation resulting in the ability to manage stressors and avoid barriers to producing work (Schutte & Loi, 2014).

Geographic dispersion. Employees who are geographically dispersed do not work in the same location and have limited face-to-face time with their leader and co-workers (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Schweitzer & Duxbury, 2010). Geographic dispersion is one of the universal characteristics of a virtual team (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Schweitzer & Duxbury, 2010).

Virtual teams. Virtual teams are most commonly defined by the following conditions; they are enabled by communication technology, co-workers are not working in the same location, they may work across departments or teams (cross-functional) at times, which means members from different organizational units come together to complete assignments and the individuals work in different time zones or are on different shifts (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Schweitzer & Duxbury, 2010).

Assumptions, Limitations, Delimitations

Assumptions are considered to be self-evident. This study relied on several

assumptions:

1. Employees would participate and be truthful in their responses about their social support, psychological needs (autonomy, competence, relatedness), and their level of engagement at the point in time the survey was distributed.

2. Employees could accurately identify their leader's style and had worked with the leader a sufficient amount of time to provide an accurate assessment of their leadership style. Since it was not known how long it takes for employees to fully interpret their leader style (Dvir et al., 2002), there was a limitation for employees who were new to the organization or new to reporting to the leader at the time of the survey deployment.

3. Leaders could accurately assess their style and provide a critical self-review; self-reported responses may be limiting (Edmonds & Kennedy, 2013).

The limitations and delimitations related to the methodology, sample,

instrumentation, data collection process, and analysis were presented, with an explanation

as to why the existing limitations are unavoidable are below. Explanation of these

limitations provides a generalization of the possible unavoidable contributing factors that

may have impacted the results of this study.

1. There was a risk that the employee's ability to be completely honest may be compromised if they believed their responses are traceable or that responses may have an impact on their employability in the future.

2. Employees with both high and low levels of engagement would participate. There was a risk that employees with low engagement may be apathetic to providing information and may show lower levels of participation, potentially impacting the results (Lynch et al., 2005).

3. Employees may or may not have been collocated with their leader in the sample selected. This circumstance may not be weighted evenly in the three groups identified (Mid-Atlantic, Southwest, and field). There was a weighting towards employees that were collocated with their leader, which resulted in an unequal distribution of the sample size.

4. The sample was from a single organization which may have limit the external validity of the results (Dvir et al., 2002).

5. A causal relationship will not be able to be established due to the non-experimental design of the study (Dvir et al., 2002).

6. The surveys were deployed at a single point in time, limiting the benefits of understanding how leadership influences employees over time (Dvir et al., 2002).

Delimitations are controlled by the researcher based on the study design, the delimitations of this study were:

1. The sample was from a single industry which may limit the external validity of the results to other industries (Dvir et al., 2002). The selection of the organization was purposeful to include a company that had a naturally dispersed workforce as part of the business model. The researcher was also employed by this organization.

2. The instruments selected for use were purposefully chosen to gather data on the variables included in the study, reliable and valid and commonly appeared in prior research and required little to no cost to utilize.

3. Using an online survey tool (Surveymonkey.com) as a data collection method was selected in order to gather responses in a reasonable time frame, efficiently across multiple locations at no cost.

4. Leader-member exchange (LMX) and self-determination theory (SDT) were selected as the theoretical frameworks, which excluded other possible psychological and social theories in order to manage the scope of the study.

5. Leadership styles were delimited to the Full Range Leadership (Bass & Avolio, 1994) model to manage the scope of the study. Past literature includes additional leadership models beyond transformational, transactional and passive-avoidant. While this model is commonly studied, it may not cover all possible leadership approaches.

Summary and Organization of the Remainder of the Study

Chapter 1 provided and introduction to this study and presented a background on the influence of leadership style, employee engagement, meeting psychological needs (autonomy, competence, relatedness) and providing social support. Chapter 1 also explained the gap and introduced the problem statement. While there was a robust foundation of literature on the full range leadership model, the literature failed to

compare transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who had high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry (Bass & Avolio, 1994; Kahai et al., 2013; Kovjanic et al., 2012; Skogstad et al., 2014a; Williams et al., 2014). Geographic dispersion affects how relationships are formed among co-workers and between leaders and followers and researchers are calling for more studies to include this variable (Avolio et al., 2014; Birdie & Jain, 2015; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). The performance of a team specifically in the ability to innovate and solve problems requires different styles of leadership outside of the traditional hierarchical methods of influence (Hoch & Kozlowski, 2014; Magni et al., 2013; Quisenberry & Burrell, 2012).

Chapter 2 reviews the literature on topics of employee engagement, leadership styles (transactional, transformational and passive-avoidant), psychological needs (autonomy, competence, relatedness), social support based and geographic location. Chapter 2 will present the theoretical foundations of leader-member exchange (LMX). According to LMX, it is the leader's responsibility to provide the employee with the resources necessary to execute the main functions of their job (Goh & Wasko, 2012). Leader-Member Exchange (LMX) posits that leaders form relationships that support the emotional and psychological needs of each employee uniquely (Graen, 1976). In addition to the relationships formed in the workplace, the intrinsic and extrinsic motivation of an employee is influenced by the leader through meeting the psychological needs of

autonomy, competence, and relatedness, according to SDT (Chiniara & Bentein, 2016; Deci & Ryan, 2000).

Chapter 3 presents the design of the research, describes the population under study, reviews the instruments selected, the plan for collecting data and concludes with the data analysis procedures, ethical considerations and a discussion on limitations. Chapter 4 describes the results of the survey issued to 800 employees in the organization being studied, analyzed using a MANOVA, illustrated with tables and graphs and will include a summary of the findings. Chapter 5 discusses the implications of the study, findings, conclusions, and recommendations for future research.

Chapter 2: Literature Review

Introduction to the Chapter and Background to the Problem

This study compared leadership styles (transformational, transactional, and passive-avoidant) in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement in a geographically dispersed corporate environment within the hospitality industry. Chapter 2 examines the theoretical foundations of leader-member exchange theory (LMX) and self-determination theory (SDT) as the premise for the study by explaining that relationships foster the fulfillment of psychological and social needs in the workplace (Burch & Guarana, 2014; Deci & Ryan, 2008). According to LMX, relationships matter at work and lead to opportunity through both contingent and social exchanges (Deci & Ryan, 2008; Meyer, 2013). Autonomy, competence and relatedness are universal psychological needs according to SDT (Chiniara & Bentein, 2016; Deci & Ryan, 2008). Self-determination theory is a primary theory of motivation in many areas of study including psychology, education, sports and organizational behavior (Chiniara & Bentein, 2016; Deschamps, Rinfret, Lagacé, & Privé, 2016). Past theories of motivation claimed that people were motivated primarily by extrinsic rewards with an emphasis generally on reward and avoidance of negative consequences (Meyer & Gagne, 2008; Skinner, 1969).

Chapter 2 reviews both seminal and recent literature on the impact of leadership style (transformational, transactional, and passive-avoidant) on employee engagement through meeting the psychological needs (autonomy, competence, and relatedness) and in providing social support for employees in a workplace. As described above, with rapid

advances in technology in the 21st century, more employees are working across geographically dispersed areas, as part of virtual teams not collocated with their co-workers or leader (Avolio et al., 2014; Balthazard, Waldman, & Warren, 2009; Mateyka et al., 2012). Chapter 2 will be organized by the relevant topics and themes present in the literature including, employee engagement, leadership style (transformational, transactional, passive-avoidant), meeting psychological needs (autonomy, competence, relatedness), providing social support and geographic dispersion.

Several studies have reported that high engagement is linked to psychological needs of having a say in how work gets accomplished (autonomy), demonstrating the ability to solve relevant issues (competence), and the ability to connect with others and share ideas (relatedness) (Deci & Ryan, 2008; Kovjanic et al., 2012; Lynch et al., 2005; Van den Broeck et al., 2010). The psychological phenomena and drivers of engagement are linked to intent to stay, employee well-being and performance, proving beneficial for organizational outcomes, making efforts around engagement a practical investment (Alessandri et al., 2015; Christian et al., 2011; Meyer, 2013). Kahn (1990) was the first to explain that employee engagement is the demonstration of how emotionally, cognitively and physically people express themselves in the performance of their roles. Research has indicated that engaged employees hold a positive outlook towards the world, boosting their ability to effectively manage stress, build competence and foster relationships; a virtuous cycle that gains social support (Alessandri et al., 2015).

Leadership provides the social structure and support the facilitation of goals through team exchanges and interactions (Kahai et al., 2013). The techniques the leader employs to accomplish work culminate in a leadership style; the most commonly

researched styles are transactional, transformation and passive-avoidant (Bass & Avolio, 2004; Skogstad et al., 2014b). Transactional leadership is characterized by setting clear expectations of performance, monitoring for results, either actively with corrections or passively waiting for mistakes, and exchange of rewards and recognition for meeting performance expectations or sanctions for a lack of results (Kahai et al., 2013). Transformational leadership fuels intrinsic motivation by creating connection and encouraging employees to go beyond self-interests to achieve goals based on a future vision (Hamstra et al., 2014; Kahai et al., 2013). Passive-avoidant leadership is defined as a general lack or avoidance of leadership responsibility (Arnold et al., 2015). Leaders within organizations are one of the most important resources for employee needs satisfaction (Kovjanic et al., 2013). Employees are working, now more than in the past, in geographically dispersed environments fostered by rapid advancements in technology (Avolio et al., 2014; Mateyka et al., 2012). Organizations are often behind in aligning policies and processes to a virtual and dispersed workforce and social science has been slow to catch up to the phenomena which will continue to rapidly evolve (Avolio et al., 2014).

Before beginning this study, the researcher examined the literature relevant to the themes as well as related topics that supported the summary and synthesizing of the subjects. The literature review included a review of the major themes of leadership style, employee engagement, psychological needs (autonomy, competence, and relatedness), social support and the influence of geographic dispersion to find sources including journal articles, books, and other related sources. The Grand Canyon University library was used to search the ProQuest, Emerald, Science Direct and EBSCOhost databases.

Multiple scholarly, peer-reviewed articles and research studies were included, but not limited to Journal of Psychology, Journal of Occupational and Organizational Psychology, Journal of Applied Psychology, Journal of Applied Social Psychology, Human Relations, Personnel Psychology, Work and Stress, Leadership Quarterly, Academy of Management Journal. Search terms included employee engagement, leadership styles, transformational, transactional, passive-avoidant, self-determination theory, leader-member exchange, social support, psychological needs, autonomy, competence, relatedness, geographic dispersion and virtual teams.

The remainder of Chapter 2 is organized with a review of the theoretical foundations of leader-member exchange (LMX), and self-determination theory (SDT). The review of literature, primarily from the last five years, highlights the importance of employee engagement in performance outcomes and demonstrate the need for additional study on leadership styles, employee engagement, psychological needs (autonomy, competence, and relatedness), social support and geographic dispersion of employees. Teams separated by geographic dispersion and working virtually are a growing phenomenon based on advances in information technology, but the impact on how people work together, how leaders lead and how work engagement is impacted by this alteration in team dynamics is not fully understood (Avolio et al., 2014; Balthazard et al., 2009). Over the past several decades working in a virtual setting has been an attractive option for both employees who want autonomy and flexibility and for employers who want to hire the best talent regardless of location (Hoch & Kozlowski, 2014). Working virtually has increased the diversity in the workforce and effectively spread the employee

populations across different geographic regions, countries, and cultures (Avolio et al.,
2014).

The problem statement explained that the literature failed to compare
transformational, transactional, and passive-avoidant leaders in perceived ability to meet
the psychological needs (autonomy, competence, relatedness) and provide social support
for employees who show high or low levels of engagement, in a geographically dispersed
corporate environment within the hospitality industry. Limited research has been
dedicated to comparing leadership styles (transformational, transactional and passive-
avoidant) in perceived ability to meet psychological needs and provide social support as
the premise for higher employee engagement, particularly with employees who are part
of virtual teams that work in geographically disbursed locations. According to LMX and
SDT, employees form a connection to the leader and have psychological needs that are
fundamental to the social interactions of a team. The methods and instruments are briefly
discussed to support the study and finally, a summary of the findings concludes Chapter
2.

Theoretical Foundations and/or Conceptual Framework

Leader-member exchange (LMX), seminal work developed by Graen, (1976) and
self-determination theory (SDT), seminal work developed by Deci & Ryan (2000),
provide the theoretical foundations for this study. Leader-member exchange theory is the
dominant theory of organizational leadership and centers on the unique relationship
between the leader and the employee (Goh & Wasko, 2012). Leader-member exchange
theory is based on role theory, which states that roles in organizations are shaped by the
people assigned to the role through pressures applied socially and directly from the leader

for particular behaviors and performance (Dienesch & Liden, 1986). Role theory was expanded upon to explain the reciprocal relationships that leaders and followers share in defining work roles in organizations; initially called the vertical dyad linkage theory (Burch & Guarana, 2014; Dansereau, Cashman, & Graen, 1973; Dienesch & Liden, 1986; Graen, 1976). Leader-member exchange theory defines levels of relationship based on familiarly and connection with the employee on a continuum from new in the role (stranger) to trusted partnership, with the latter being beneficial to organizational outcomes (Graen, 1976; Graen & Uhl-Bien, 1995).

Not all relationships between the leader and the employees that report to them are equal according to LMX, there are reliable partners in the in-group and distant acquaintances in the out-group (Burch & Guarana, 2014; Goh & Wasko, 2012; Graen, 1976). Employees that are part of the in-group, have positive interactions with the leader, often have a similar work style to the leader, get more of the leader's time and high-quality, engaging assignments (Burch & Guarana, 2014; Goh & Wasko, 2012; Graen, 1976). Higher-quality follower relationships develop based on the assignment and delegation of tasks with more responsibility, autonomy, and challenge (Burch & Guarana, 2014). Leaders allocate more resources to the in-group relationships that have formed with individuals on their team, resulting in better performance of those members, which perpetuates a prosperous performance cycle characterized by an exchange of emotional support and work effort (Burch & Guarana, 2014; Goh & Wasko, 2012). Conversely, employees in out-groups do not have close contact with the leader, interact infrequently with the leader and receive routine assignments (Goh & Wasko, 2012; Graen, 1976). The premise of LMX theory is that leaders build unique relationships with employees based

on time, resource or cognitive pressures (Goh & Wasko, 2012). The dyad of a leader and employee is influenced by the similarity in demographics and other social relationships in the workplace (Avery et al., 2007).

In comparison to LMX theory, self-determination theory (SDT) is relatively new seminal work, developed at the end of the 20th century (Deci & Ryan, 2000; Miniotaite & Buciuniene, 2013). Self-determination theory developed from theories related to human development and was founded based on studies of human motivation through meeting psychological needs (intrinsic) and through contingent rewards or avoidance of punishment externally (extrinsic) (Deci & Ryan, 2000; Miniotaite & Buciuniene, 2013). SDT developed out of a gap in the literature on how the development of the self and core motivational processes are similar across social relationships in a wide variety of environments that facilitate the meeting of psychological needs (Miniotaite & Buciuniene, 2013; Vallerand, Pelletier, & Koestner, 2008).

According to self-determination theory of human motivation, intrinsic motivation in the workplace, and in many other environments, attains the best outcomes by meeting the three specific psychological needs; autonomy, competence, and relatedness (Chiniara & Bentein, 2016; Deci & Ryan, 2000; Miniotaite & Buciuniene, 2013; Vallerand et al., 2008). Autonomy is the extent to which one can self-initiate and choose when and how activities are accomplished (Deci & Ryan, 2000; Kovjanic et al., 2012; Lynch et al., 2005; Vallerand et al., 2008; Van den Broeck et al., 2010). Competence is feeling effective and being considered effective in resolving challenging tasks to the desired outcome (Deci & Ryan, 2000; Lynch et al., 2005; Miniotaite & Buciuniene, 2013). Relatedness is defined as having a sense of belonging and connection to others (Kovjanic

et al., 2012; Lynch et al., 2005; Miniotaite & Buciuniene, 2013; Van den Broeck et al., 2010).

As theoretical foundations, LMX theory and SDT have similarity in emphasizing the importance of the relationship between the leader and follower as a premise. According to SDT, when psychological needs are met through autonomy, competence, and relatedness, there is growth and well-being (Miniotaite & Buciuniene, 2013). Leaders have limited resources in time and energy, according to LMX, and therefore do not have equivalent relationships with all their employees, which influences their perceived ability to meet psychological needs equitably as proposed by SDT (Goh & Wasko, 2012; Graen, 1976). High-quality LMX results in a positive relationship between the leader and the employee and leads to a shift from self-interests on the part of the employee to broader organizational interests (Goh & Wasko, 2012). The relationship between the employee and the leader is recognized as being important to how employees fulfill the basic psychological needs of autonomy, competence and relatedness in the workplace (Graves & Luciano, 2013). An individual's motivation at work is fostered by meeting psychological needs (autonomy, competence, and relatedness) through positive interactions with the leader that are repeated and become internalized to the self (Vansteenkiste et al., 2007; Vallerand et al., 2008).

This study extended knowledge of both LMX theory and SDT by specifically researching how these theories are leveraged in organizations through the application of leadership style, social support, and influences of geographic dispersion. Significant increases in the use of computer-mediated technology in place of face-to-face communications may influence the relationship between the leader and the employee

(Avolio et al., 2014; Deci & Ryan, 2000; Graen, 1976). The research questions in the study compare transformational, transactional, and passive-avoidant styles in the perceived ability to provide social support and meet psychological needs of employees based on geographic dispersion. The research questions examined in this study included:

RQ1: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

Review of the Literature

Leadership styles. The behaviors that leaders exhibit when influencing followers in pursuit of achieving goals is referred to as leadership style (Hamstra et al., 2014). The importance of leadership in meeting the psychological needs of employees through the formation of relationships is well documented in the literature related to SDT and LMX theory (Burch & Guarana, 2014; Deci & Ryan, 2000; Goh & Wasko, 2012; Graen, 1976; Miniotaite & Buciuniene, 2013; Vallerand et al., 2008; Williams et al., 2014). The Full Range Leadership model includes the styles of transformational, transactional and passive-avoidant, and has been one of the most studies models of leadership over the past several decades (Bass & Avolio, 1994; Skogstad et al., 2014a). Commonly referenced styles of leadership range on a continuum from passive to active include passive-

avoidant, transactional, and transformational (Rowold, 2014). These styles are not mutually exclusive but do have differing work outcomes, and most leaders use a combination of styles depending on the situation and circumstance (Kahai et al., 2013).

Transactional leadership is characterized by an exchange of rewards and recognition or avoidance of sanctions between the leader and the follower for meeting performance expectations (Kahai et al., 2013). Transformational leaders appeal to followers to identify with the greater needs of the group and motivate individuals through their individual needs, providing intellectual challenges and being a role model towards the achievement of the group's objectives (Hamstra et al., 2014; Kahai et al., 2013). Passive-avoidant leadership is characterized by a general lack or avoidance of leadership, which includes being physically absent from the workplace, avoiding making decisions and limited interaction with direct reports, peers and bosses (Arnold et al., 2015).

Transformational. Transformational leadership is characterized by targeting intrinsic motivation in followers and encouraging them to go beyond self-interests to achieve goals based on a compelling future vision (Hamstra et al., 2014; Kahai et al., 2013). Leadership styles, such as transformational leadership, are supported throughout literature as having the interpersonal savvy to support people while meeting organizational objectives (Kahai et al., 2013; Kovjanic et al., 2012; Williams et al., 2014). Transformational leadership was introduced by Burns (1978) as an alternative to leadership power added to the model by stressing the importance of meeting the needs of people and gaining followership. Bass (1990) followed with the connection to emotions as part of the relationship between the leader and the follower (Kovjanic et al., 2012). The four elements of transformational leadership include inspiring and motivating

employees towards a future vision, intellectual stimulation, considerate of the uniqueness and value of each individual, and fostering an environment where employee contributes fully (Kovjanic et al., 2013). Transformational leaders are defined by the ability to set high expectations, they are optimistic about the future and effectively communicate their support that followers can achieve (Kovjanic et al., 2012).

Kovjanic et al., (2013) examined transformational leadership style and performance. Participants included 190 individuals, recruited online to review a scenario and then contribute their ideas to a mock work project (Kovjanic et al., 2013). The group was divided and specific scenarios were delivered in a style similar to a transformational leader or a non-transformational leader; after completing the task, participants responded to an online survey about the experience (Kovjanic et al., 2013). Meeting psychological needs (autonomy, competence, and relatedness) was assessed using the Needs Satisfaction Scale (La Guardia, Ryan, Couchman, & Deci, 2000). Leadership style was measured using the Multifactor Leadership Questionnaire (MLQ 5X Short) (Bass & Avolio, 1995b). Engagement was measured with the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). Results also indicated that transformational leadership had positive effects on meeting psychological needs of competence $r = .66$, $p < .001$, relatedness $r = .77$, $p < .001$ and autonomy $r = .64$, $p < .001$ (Kovjanic et al., 2013). Meeting the psychological needs of competence and relatedness, predict engagement, but surprisingly the need of autonomy was not strongly related in this study (Kovjanic et al., 2013). The results for autonomy run counter to research on psychological needs and the importance of autonomy (Breevaart et al., 2014; Kovjanic et al., 2012). The researchers reported that the number of variables included in the study

may have diluted the results related to autonomy (Kovjanic et al., 2013). Kovjanic et al., (2013) assert work engagement leads to high performance in quantity and quality of work and is fostered by transformational leadership.

Breevaart et al. (2014) investigated transactional and transformational leadership styles on employee engagement. The study was completed with 61 Naval cadets who were asked to rate the performance of their daily assigned leader over a 34-day period using daily diaries (Breevaart et al., 2014). Leadership style was measured using the Multifactor Leadership Questionnaire-5S (Bass & Avolio, 1995b). Engagement was measured with the Utrecht Work Engagement Scale (Schaufeli et al., 2006). Transformational leadership was positively related to engagement $r = .19$, $p < .001$, autonomy $r = .15$, $p < .001$, and social support $r = .39$, $p < .001$ (Breevaart et al., 2014). Breevaart et al. (2014) assert that transformational leaders provide an environment where employees can go beyond what is expected by modeling performance, setting high expectations and encouraging followers. Contrasting the findings of Kovjanic et al., (2013), follower's needs are met when the behavior of the leader is in alignment with encouraging autonomy, independent decision making and offering connection and social support (Breevaart et al., 2014; Song et al., 2012).

Song et al., (2012), examined the effect transformational leadership has on organizational knowledge creation practices and employee engagement. Participants included 432 mid and low-level managers that worked in an organization in South Korea (Song et al., 2012). Leadership style was measured using Multifactor Leadership Questionnaire (Bass & Avolio, 1990). Daily work engagement was measured using the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003), and an instrument

designed by the researchers to measure organizational knowledge creation (Song et al., 2012). The researchers found that there was a significant interrelationship between transformational leadership, engagement and a learning environment (Song et al., 2012). A regression analysis conducted on the results of their study showed that organizational knowledge creation was predicted by transformational leadership $R^2 = 0.219$ and $R^2 =0.0520$ when adding the variable of employee engagement (Song et al., 2012). Transformational leadership and employee engagement explained 52% of the variance in the dependent variable organizational knowledge creation (Song et al., 2012). Results demonstrated that employee engagement, when cultivated using collaboration and constructive communication, is a powerful influence on organizational knowledge creation (Song et al., 2012).

ElKordy (2013), examined how key work attitudes, which are characterized by organizational commitment and job satisfaction, are predicted by transformational leadership and the organizational culture. Work attitudes are arguably substitutes for engagement (Meyer, 2013). Participants included 192 employees working across seven different industries in Egypt who completed an online survey (ElKordy, 2013). Leadership style was measured using the Multifactor Leadership Questionnaire-6S (Bass & Avolio, 1990) the Denison organizational culture survey was used to measure culture (Denison & Mishra, 1995; as cited in ElKordy, 2013), organizational commitment was measured using items from the scale designed by Allen and Meyer (1990), job satisfaction was measured using items adapted from the scale developed by Hackman and Oldham (1975). Findings indicated that culture and transformational leadership practices together accounted for $R^2 = .45$ or 45% of the variation in job satisfaction (ElKordy,

2013). In addition, organizational culture explained $R^2 = .69$ or 69% of variation in organizational commitment (ElKordy, 2013). The measure of organizational culture is recommended as a diagnostic tool that is useful for identification of areas that are strongly aligned with the company's values and areas that are opportunities for improvement (ElKordy, 2013). ElKordy (2013), asserts that leaders need to understand the importance of values and norms as important drivers of employee commitment and job satisfaction.

Tims et al., (2011), studied the influence of leadership style, self-efficacy, and optimism on employee's daily work engagement. Participants included 42 contract workers from two separate organizations in the Netherlands (Tims et al., 2011). Participants filled in a daily diary and completed surveys over five consecutive workdays, including the Multifactor Leadership Questionnaire (Bass & Avolio, 1995b), Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003), and the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). Results supported the relationship between transformational leadership and day level employee engagement $r = .43$, $p < .01$, daily optimism $r = .50$, $p < .01$, daily self-efficacy $r = .34$, $p < .05$. (Tims et al., 2011). Tims et al., (2011) asserted that transformational leadership positively enhances an employee's level of engagement. Transformational leadership aimed to shape the values and norms of the employees; employees are motivated to work beyond their current capability and align with the goals of the organization based on the influence of the leader (Tims et al., 2011).

Kovjanic et al., (2012) examined how transformational leaders foster positive employee outcomes through meeting psychological needs (autonomy, competence,

relatedness). Two studies were conducted online with samples from the workforce in a variety of organizations (Kovjanic et al., 2012). The first study involved 410 working adults from Germany, the second study included 442 workers from Switzerland and had a time lag in between the measurement of leadership and the other variables (Kovjanic et al., 2012). Meeting psychological needs (autonomy, competence, and relatedness) was assessed using the Needs Satisfaction Scale (La Guardia et al., 2000). Leadership style was measured using the Multifactor Leadership Questionnaire (MLQ 5X Short) (MLQ-5X; Bass & Avolio, 1995b). Job satisfaction was measured using the Job Diagnostic Survey (Hackman & Oldham, 1975). Occupational self-efficacy was measured using the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). Affective Commitment was measured using the Affective Organizational Commitment Scale (Meyer, Allen, & Smith, 1993). Results from both studies indicated that there is a strong relationship between psychological needs (autonomy, competence, relatedness) satisfaction $r = .66, p < .001, r = .48, p < .001, r = .71, p < .001$ respectively, and transformational leadership and that transformational leadership was positively related to job satisfaction $r = .53, p < .001$, (Kovjanic et al., 2012). Kovjanic et al., (2012) asserted that the results indicated that meeting psychological needs is just one contributor to how transformational leaders influence followers and that there are potentially important extrinsic motivators that transformational leaders utilize.

Choi, Tran, & Park, (2015) examined the inclusive leadership and employee engagement. Inclusive leaders are available, listen effectively and work to meet the needs of employees (Choi et al., 2015). Participants included 246 employees representing six Vietnamese companies in the service industry including banking, telecommunications,

and hospitality in Hanoi (Choi et al., 2015). The participants completed a survey that measured engagement using the Employee Work Engagement Scale (Schaufeli et al., 2002) leadership was assessed with the Inclusive Leadership Scale (Carmeli, Reiter-Palmon, & Ziv, 2010), organizational commitment was measured using the Affective Organizational Commitment Scale (Meyer & Allen, 1997), and employee creativity was assessed using the Employee Creativity Scale (Tierney, Farmer, & Graen, 1999). The findings indicated that inclusive leadership had a positive relationship with employee engagement $r =.143$, $p <.05$, organizational commitment $r = .280$, $p <.001$ and employee creativity $r = .166$, $p <.01$ (Choi et al., 2015) were also positively related to employee engagement (Choi et al., 2015). Choi et al., (2015) assert that managers must understand the fundamental importance of creating an open and inclusive environment for employees to thrive. Key elements such as fairness, offering rewards, and employee development are important for leaders to consider (Choi et al., 2015).

The optimism and positive affect that results from transformational leadership predict job outcomes; this is due to the stable and consistent way of thinking, feeling, and behaving that is promoted in the workplace (Kovjanic et al., 2013; McColl-Kennedy & Anderson, 2002; Tims et al., 2011). Transformational leadership is linked to positive work outcomes (Kahai et al., 2013; Kovjanic et al., 2012; Williams et al., 2014). The belief that goals are attainable and that a future is better, even if it has obstacles, is part of the optimistic values that leaders communicate (McColl-Kennedy & Anderson, 2002). Rowold (2014) asserted that transformational and transactional leadership cannot fully depict all the constructs included in leadership theory, but conceded that these two styles are the most heavily researched to date.

Transactional. Transactional leaders are characterized by monitoring for deviations from established norms and provide clarity on what performance criteria will meet the expected performance expectations (Hamstra et al., 2014). Transactional leadership includes management by exception, which focuses on the avoidance or correction of mistakes by encouraging employees to meet expectations and recognizes achievements through contingent rewards (Breevaart et al., 2014). Transactional leaders tend to focus on individual goals and performance rather than the collective which tends to reduce cooperation and collaboration within teams (Hamstra et al., 2014). Transactional leaders that utilize contingent rewards are effective in facilitating follower engagement, however, the use of rewards signals scarcity in and encourages followers to outperform each other and compete towards performance goals (Breevaart, et al., 2014; Hamstra et al., 2014). Transactional leadership is generally viewed as inferior to transformational leadership, however, Quisenberry and Burrell (2012) point out that the ability to establish a structure, along with performance expectations establishes a strong foundation for virtual teams to expedite a productive start (Kahai et al., 2013).

Hamstra et al. (2014) examined transformational and transactional leadership techniques to determine if the particular style the leader utilizes can predict the achievement of the follower's goals. Goals were defined as performance based, comparing outcomes to the performance of others and mastery goals that require competence and build skills and expertise (Hamstra et al., 2014). Participants included 449 employees of 120 leaders within various organizations within the Netherlands. Participants rated their leader's use of transformational approaches towards intrinsic mastery goals and transactional leadership approaches on performance related goals

filling out paper and pencil survey. Researchers approached the participant directly and obtained permission from the leaders for their employees to participate. The subscales of the Achievement Goal Questionnaire (AGQ-R) measured achievement goals (Elliot & Murayama, 2008) and leadership style was measured using the Multifactor Leadership Questionnaire (MLQ-5X; Bass & Avolio, 1995b). After controlling for demographic variables, leadership style explained 12.7% of the variance between groups and accounted for 2.2% of the variance within groups in achievement of mastery goals (Hamstra et al., 2014). Hamstra et al. (2014) assert that a leader's behaviors may communicate, favor and encourage performance related goals (transactional leadership) or more intrapersonal goals (transformational leadership).

Kahai et al., (2013) examined leadership styles in virtual environments. In their experimental study, three separate experiments, using different virtual conditions, divided students enrolled in a management course were into small teams to complete a decision-making task with a leader that was utilizing transactional or transformational leadership approaches respectively. Both transactional and transformational leadership styles were found to have positive effects on discussion satisfaction $r = 0.66$, $p < .05$, $r = 0.68$, $p < 05$ respectively. Transactional leadership showed a negative relationship to cognitive effort $r = −0.22$, $p =$ n.s. but overall the satisfaction with the efficiency of the discussion and the decisions made was positive, leading the researchers to report that transactional leadership styles may reduce overall cognitive load in virtual environments and may be more appropriate when making rapid decisions.

Strang (2011) examined leadership impact on time and quality of work in virtual teams. The study measured leadership style, personality, project and organizational

effects on new product development within virtual teams (Strang, 2011). The 1,358 participants on virtual teams from eight different organizations, seven organizations were in multinational locations and one with employees in a single country participated in an online survey (Strang, 2011). Survey instruments, deployed online, measured leadership style using the Multifactor Leadership Questionnaire (MLQ-5X; Bass & Avolio, 2004), personality factors were measured using the Five Factor Model (FFM NEWO-PI-R; McCrae & Costa, 1997), and social desirability was assessed to check for bias in responses using the Social Desirability Scale (SDS; Crowne & Marlowe, 1960). Results indicated an 85% multivariate variance in scope quality and time performance with transactional leadership approaches, specifically, contingent reward, resulted in higher team performance when working virtually (Strang, 2011). In addition, Strang (2011) promotes the use of personality assessments in team member selection for virtual project team members with the study results indicating that employees you have moderate neuroticism, moderate to high extroversion and openness, low conscientiousness, and agreeableness with a normal social desirable disposition along with good personnel evaluations and experience with working on teams successfully.

To further the distinctions between the styles of leadership and the nuances that impact employees in the workplace, Arnold et al., (2015) studied leadership styles, emotion regulation, and burnout. Three waves of data from 205 participants working full-time in a management role with direct reports were recruited and surveyed online (Arnold et al., 2015). Leadership style was measured using the Multifactor Leadership Questionnaire (MLQ-5X; Bass & Avolio, 1995b). Two forms of emotion regulation were measured using scales from Brotheridge and Lee (2003), and the Copenhagen Burnout

Inventory (Kristensen, Borritz, Villadsen, & Christensen, 2005) measured work burnout.

Results of a regression analysis showed that transformational leadership has a positive

relationship with demonstrating genuine emotion and deep acting (emotional regulation)

$R^2 = .31$, $p < .001$, $R^2 = .25$, $p < .001$, respectively. Passive-avoidant leadership style

predicted use of surface emotion $R^2 = .51$, $p < .001$ and was also associated positively with

burnout (Arnold et al., 2015). The researchers assert that transformational leaders are

keenly aware of the impact of their emotions on their followers and show genuine

emotions that are authentic and appropriate to the needs of their followers (Arnold et al.,

2015). Passive-avoidant leaders also relied on genuine emotion $R^2 = .24$, $p < .001$, Arnold

et al., (2015) propose that motivation for a passive-avoidant leader to use genuine

emotion is a lack of effort to regulate emotions with little concern for the impact of

emotional response on followers. Transactional leadership styles predicted surface acting,

$R^2 = .46$, $p < .001$, which requires a display of different emotions for a given situation than

the emotions that are being experienced internally (Arnold et al., 2015). This type of

emotional regulation requires more energy and resources to regulate and ultimately leads

to a lack of connection between the employee and the leader (Arnold et al., 2015).

Passive-avoidant. Passive-avoidant leadership is a more common and passive

manifestation of destructive leadership and has negative associations with employee well-

being (Aasland, Skotad, Nielsen, & Einarsen, 2010; Skogstad et al., 2014b). This style of

leadership is characterized by a general lack or avoidance of leadership, limited

involvement with direct reports especially when they need support, and is demonstrated

by being physically absent from the workplace, avoidance of making decisions and

limited interaction between co-workers and bosses (Arnold et al., 2015; Aasland et al.,

2010). Passive-avoidant leaders display emotional disconnection to followers along with extreme ambiguity in work direction (Arnold et al., 2015; Skogstad et al., 2014b).

Aasland et al., (2010) studied the prevalence of destructive leadership behavior in the Norwegian workforce. Participants included 4,500 working adults in Norway randomly selected from a representative sample obtained from the Norwegian Central Employee Register. Survey questionnaires were sent by mail to 2,539 respondents to measure forms of destructive leadership. Tyrannical, derailed, and supportive-disloyal leadership behavior was measured using the destructive leadership scale (Einarsen, Hoel, & Notelaers, 2009). Passive-avoidant leadership was measured using four items from the Multifactor Leadership Questionnaire (Bass & Avolio, 1990). Six questions from Ekvall and Arvonen (1991) questionnaire covering employee, production, and change-centered leadership were interspersed in the survey and measured constructive leadership in an effort to prevent response set (Aasland et al., 2010).

Results indicated that destructive forms of leadership behavior are not an anomaly and passive forms are the most prevalent in the workforce (Aasland et al., 2010). The two estimation methods used revealed that between 34% and 61% of the respondent's report experiencing some kind of regular exposure to destructive forms of leadership during a six-month time period (Aasland et al., 2010). The research showed that Passive-avoidant leadership behavior was the most common form of destructive leadership behavior (21.2%) and tyrannical leadership behavior was the least reported at (3.5%) (Aasland et al., 2010). Leadership is not demonstrated in purely constructive of destructive forms (Aasland et al., 2010; Skogstad et al., 2014b). Aasland et al., (2010) asserts that forms of leadership are mixed rather than on a continuum and urges more study of the behaviors

that leaders use along with the rationale to present a more robust view of the complexities of leadership.

Agreeing with the premise that there are both constructive and destructive forms of leadership (Skogstad et al., 2014b) examined a continuum of leadership including constructive forms, Passive-avoidant, and tyrannical leadership. In their longitudinal study of 4,500 offshore workers in Norway, questionnaires were mailed twice with a 6-month lag in-between data gathering. The survey instruments included six items from Ekvall and Arvonen (1991) covering employee, production, and change-centered leadership. Tyrannical leadership was measured using the four items from the Destructive Leadership Scale (Aasland et al., 2010). Passive-avoidant leadership was measured by four items from the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1990). Job satisfaction was measured with four items from the Job Satisfaction Scale – short version (Brayfield & Rothe, 1951). The researchers concluded that lassie-faire and tyrannical leadership have a negative relationship to job satisfaction over time (Skogstad et al., 2014b).

Results indicated that both time one (T1) and time two (T2) of the questionnaire deployments, tyrannical leadership T1 $r = -.24$, $p <.001$, T2 $r = -.16$, $p <.001$ and passive-avoidant leadership T1 $r = -.24$ $p < .001$, T2 $r = -.20$, $p < .001$ predicted a decline in follower's job satisfaction. (Skogstad et al., 2014b). Constructive leadership did not predict job satisfaction at either interval, while tyrannical leadership showed was a faster decline in job satisfaction at 6 months, and lassie-faire leadership predicted a decline in job satisfaction at one year (Skogstad et al., 2014a). Skogstad et al., (2014aa) assert that consistent constructive leadership approaches may take longer to effect job

satisfaction than the study afforded, however, results indicated that more destructive forms of leadership have a more rapid effect on job satisfaction (Skogstad et al., 2014a). Passive-avoidant leadership is considered the most ineffective leadership style shows a negative impact on job satisfaction over time and includes counterproductive work behaviors such as withdrawal and passivity (Aasland et al., 2010; Skogstad et al., 2014a).

Employee engagement. Kahn (1990) was the first to make the connection between employee engagement and psychological needs as conditions that have to be met for an employee to perform in the roles they fulfill. The most common definition of employee engagement includes the factors of vigor, dedication and absorption in organizational life (Alacron & Lyons, 2011; Kahn, 1990; Song et al., 2012). Vigor is defined as mental energy and the desire to persevere even under difficult circumstances, dedication is the demonstration of enthusiasm and pride in one's work and absorption is the act of being focused and engrossed in the efforts related to work activities (Alacron & Lyons, 2011; Maslach & Leiter, 2008; Song et al., 2012). Schaufeli and Bakker (2010) include perseverance and persistence to the definition of work engagement as positive and fulfilling and characterized by employees who work hard and are happily engrossed in their work. There are related concepts to engagement including job satisfaction, job involvement and organizational commitment that form attitudes towards work (Meyer, 2013). The positive emotional and cognitive states of employees result in engaged behaviors that promote positive outcomes for organizations (Shuck & Wollard, 2010).

Employee engagement metrics are commonplace in companies, with a significant consulting market measuring data and making recommendations for organizations (Choo, Mat, & Al-Omair, 2013). Choo et al., (2013) called for more empirical research in the

area of employee engagement due to a limited amount of academic knowledge and evidence in previous research on the limited value of employee engagement results influencing decisions in organizations. The sample included ($N = 97$) employees in a manufacturing organization that completed a survey with a Likert scale to measure organizational practices related to engagement (Choo et al., 2013). The results indicated that organizational practices related to engagement were important predictors of engagement and the most power predictor was employee development followed by communication and recognition with the $R^2 = .432$ or a 43% change in employee engagement was caused by organizational practices related to engagement (Choo et al., 2013). Choo et al., (2013) concluded that organizational practices do have a major impact on employee engagement.

Alacron & Lyons (2011) studied the relationship between the three factors of engagement vigor, dedication and absorption and job satisfaction to the variables of workload, control, fairness, reward, values, community to determine if they are different constructs. Three samples were gathered for the study, in the first two samples, participants included students that were enrolled in a psychology course at a university in North America (280, 387 respectively) and in the third sample, 394 participants were recruited online (Alacron & Lyons, 2011). The sample was combined and then randomly split in half with sample 1 (530) and sample 2 (531) (Alacron & Lyons, 2011). Engagement was measured with the 9-item Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006). Job satisfaction was measured using the Michigan Organizational Assessment Questionnaire (MOAQ) (Cammann, Fichman, Jenkins, & Klesh, 1979). To measure job and organizational fit the Areas of Work–Life Survey (AWLS) was utilized

(Leiter & Maslach, 2000). The results indicated that engagement explains a small but significant variance on areas of work life including workload $R^2 = .14$, control $R^2 = .23$, reward $R^2 = .38$, community $R^2 = .32$ and values $R^2 = .41$ (Alacron & Lyons, 2011). Engagement did not have a unique variation on perceptions of fairness $R^2 = .29$ (Alacron & Lyons, 2011). Alacron & Lyons (2011) asserted that while the results show job satisfaction and engagement as distinct, there is a need to understand the predictors and outcomes particularly the role of positivity may be important in the relationship between engagement and job satisfaction (Alacron & Lyons, 2011).

To address the question of positive affect, Alessandri et al., (2015) studied the role of work engagement and self-efficacy on job performance. The participants were included in a two-wave study to investigate the individual predictors of job performance (Alessandri et al., 2015). The study and included 388 male employees of a security company in Italy (Alessandri et al., 2015). In the first wave, a survey was issued in person by the researcher and measured positive orientation, using the P-Scale as the survey instrument to assess optimism, self-esteem and life satisfaction (Caprara et al., 2012), work engagement was measured using the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003) and self-efficacy was measuring using the Work Self-Efficacy Scale (Borgogni, Petitta, & Steca, 2001).

Work performance was measured 12 months later using the performance management system internal the organization (Alessandri et al., 2015). Researchers found that the effect of positive orientation and one's outlook toward the world effects their job performance and work engagement (Alessandri et al., 2015). In order for a positive outlook to have an optimal effect at work, employees need a healthy formation

of self-efficacy, which is the belief that they have the power to produce the outcomes by

their actions (Alessandri et al., 2015). Findings supported the effects of positive

orientation on job performance $r = .30$, $p < .01$, self-efficacy $r = .59$, $p < .01$ and work

engagement $r = .51$, $p < .01$ (Alessandri et al., 2015). The study asserted that roughly

38% of the variance positive effect on job performance is mediated through work

engagement (Alessandri et al., 2015). Employees who have higher engagement at work,

have better job performance, but none of the positive effects of employee engagement

happen in isolation (Alessandri et al., 2015). Autonomy and self-efficacy lead to

performance outcomes and competence built through a cycle of experience and

opportunity offered by the leader, who has a critical role in the path to engagement at

work (Alessandri et al., 2015).

Milam (2015) examined engagement and the role organization factors have in

facilitating the environment to optimize performance. The role of conscientiousness was

central to this study (Milam, 2015). Conscientiousness is a personality trait that is

characterized by stability, organizational skills and a high level of self-control to manage

stress and work through obstacles by leveraging and creating resources (Milam, 2015).

To determine if employees who are low in conscientiousness can feel engaged at work

140 employees in Romania were surveyed (Milam, 2015). Conscientiousness was

measured using a 10-item scale from the International Personality Item Pool (Goldberg et

al., 2006), work engagement was measured using the nine-item Utrecht Work

Engagement Scale (UWES; Schaufeli et al., 2006), the Organizational Climate Measure

(Patterson et al., 2005), was utilized to assess the formality perceived in an organization's

culture, and the organizational and psychological climate (Milam, 2015). Findings

indicated a relationship between conscientiousness and engagement $r = .36$, $p < .01$, and between perceptions of effort and engagement $r = .40$, $p < .01$ (Milam, 2015). Milam (2015) asserts that people high in conscientiousness perform well and are engaged when the organizational climate has low formality because they are well equipped to self-manage and do not require specific rules and structure to thrive. Alternatively, employees who are low in conscientiousness are more likely to thrive and engage in structured, formal environments where the ambiguity is reduced (Milam, 2015). Milam (2015) adds that it is in the best interest of employee well-being and organizational outcomes to develop engagement in the workplace and organizations can work to increase their overall engagement by screening employees for conscientiousness and adding structure and altering the environment by enacting rules to aid employees who are low conscientiousness. Providing clarity of performance expectations and work assignments are critical job satisfaction and satisfy employee needs for extrinsic motivation (Milam, 2015). When employees are provided the autonomy to determine how to achieve work outcomes are achieved, intrinsic psychological needs are also met (Alacron & Lyons, 2011; Hamstra et al., 2014; Lynch et al., 2005).

Burch and Guarana (2014) examined the influences of transformational leadership and leader-member exchange (LMX) on employee engagement. Participants included 302 employees from a large, multinational employer in Brazil (Burch & Guarana, 2014). A longitudinal study was conducted that included the distribution two surveys; the first survey measured LMX, engagement and transformational leadership (Burch & Guarana, 2014). A month later an additional survey yielded 292 responses from the same sample of employees and measured the additional variables of turnover intention and organizational

citizenship behavior (Burch & Guarana, 2014). Leader-member exchange was measured using multidimensional (MDM) 11-item scale (Liden & Maslyn, 1998) leadership was measured using the Multifactor Leadership Questionnaire (Bass & Avolio, 1995b). Follower engagement was assessed with the UWES-9-Utrecht Work Engagement Scale (Schaufeli et al., 2006), organizational citizenship behavior was evaluated by a 16-item scale developed by Lee and Allen (2002), and turnover intentions were assessed by the Intentions to Quit scale (Wayne, Shore, & Liden, 1997). Results of the regression analysis indicated that leader-member exchange (LMX) has a significant relationship to engagement $r = .58$, $p < .01$ and showed a negative relationship to turnover intention $r = -.49$, $p < .01$. Transformational leadership, when measured controlling for LMX, also had a significant relationship to engagement $r = .47$, $p < .01$ and showed a negative relationship to turnover intention $r = -.51$, $p < .01$ (Burch & Guarana, 2014). Burch and Guarana (2014) assert that leaders should focus on and be incentivized for the ability to forge relationships with their followers to develop a sense of relatedness and understand the employee's needs which create an environment for employees and drives engagement. Additionally, Burch and Guarana (2014) recommend organizations train leaders on the importance of the dyadic relationship with followers and the positive outcomes for organizations who invest in developing social bonds (Burch & Guarana, 2014).

Vogelgesang et al., (2013) studied the effects of leader integrity to work engagement and performance. In a longitudinal study leader behavior was compared to follower work engagement; specifically, the relationship between engagement, leader integrity, and performance (Vogelgesang et al., 2013). Participants included cadets from

the U.S. Military Academy; an intriguing sample due to the competitive nature of acceptance, the differentiator for performance is not based on an individual's capabilities but the engagement and performance of the team (Vogelgesang et al., 2013). Communication transparency was measured using a 9-item subset of the 13-item communication openness scale (Rogers, 1987), behavioral integrity was measured using the 8-item scale (Simons, Friedman, Liu, & McLean Parks, 2007), work engagement was assessed using the May, Gilson, and Harter (2004) scale of engagement, performance was measured using the institution's performance rating system (Vogelgesang et al., 2013). In the first distribution of surveys, 537 cadets participated, followed three weeks later the same survey yielded 453 responses from the same group of cadets (Vogelgesang et al., 2013). The third data point was collected 6 weeks later on individual performance from the cadet's leader (Vogelgesang et al., 2013). Findings indicated communication transparency showed a significant relationship to perceptions of behavioral integrity $r =$ .69, $p <$.05 and there was a positive relationship between behavioral integrity and engagement $r = .16$, $p < .05$, additionally leaders rated performance higher when engagement was higher, demonstrating a positive relationship $r = .19$, $p < .05$ (Vogelgesang et al., 2013).

Communication was also examined through the lens of reward systems (Strom, Sears, & Kelly, 2014). The researchers examined organizational justice and leadership style in predicting engagement and explored transactional and transformational leadership styles to determine the relationship between organizational justice and work engagement (Strom et al., 2014). Participants for the study were recruited online from a 3rd party internet provider by invitation online (Strom et al., 2014). Of the 10,000

invitations that were randomly sent 356 responded and 348 respondents from across the United States met the requirements (Strom et al., 2014). The anonymous online survey measured employee engagement, leadership style and organizational justice (Strom et al., 2014).

Organizational justice was defined in two forms; the first refers to the employee's perceptions that the process the organization uses to determine rewards is fair (procedural) and the second that rewards that the organization decides to distribute are fair (distributive) (Strom et al., 2014). Employee engagement was assessed using the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006), distributive justice, was measured using a 5-item scale constructed by Niehoff and Moorman (1993), leadership style was assessed using the Multidimensional Leadership Questionnaire (Bass & Avolio, 1990). Strom et al., (2014) found that engagement was significantly related to both distributive $r = .44$ $p < .01$ and procedural justice $r = .52$, $p < .01$ and transactional $r = .32$, $p < .01$ and transformational leadership $r = .44$, $p < .01$ (Strom et al., 2014). Strom et al., (2014) reported that organizational justice showed a stronger relationship to engagement when employees reported relatively lower levels of interactions with transactional leadership styles. Strom et al., (2014) assert that transactional leaders may be less likely to share information on an employee's standing, leaving the employee to interpret what is occurring through the distribution of rewards within the organization. In the absence of information, interpretation of fairness through organizational justice shapes employee's work-related behaviors and limits engagement (Strom et al., 2014). Strom et al., (2014) assert that when employers provide a predictable, motivating and rewarding environment, employees will reciprocate and engage with an organization

when they estimate fairness in economic conditions and socioemotional benefits are provided by the employer.

Mone, Eisinger, Guggenheim, Price, & Stine, (2011) examined the role of performance management in driving employee engagement. Mone et al., (2011) suggested a framework of performance management activity which included setting goals, providing ongoing feedback and recognition, managing employee development, conducting mid-year and year-end performance appraisals and building a climate of trust and employee empowerment. Management behaviors were also outlined and included providing opportunities to make decisions and control the quality of work, which aligns to the need for autonomy, the ability to demonstrate skills, ideas and innovation (competence) and providing feedback and recognition and being trustworthy (relatedness) (Deci & Ryan, 2000; Mone et al., 2011). Mone et al., (2011) assert that a structured performance management process adds to perceptions of fairness and is critical for employee engagement.

Khan et al., (2015) studied the impact of factors that affect organizational commitment, including training, teamwork, communications, rewards and an employee's age. Participants included 200 employees from 35 bank branches in Pakistan (Khan et al., 2015). Organizational commitment was measured using the Affective Organizational Commitment Scale (Meyer & Allen, 1991), and the Perception of Organizational Factors Scale (Lau & Idris, 2001), was used to measure perceptions around training, communication, rewards, and teamwork. Results indicated that employees over age 44 were motivated by rewards, between 31-44 rewards and communication predicted organizational commitment and employees under 31 commitments was predicted by

training, rewards, and communications (Khan et al., 2015). The findings indicated that the organizational factors of training, teamwork, communication and rewards contribute to higher levels of organizational commitment (Khan et al., 2015). Khan et al., (2015), assert that the underlying motivations that change with age and experience are important for engaging employees based on their life stage.

Robertson and Cooper (2010), reviewed the integration of well-being and employee engagement as a unique construct of full engagement. Prevalent definitions of engagement explain the benefits of engagement with the organization or a narrow engagement perspective. Robertson and Cooper (2010), define full engagement as the impact of engagement on the organization and the individual employee. A lack of psychological well-being in the workplace, specifically related to a lack of autonomy is linked to health risks and stress related ailments (Robertson & Cooper, 2010). Psychological well-being in the workplace needs to include the meaningful nature of work and the degree of positive emotions experienced (Robertson & Cooper, 2010). The researchers suggest composition (how roles are selected), development (incumbent training, coaching and mentoring), situational engineering (job redesign, reorganization of work and teams) as interventions to help improve well-being and engagement in the workplace (Robertson & Cooper, 2010).

Personal growth and development is consistently reported as a key factor in employee engagement and critical to optimized performance in the workplace (Deci & Ryan, 2000; Shuck, Twyford, Reio, & Shuck, 2014). Shuck et al., (2014) examined human resource development practices and employee engagement along with the connection to employee turnover intentions. Participants included 207 healthcare workers

who participated in an online survey (Shuck et al., 2014). To measure perceived support, the Perceived Investment in Employee Development (PIED) 9 item scale was utilized (Lee & Bruvold, 2003), employee engagement was measuring using the 18 item Job Engagement Scale (Rich, LePine, & Crawford, 2010) turnover intention was assessed using the three item Turnover Scale (Colarelli, 1984) (Shuck et al., 2014). Findings indicated a positive relationship between employee development, employee engagement, and an intention to stay with an organization (Shuck et al., 2014). Shuck et al., (2014) assert employees give positive results back to organizations that are supporting them, and that when employees are supported through development of skills and encouraged toward their career goals they are less likely to leave an organization.

Employees who are highly engaged offer discretionary effort, positive organizational citizenship behaviors, have a higher intention to stay (Avery et al., 2007; Dunn, Dastoor, & Sims, 2012; Lloyd, 2008). Executives report employee engagement in the top challenges that they focus their attention on because of the impact on customer satisfaction and loyalty, retention and turnover and safety (Avery et al., 2007). Leaders that invest in understanding the leadership characteristics that matter most to employees and align behaviors accordingly benefit from the positive aspects of high employee engagement (Burch & Guarana, 2014). Leaders that review job design, including the significance of and variety in task assignments, including the opportunity to innovate and be involved in decision-making, have the potential to gain insight into employee engagement beyond typical survey results (Christian et al., 2011). Job satisfaction and engagement are separate constructs, yet positively related to meeting psychological needs

of employees (Alacron & Lyons, 2011; Deci & Ryan, 2000; Kovjanic et al., 2012; Lynch et al., 2005; Van den Broeck et al., 2010).

Psychological needs. The type, not the amount of motivation in the workplace predicts outcomes according to self-determination theory (Deci & Ryan, 2008). Self-determination theory focuses on the social aspects of work that foster various types of motivation, and the degree to which psychological needs for autonomy, competence and relatedness are supported (Deci & Ryan, 2008). Psychological needs are foundational to employee engagement, which requires leadership to foster an organizational environment where employees feel comfortable expressing themselves authentically in the course of their work (Christian et al., 2011). Self-determination theory also focuses on intrinsic and extrinsic goals and the relationship to job performance and psychological health (Deci & Ryan, 2008). To lay the pathway for job satisfaction and engagement, employees must be motivated both extrinsically and intrinsically in the context of their work according to SDT (Deci & Ryan, 2000; Lynch et al., 2005). When employees internalize the connection to the organization, acquire social support and have their psychological needs met, they are more likely to be engaged, take responsibility for less desirable tasks and put forth discretionary effort to accomplishing all aspects of work (Deci & Ryan, 2000; Williams et al., 2014).

Psychological needs-autonomy. Autonomy, competence, and relatedness are fostered by leadership through advocating for an employee inclusive approach to problem-solving, retaining positive regard for and interest in employees and actively engaging with employees to accomplish work (Williams et al., 2014). Autonomy is the ability for an individual employee to determine how to conduct and complete their work

assignments with little oversight (Hackman & Oldham, 1975; Sisodia & Das, 2013; Trepanier et al., 2013; Vansteenkiste, et al., 2007). Of the three psychological needs (autonomy, competence, and relatedness), autonomy is reported in several studies to play a motivating role in work outcomes including task performance and organizational citizenship behaviors (Chiniara & Bentein, 2016; Deci & Ryan, 2008; Graves & Luciano, 2013; Trepanier et al., 2013). Autonomous motivation incorporates both intrinsic and extrinsic motivation (Deci & Ryan, 2008). The motivation that is driven from autonomy is most often aligned with the values and goals of the individual (Graves & Luciano, 2013). Employees with jobs that have a high degree of autonomy have high satisfaction based on the motivation that is generated meeting their psychological need (Sisodia & Das, 2013).

Graves and Luciano, (2013) studied SDT, LMX and psychological needs of satisfaction, autonomous motivation, and attitudinal outcomes. Participants included 283 working adults who were mailed a survey. The LMX 7 scale measured leader-member exchange (Graen & Scandura, 1987), needs satisfaction was measured using the Basic Need Satisfaction at Work Scale (University of Rochester), intrinsic motivation was assessed using relevant subscales of the Motivation at Work Scale (Gagne et al., 2010), organizational commitment was measured using five items from the scales developed by Meyer and Allen (1997), job satisfaction was measured using the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979) (Graves & Luciano, 2013). Graves and Luciano, (2013) found that the quality of the relationship between the leader and the employee (LMX) was directly and positively related to job satisfaction r =.47, $p < .05$ and fulfills the psychological needs of autonomy r =.53, $p < .05$

competence $r = .43$, $p < .05$ and relatedness $r = .46$, $p < .05$. Graves and Luciano, (2013) assert that a high-quality relationship between the leader and the employee facilitates motivation, vitality and job attitudes.

De Cooman et al., (2013) examined the relationship of the design and characteristics of a job to psychological need of autonomy. The research measured negative work–home interference using 4-point scale developed by Geurts et al., (2005), job resources were measured by both skill utilization and strategic impact of the position by using questions developed by De Cooman et al., (2013), need satisfaction was measured by the Work-Related Basic Need Satisfaction Scale (W-BNS scale; Van den Broeck et al., 2010), autonomous motivation was assessed using the intrinsic motivation subscales Gagne et al., (2010), work effort was measured using the 10-item Work Effort Scale (De Cooman, De Gieter, Pepermans, Jegers, & Van Acker, 2009). Participants included 689 employees from 12 service organizations across Belgium (De Cooman et al., 2013). The survey was deployed in both an online and paper and pencil format at the discretion of the organization; the survey was identical in both deployment methods (De Cooman et al., 2013).

The study offered several findings, first, that job demands provide employees a purpose and challenge $r = .21$, $p < .001$ and only demands from home provided pressures that interfered with performance $r = -.19$, $p < .001$ (De Cooman et al., 2013). Second, the strategic positioning of a job within an organization and the overall value the role provides are important to employee engagement; the researchers called for efforts to add this variable to job design in addition to autonomy, skills, and utilization of the role (De Cooman et al., 2013). Finally, the psychological needs satisfaction $r = .22$, $p < .001$ and

autonomous motivation $r = .30$, $p < .001$ are positively related to the level of effort

employees give to their job and plays an important role in the level of work effort (De

Cooman et al., 2013). De Cooman et al., (2013) assert that the work effort that employees

are willing to give can be fully explained by meeting the psychological need of

autonomy.

Chiniara & Bentein (2016) studied the psychological need for autonomy,

competence, and relatedness as mediating roles in individual performance through

servant leadership. The premise of servant leadership is that the leader accomplishes

organizational outcomes through focusing on the growth, development, and needs of the

follower (Chiniara & Bentein, 2016). The connection between this leadership style and

self-determination theory, which is the foundation of psychological needs is the focus on

meeting the follower's needs (Chiniara & Bentein, 2016). Participants included 821

employees of a Canadian organization with employees in North America (Chiniara &

Bentein, 2016). First level employees completed an online survey; two months later 157

supervisors completed the same survey and provided additional performance data on the

followers (Chiniara & Bentein, 2016).

Employee-leader dyads (279) were formed by asking the employees to provide

the name of the leader, which was coded for anonymity (Chiniara & Bentein, 2016).

Chiniara & Bentein (2016) measured leadership style using the 7-dimension Servant

Leadership scale (Liden, Wayne, Zhao, & Henderson, 2008), needs satisfaction was

measured using the Work-related Basic Needs Satisfaction scale (Van den Broeck et al.,

2010), individual employee performance was assessed by the supervisors using a

modified version of Liden, Erdogan, Wayne, and Sparrowe's (2006) 4-item individual

performance measure, organizational citizenship behavior was assessed using OCB-O (organizational) and OCB-I (individual) (Williams & Anderson, 1991). Findings indicated strong evidence that servant leadership is effective in meeting the psychological needs of employees, autonomy $r = .49$, $p < .001$, competence $r = .29$, $p < .01$, and relatedness $r = .43$, $p < .001$ (Chiniara & Bentein, 2016). Autonomy was the most influential construct, positively predicting task $r = .22$, $p < .001$, OCB-O $r = .17$, $p < .01$, and OCB-I $r = .20$, $p < .01$ (Chiniara & Bentein, 2016). Chiniara and Bentein (2016) assert autonomy is a necessity and a requirement for employees in determining how much they are willing to invest of themselves through additional effort in the tasks and roles that lead to organizational success.

Lloyd (2008) examined the role of discretionary effort and performance to determine the importance of autonomy. Discretionary effort is the factor that makes company performance stand out and it is defined as doing more than what is required (Lloyd, 2008). Participants were divided into two samples, 476 managers and a 424 in a mixed group with both managers and non-managers (Lloyd, 2008). Lloyd (2008) blended measurements to one survey instrument using a measured using a 7-item survey developed to assess discretionary effort, in-role behavior (IRB) was measured using 10 items from Fox and Feldman (1988), organizational citizenship behavior (OCB) was measured using 15 items from Jordan and Sevastos (2001), autonomy was measured using 6 items from the Job Diagnostic survey (Hackman & Oldham, 1975) and skills were measured from 3 items from a Sheraton survey (Lloyd, 2008). Results of the regression analysis indicated the autonomy was a predictor of discretionary effort $R^2 = 0.49$, when controlling for OCB and IRB autonomy was still a predictor of discretionary

effort $R^2 = 0.36$ (Lloyd, 2008). Autonomy is considered a motivator in job performance, without it, roles are prescribed leaving little latitude for individual discretion (Lloyd, 2008).

Counter to the findings of other researchers (Chiniara & Bentein, 2016; De Cooman et al., 2013; Lloyd, 2008; Trepanier et al., 2013), Sisodia and Das (2013) studied autonomy and the found a different outcome based on the employee's hierarchical level within an organization. Sisodia and Das (2013) assessed job autonomy on organizational commitment based on an employee's hierarchical level in an organization. Participants included 100 male employees from various organizations in Agra, India, divided into 50 management level employees and 50 non-management level employees (Sisodia & Das, 2013). Survey measures included items from the Job Autonomy Scale (Das, Arora, & Singhal, 2000), and the Organizational Commitment Scale (Allen & Meyer, 1990).

Sisodia and Das (2013) reported that autonomy positively predicted organizational commitment $F = 4.670$, $p < .05$, hierarchical level also affected organizational commitment $F = 40.691$, $p < .01$ and finally an interaction between job autonomy, hierarchal level and organizational commitment $F = 6.114$, $p < .05$. Sisodia and Das (2013) found that employees given more autonomy are more committed, they also found that employees higher in the organization have greater organizational commitment and are afforded more autonomy based on their level and role in the organization. Employees lower in the hierarchy did not improve in commitment based on the autonomy provided in their position (Sisodia & Das, 2013). Sisodia and Das (2013) assert that giving managers the autonomy to determine how to perform the key functions and tasks associated with their role and is a critical motivator in a leader's commitment to

an organization, but that employees lower in the organizational hierarchy do not benefit from increased autonomy in their role (Sisodia & Das, 2013). The researchers point out the small sample size as a limitation in the findings of their study (Sisodia & Das, 2013).

Consiglio et al., (2016) examined the role that self-efficacy and social context has in predicting employee engagement over time. Self-efficacy is derived from Social Cognitive Theory, which is the belief that people have control over themselves and their environment (Consiglio et al., 2016). In the workplace, the social context is the frame through which employees make sense of the environment through interactions with supervisors, co-workers, and executive management (Consiglio et al., 2016). Social support defined as reliable support of others in the workplace when help and assistance are needed (Consiglio et al., 2016). A two wave, longitudinal study was conducted over 3 years, 741 participants from a large organization in Italy participated in both waves (Consiglio et al., 2016). Self-efficacy was measured using the scale developed by Borgogni et al., (2001) social context was assessed, using 14 items from a scale also developed by Borgogni et al., (2001) and work engagement was measured using the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006). Consiglio et al., (2016) found that high self-efficacy and work engagement have a significant relationship $R^2 = .34$, $p < .01$ and self-efficacy predicts positive social context at work over time through relationships with colleagues $R^2 = .43$, $p < .01$, top management $R^2 = .66$, $p < .01$ and the direct leaders $R^2 = .79$, $p < .01$. When employees have positive perceptions of their supervisor, co-workers, and executive leadership, there is a relationship to engagement and discretionary effort (Consiglio et al., 2016).

Autonomy is influenced on a continuum from the lowest form, external regulation which is taking care of work in order to avoid reprimand or in order to earn and incentives, to the highest form of autonomy integrated regulation, in which the tasks and activities are aligned with the core beliefs of the individual (Williams et al., 2014). Some individuals pursue work as a part of intrinsic motivation (Williams et al., 2014). The achievement of a level or personal growth and self-actualization is the driving motivation behind extrinsic factors (Williams et al., 2014). Others are motivated by extrinsic sources of worth, including financial success, powerful positions, and influence over organizational outcomes (Williams et al., 2014). Research indicates that extrinsic motivators lead to less overall job satisfaction and lower intention to stay with an organization (Vansteenkiste, et al., 2007; Trepanier et al., 2013).

Psychological needs-competence. Meeting the need of competence was associated with employees feeling invigorated and having more energy at work (Graves & Luciano, 2013). The ability to feel that there is control over the environment adds confidence and sets to tone to foster the formation of collaborative relationships and networks based on a positive outlook and self-efficacy (Consiglio et al., 2016). Meeting the psychological needs of an employee such as autonomy, relatedness and competence predict job outcomes such as engagement, job satisfaction and organizational commitment (Graves & Luciano, 2013; Kovjanic et al., 2013; Tims et al., 2011; Trepanier et al., 2013). Meeting all three psychological needs (autonomy, competence, relatedness) provides the motivation required for employees to and meet job demands and add discretionary effort in the workplace (Deci & Ryan, 2008; Trepanier et al., 2013).

Growth and personal mastery are aligned with intrinsic motivation and the psychological need of competence (Lynch et al., 2005).

Extrinsic value orientations are concerned with control, security and acquisition of material possessions and prestige whereas intrinsic value orientations seek self-actualization, through growth and development in the workplace, forming collaborative relationships with colleagues and influencing society in a positive way through individual efforts (Vansteenkiste et al., 2007). Vansteenkiste et al., (2007) studied the importance of value orientation (intrinsic, extrinsic) on job satisfaction and work outcomes in two separate studies. Participants in the first study included 885 Belgium employees who were individually interviewed on items related to value orientation and well-being (Vansteenkiste et al., 2007). In the second study, 119 employees completed a survey to assess the same variables as study one (Vansteenkiste et al., 2007). Findings of both studies indicated that having an extrinsic value orientation negatively predicted dedication $R^2 = .60$, $p < .001$, job vitality $R^2 = .53$, $p < .001$, job satisfaction $R^2 = .58$, $p < .001$, and positively predicted short-lived satisfaction $R^2 = .36$, $p < .001$, work–family conflict $R^2 = .14$, $p < .001$, emotional exhaustion $R^2 = .26$, $p < .001$, and turnover intention $R^2 = .27$, $p < .001$ (Vansteenkiste et al., 2007). People who work primarily for status, control over others and material success are less likely to satisfy their psychological needs met at work (Vansteenkiste et al., 2007). Conversely, those holding an intrinsic value orientation with the focus on growing capability and building social collaboration with others are more likely to have their psychological needs (autonomy, competence, relatedness) met and hence have more satisfaction at work and overall well-being (Vansteenkiste et al., 2007).

Similarly, Schreurs et al., (2014) examined work value and work engagement, but on teams, to determine the role values on psychological needs satisfaction (autonomy, competence, relatedness). Participants included 307 employees working on 31 teams in the Netherlands and Belgium (Schreurs et al., 2014). Psychological needs satisfaction was measured using the Work Related Basic Need Satisfaction scale (Van den Broeck, Lens, DeWitte, & Van Coillie, 2013) engagement was assessed with the Utrecht Work Engagement Scale (Schaufeli et al., 2006), extrinsic and intrinsic work values, were assessed utilizing an 18-item list developed by Van den Broeck et al., (2013), which was modified to assess shared work value on teams. Findings indicated that teams experience a higher satisfaction of psychological needs (autonomy, competence, relatedness) when work values are intrinsic $r = .26$, $p < .01$ and positive relationship to individual work engagement $r = .22$, $p <. 01$ (Schreurs et al., 2014). Schreurs et al., (2014) assert that employee's level of engagement is higher and psychological needs are satisfied when working on teams that demonstrate intrinsic work values. Van den Broeck et al., (2013) also examined intrinsic and extrinsic characteristics in workers and compared qualitative and quantitative work on motivation based on the premise of SDT. Motivation is autonomous when employees believe that they have influence over the outcome of their work, find their jobs enjoyable and are challenged (Van den Broeck, et al., 2013). Workers had the most job satisfaction when they scored high in autonomous motivation that stems from intrinsic work values (Van den Broeck et al., 2013).

Psychological needs-relatedness. Leaders are considered effective if they can consistently demonstrate social and emotional skills (Riggio & Reichard, 2008). Relatedness is established by taking an interest in each individual's thoughts and ideas

and developing a relationship that is authentic; increasing the bond between leader and follower (Kovjanic et al., 2012). When a leader has high integrity, transparent communication, and engagement, and when leader's actions and words match there is a positive relationship between employee engagement and performance (Vogelgesang et al., 2013). Creative ideas and innovation were positively impacted by meeting the psychological needs of the employee related to autonomy, competence, and relatedness (Kovjanic et al., 2013). Employees may actually suggest fewer ideas, but the ideas they do put forth are likely to be of higher quality based on the higher expectations established by transformational leaders (Kovjanic et al., 2013). Self-determination theory includes meeting the psychological needs of competence, relatedness and autonomy and combined with the four elements of transformational leadership, which include inspiring and motivating employees towards a future vision, intellectually stimulating and competent and considerate of the uniqueness and value of each individual, fosters an environment where employee contributes fully (Kovjanic et al., 2013). Employee engagement, when cultivated using collaboration and constructive communication, is a powerful influence on organizational knowledge creation (Song et al., 2012). The main point of connection between the organization and the employee is the leader; leadership style effects the level of engagement (Breevaart et al., 2014; Song et al., 2012).

Williams et al., (2014) studied the correlation between basic psychological needs satisfaction, the stress employees feel at work. Specifically, the study focused on how stress can manifest into physical symptoms when there is no evidence of illness (Williams et al., 2014). Participants included 287 employees in Nordic organizations who completed identical questionnaires in either electronic or paper and pencil form

(Williams et al., 2014). Managerial support was measured using the Work Climate Questionnaire (Baard, Deci, & Ryan, 2004), motivation at work was assessed using the Revised Motivation at Work Scale (R-MAWS; Gagne et al., 2010), somatic symptom burden was measured using the Patient Health Questionnaire-15 (PHQ-15; Kroenke, Spitzer, & Williams, 2002), the emotional exhaustion subscale of the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996). Gender differenced were revealed using MANOVA $F(6, 279) = 2.81$, $p < .05$. ANOVA revealed that Women reported higher somatic symptoms $F(1, 284) = 13.29$, $p < .001$ than men. In addition, MANOVA revealed differences by position in management and non-management $F(6, 279) = 4.02$, $p < .001$. Follow up ANOVAs revealed that participants in management reported higher managerial need support, $F(1, 284) = 9.71$, $p < .01$, higher autonomous self-regulation at work, $F(1, 284) = 10.08$, $p < .01$, lower somatic symptom burden, $F(1, 284) = 9.43$, $p < .01$, lower emotional exhaustion, $F(1, 284) = 4.74$, $p < .05$, and lower absenteeism, $F(1, 284) = 7.05$, $p < .01$. The researchers controlled for gender and position in the analysis.

Evidence in this study supports the argument that supportive managers predict autonomous motivation $r = .28$, $p < .001$ which results in well-being through avoidance of somatic symptoms $r = -.26$, $p < .001$ emotional exhaustion $r = -.30$, $p < .001$, and turnover intention $r = -.47$, $p < .001$ (Williams et al., 2014). Managerial support predicted avoidance of somatic symptoms $r = -.26$, $p < .001$ emotional exhaustion $r = -.39$, $p < .001$, and turnover intention $r = -.40$, $p < .001$ (Williams et al., 2014). Williams et al., (2014) assert when employee's psychological needs are met, impacts associated with the positive effects extend beyond the workplace to social outcomes that include psychological health, physical health, and social wellness.

Trepanier et al., (2013) examined the social stressor of bullying in the workplace, the impact on psychological health, and the role of psychological needs satisfaction (autonomy, competence, relatedness). Participants included 1179 nurses in Quebec, Canada who completed an online survey measuring workplace bullying, psychological needs (autonomy, competence, and relatedness), burnout and engagement (Trepanier et al., 2013). Workplace bullying was measured using Negative Acts Questionnaire-Revised (NAQ-R; Einarsen et al., 2009), psychological needs satisfaction was assessed using the Work Related Basic Need Satisfaction scale (WRNS; Van den Broeck et al., 2010), burnout was measured using the Maslach Burnout Inventory (Maslach et al., 1996), engagement was measured with the Utrecht Work Engagement Scale (UWES-9; Schaufeli et al., 2006) (Trepanier et al., 2013). Trepanier et al., (2013) found workplace bullying negatively affects work engagement by preventing psychological needs of autonomy $r = -.64$, $p < .001$ competence $r = -.30$, $p < .001$ and relatedness $r = -.47$, $p <.001$ satisfaction from occurring and bullying positively predicts burn out $r =.36$, $p < .001$. Work engagement is positively affected by meeting the psychological needs of autonomy $r = .46$, $p < .001$, competence $r = .25$, $p < .001$ and relatedness $r =.17$, $p < .001$ (Trepanier et al., 2013). The need to feel a part of the workplace is central to meeting an employee's psychological needs and meeting all three are important to engagement, however, a lack of autonomy may have high psychological costs such as burn out (Trepanier et al., 2013).

Overall, an employee's well-being and behaviors at work are influenced by the leader's style (Williams et al., 2014). Employees who experience destructive forms of leadership are more likely to be absent from the workplace and utilize resources to aid

with stress, such as medical and mental health services, creating finical implications for organizations (Williams et al., 2014). A leader's psychological well-being and ability to cope with the demands of leadership is a predictor of leadership behavior (Byrne et al., 2014). Individuals who hold positive outlooks and assume that the future will work in their favor achieve more success at work (Alessandri et al., 2015). Individuals that have the ability to cope with work stress, along with the inevitable roadblocks and barriers through both a positive individual outlook and acquiring social support, have more cognitive, emotional and intellectual resources to invest in work activities (Alessandri et al., 2015). Leaders establish the social environment on their team and are reported in research as pivotal to employee engagement and job satisfaction (Bass, 1990; Gajendran, & Joshi, 2012; Kovjanic et al., 2012; Segura et al., 2013; Quisenberry & Burrell, 2012).

Social support. According to a 2016 news release by the U.S. Bureau of Labor Statistics, average workforce tenure in the US is 4.2 years and within the hospitality industry, the average is 2.2 years. Approximately 30% of employees stay with employers less than 2 years (Ballinger, Craig, Cross, & Gray, 2011). Losing talent that is highly engaged and well connected in an organization has financial, emotional and productivity losses for an employer (Ballinger et al., 2011). Social support and informal networks are part of the sustainability of an organization's culture (Ballinger et al., 2011). Work environments provide access to social networks and employees with strong personal social support networks report higher levels of well-being (Stansfeld, Shipley, Head, Fuhrer, & Kivimaki, 2013). Social support structures are based on the notion that employees can turn to others for help who care about them as individuals are competent and available to provide assistance (Sarason et al., 1983). Social support reduces the

sense that work-related challenges must be addressed alone and gives the individual and group a collective sense that the obstacles they face are shared (Avanzi et al., 2015; Trepanier et al., 2013).

At work, social support structures are found in the relationships with peers, top management and the employee's direct leader (Consiglio et al., 2016; Sarason et al., 1983). Informal networks and the support they provide have an impact on an employee experience at work (Ballinger et al., 2011). Engaged employees are more likely to create social systems that are supportive of teamwork leading to a more effective performance in job assignments (Christian et al., 2011). Since employees often work in teams in organizations, the leader has an important role to promote dynamic interaction between co-workers and build a compelling vision for employees (Song et al., 2012). While belief in one's self (self-efficacy) and one's abilities fosters engagement, the ability to adapt, adjust and persevere is not completed in a silo; people need others for social outlets to persist and perform (Consiglio et al., 2016; Sarason et al., 1983). Relationships with peers, the direct manager, and top management create visibility and opportunity through job assignments creating a reciprocal effect that has a positive impact on employee engagement and performance (Consiglio et al., 2016). Employees who identify with a social group, which can include their work team or their organization manage stress better and report lower levels of burnout (Avanzi et al., 2015). People generally want to see social groups that they are a part of succeed (Avanzi et al., 2015). A sense of community has been found to reduce the feelings of inequity at work and elevate feeling of support by establishing a positive work environment to organize work and form a mutually supportive network (Maslach & Leiter, 2008).

Avanzi et al., (2015) examined organizational identification and social support. Social support is a job characteristic that provides advice and assistance from supervisors and co-workers and is likely related to engagement (Christian et al., 2011). Participants included 192 high school teachers in Italy, who completed a survey. Organizational identification was measured with items from the scale developed by Mael and Ashforth scale (1992), social support was assessed with the UK Health and Safety Executive's four-item scale (Edwards et al., 2008), collective efficacy was measured with the scale by Skaalvik and Skaalvik (2007), emotional exhaustion was assessed with Maslach Burnout Inventory-Educators Survey (MBI-ES; Maslach et al., 1996). Results showed that social support was positively correlated to organizational identification $r = .37$, $p < .001$, and collective efficacy $r = .43$, $p < .001$. Avanzi et al., (2015) found employees who strongly identify with the organization, received social support from colleagues, had better overall well-being and showed an increase a collective sense of engagement and reduced burnout. Avanzi et al., (2015) assert that social support is important to an individual's belief that future challenges will be met and managed with a network of resources that are able to help, reducing stress and likelihood of burnout.

Maslach and Leiter, (2008) completed a longitudinal study at one-year intervals for two years to determine the early predictors of job burnout and engagement. The way that people feel psychologically has been studied on a continuum from the positive (engagement) to the negative (burnout) and includes three dimensions that are interrelated; energy level, involvement, and efficacy (Maslach & Leiter, 2008). Participants included 466 employees of the administrative division of a large university in North America (Maslach & Leiter, 2008). The continuum of burnout to engagement was

measured using the Maslach Burnout Inventory (Maslach et al., 1996) work-life areas were measured using the Areas of Worklife Scale, which assesses workload, control, reward, community, fairness, and values (Maslach & Leiter, 2008). Maslach and Leiter, (2008) found that the area of work-life that swayed employees toward burnout was the perception of fairness in the workplace $r = .59$, $p < .01$. When employees experience reciprocity through relationships at work, and there is a perception that there are fair and equitable organizational processes, they are less likely to be burned out and more likely to demonstrate engagement (Maslach & Leiter, 2008).

Saks (2006) examined the antecedents and consequences of employee engagement. Participants included 102 employees in a variety of professions and across numerous organizations in Canada, who completed a paper and pencil survey (Saks, 2006). Engagement and recognition were both was measured based on a scaled designed for the study (Saks, 2006) job characteristics were assessed using a scale from Hackman and Oldham (1975), organizational support was measured using a scale adapted from (Rhoades, Eisenberger, & Armeli, 2001) procedural and distributive justice were assessed using scaled developed by Colquitt's (2001) job satisfaction was measured by Cammann et al. (1979) organizational citizenship behavior directed to the individual organization were each assessed by items developed by Lee and Allen (2002). Saks (2006) found that that job engagement and organizational engagement are moderately correlated, $r = .62$, $p < .001$ and that organizational support predicts both job satisfaction $r = .58$, $p < .001$ and organization engagement $r = .58$, $p < .001$. Saks (2006) asserted that at work, people become interdependent over time through a series of reciprocal exchanges between the employee and the leader that develop into meaningful relationships involving trust and

mutual commitment. The employee reciprocates the relationship with the leader and organization through demonstrating engagement (Saks, 2006).

Zhang, Ling, Zhang, and Xie, (2015) examined organizational commitment, work engagement, person-supervisor fit, and turnover intention. Person-supervisor fit is defined as alignment in attitudes, personality, and values between a leader and follower (Lankau, Riordan, & Thomas, 2005). Survey date was collected from 512 engineers in Taiwan. Organizational commitment was assessed with scale adapted from the Organizational Commitment Questionnaire (Ling, Zhang, & Fang, 2000). Research on the structural model of for use with Chinese employees, engagement was measured with the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006) items adapted from the scale developed by Cropanzano, Howes, Grandey, and Toth (1997) to measure turnover intention, person–supervisor fit was measured using a three-item, unidimensional scale (Cable & DeRue, 2002). Zhang et al., (2015) found that organizational commitment positively predicts engagement $r = .51, p < .001$ and negatively predicts turnover intention $r = -.59, p < .001$, meaning that employees that are engaged are less likely to leave. Results indicated that employees were less likely to leave an organization when the person-supervisor fit was aligned and employees were committed to the organization (Zhang et al., 2015).

Choo et al., (2013) studied organizational practices and employee engagement. Participants included 97 employees of a multinational electronics firm in Malaysia (Choo et al., 2013). Participants filled out a survey created and delivered by the researcher to study the relationship between the independent variables of development, recognition, and communication on employee engagement. Findings indicate that employee

engagement is positively predicted by the organizational practices $R^2 = .432$, ($p = .001$) Choo et al., 2013). The researchers assert that inconsistency in communications may be the rationale for the result and stress the importance of timely and transparent communication, employee development, on the other hand, showed a strong relationship and meets the basic psychological needs of autonomy, competence, and relatedness (Choo et al., 2013).

Schutte and Loi (2014), examined the connection between emotional intelligence and workplace flourishing; specifically, the constructs of well-being, work engagement, and social support. Emotional intelligence involves the ability to accurately perceive the emotions of others and exercise emotional control (Schutte & Loi, 2014). Participants completed an online survey and included 319 working adults; 162 from the United States and 157 from Australia (Schutte & Loi, 2014). Well-being was measured by assessing mental health and included the short-form Depression Anxiety and Stress Scales (DASS-21; Henry & Crawford, 2005), work engagement was measuring using the Abridged Job in General Scale (Russell et al., 2004), perceptions of power, which defined as the ability to influence others socially, were measured using the Sense of Power Scale (Anderson, John, & Keltner, 2012), social support was assessed using the Social Support Questionnaire Short Form (SSQ3; Sarason, Sarason, Shearin, & Pierce, 1987), and emotional intelligence was measured using the Assessing Emotions Scale (Schutte, Malouff, & Bhullar, 2009). Results indicated that satisfaction with social support predicted emotional intelligence $r = .34$, $p < .01$, work engagement $r = .24$, $p < .01$, perceived power $r = .28$, $p < .01$, well-being (mental health) $r = .31$, $p < .01$ (Schutte & Loi, 2014). The result of this study also suggests that the ability to relate to and correctly

identify the emotions of others and manage emotional control is foundational to engagement, social support, and influences well-being in the workplace (Schutte & Loi, 2014).

Similarly, Stansfeld et al., (2013) studied work characteristics that determine social support and well-being but organized a longitudinal study. Researchers utilized data from the Whitehall II study, which gathered information via survey from 5,182 civil servants in London between 1985 and 1988 for phase one and in 1989 for phase two (Stansfeld et al., 2013). Finding indicated that high levels of well-being are positively predicted by social support in the workplace $r = .61$, $p < .001$ (Stansfeld et al., 2013). While the researchers acknowledge the dated sample, they stress that social support and work well-being have not changed in their importance in the present day (Stansfeld et al., 2013). Stansfeld et al., (2013), assert that personal relationships and a sense of control within the work environment affect well-being positively.

Siedlecki, Salthouse, Oishi, and Jeswani (2014) also examined the relationship between social support and well-being by specifically looking at life satisfaction and positive and negative affect. Participants included 1,111 individuals between the ages of 18-95 from Charlottesville, Virginia recruited through newspaper advertisements, flyers, and referrals from participants who already completed the survey (Siedlecki et al., 2014). Social support was measured using the Social Network Questionnaire (Shaw, Krause, Liang, & Bennett, (2007), depression was measured with the Center for Epidemiological Studies-Depression scale (CES-D; Radloff, 1977), trait anxiety was assessed using the subscale of the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), affect was measured using the Positive and Negative Affect Scale

(PANAS; Watson, Clark, & Tellegen, 1988). Results indicated that life satisfaction correlated significantly $r = -0.65$ and $r = 0.32$ with negative affect and positive affect, respectively (Siedlecki et al., 2014). Overall findings indicated that the ability to rely on someone supports the mental well-being and meets the psychological need of relatedness (Siedlecki et al., 2014). In the workplace, employees that form social support within their co-workers find outlets for stress and develop a sense of belonging (Lynch et al., 2005; Maslach & Leiter, 2008).

As relationships on work teams form, personal and professional obligations form over time, the stronger the relationship and the more willingness there is to extend trust and the expectation of future benefits from reciprocity (Goh & Wasko, 2012). The environment in which people work is critical for the success of individuals and includes establishing challenges, regular feedback, and supportive relationships according to SDT (Deci & Ryan, 2008). Strong social bonds that form in the relationship between the leader and the follower foster high engagement supporting LMX theory (Burch & Guarana, 2014; Goh & Wasko, 2012). A sense of community and social support at work has been found to elevate levels of employee engagement through the mutual support, positive work environment and networks that employees create to share work, collaborate and cope with stress (Maslach & Leiter, 2008). Collaboration and social connection among team members are important in order to achieve desired work outcomes (Hoch & Kozlowski, 2014; Goh & Wasko, 2012). Developing a sense of obligation to the team through the development of a social network, and a commitment to investing in the relationships embedded within that network is an essential element for productivity on teams (Goh & Wasko, 2012).

Geographic dispersion. Geographic dispersion has been shown to have a negative effect on performance and satisfaction, particularly if traditional hierarchal leadership styles are utilized (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). Geographic dispersion is multifaceted and has many concepts to consider its full impact on team performance, the ability to innovate and solve problems (Magni et al., 2013). Employees that work on geographically dispersed teams work across spatial, temporal and relational boundaries (Segura et al., 2013). Spatial boundaries are defined as the physical work location of dispersed virtual teams; they are not collocated and are separated by geography, temporal boundaries refer to working across time zones, relational boundaries are related to working across networks, organizational teams, departments, units and cultural sub-groups (Segura et al., 2013; Schweitzer & Duxbury, 2010).

Discontinuity is a term used to combine the unique work environment of dispersed teams which includes geography, organizational and national culture (Segura et al., 2013). Geographically dispersed teams are more challenging to lead and motivate (Avolio et al., 2014; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Building the connection between the employee, the leader, and the other virtual team members requires more effort to engage and different management strategies (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Virtual collaboration is not an equal replacement for face to face contact, but for many organizations the need to share information and collaborate through online technology and social media is a key feature of innovation and requires leaders to know how to leverage advanced information technology tools and resources through consistency in communications (Avolio et al., 2014; Magni et al.,

2013). Computer-mediated technologies aid in increasing collaboration and reducing the limitations introduced by geographic dispersion (Magni et al., 2013; Oeberst & Moskaliuk, 2016). Information technology and the means for sharing and disseminating information has changed, but the way in which organizations and teams are led has not adapted considerably to advances in information technology (Avolio et al., 2014; Quisenberry & Burrell, 2012). Leadership provides the social structure and supports the facilitation of team goals through team exchanges and interactions (Kahai et al., 2013). Establishing roles and responsibilities on virtual teams is recommended as the method to establish trust (Quisenberry & Burrell, 2012). On virtual team's, relationships of trust are built from a demonstration of competence (Quisenberry & Burrell, 2012). Relationships form after work assignments are established, which is the reverse of teams that are in close proximity (Quisenberry & Burrell, 2012).

Hoch and Kozlowski (2014) examined the impact of traditional hierarchical leadership, structural support and shared team leadership on team performance of virtual teams. Participants included 565 front line employees and team leaders from 101 global manufacturing industries working in research and development (Hoch & Kozlowski, 2014). Findings in this study indicate that hierarchical leadership predicted weaker team performance on virtual teams (Hoch & Kozlowski, 2014). Structural support, are the systems and processes in organizations related to information, rewards, and communication and often compensate for negative aspects of the work environment or leadership behavior (Hoch & Kozlowski, 2014). The more virtual a team, the more that structural support strengthened team performance (Hoch & Kozlowski, 2014). Shared team leadership, which is characterized by strong peer support in decision making and

team members leading each other towards the accomplishment of goals, had a significant relationship to team performance for both proximate teams and virtual teams (Hoch & Kozlowski, 2014). Hoch and Kozlowski (2014) assert that structural support, creating clarity on the reward system, and transparent communication is beneficial for virtual teams and shared leadership is recommended for managing all teams.

Dunn et al., (2012) examined transformational leadership and organizational commitment across cultures. Participants included 474 employees that worked for a multinational organization; 142 from Israel and 332 from the United States (Dunn et al., 2012). The Leadership Practices Inventory (Kouzes & Posner, 1997) measured the universal effectiveness of transformational leadership approaches across cultures and organizational commitment was assessed using the three-dimensional Organizational Commitment scale (Meyer & Allen, 1991). The researchers found leadership behavior and organization commitment did not vary by country except on one variable, in the U.S. sample, the results indicated a positive relationship between continuance commitment (intent to stay) and inspiring a share visions $r = .12$; $p < 0.05$, suggesting that transformational leadership has a universal appeal across cultures (Dunn et al., 2012). Organizational commitment and participative leadership behaviors, specifically transformational leadership attributes of articulating a shared vision, having high expectations and a firm conviction that the goals are achievable through the efforts of the individuals and the collective group, have demonstrated positive relationships in past research to organizational outcomes regardless of culture (Dunn et al., 2012). Dunn et al., (2012) asserted that organizational culture influences acceptance of leadership approach as part of the socialization that occurs in organizations

O'Leary and Cummings, (2007) studied the characteristics of geographic dispersion in teams specifically, spatial dispersion, the physical distance between team members, temporal dispersion is the time that team members' work hours overlap and configurational dispersion, the number of sites where team members are located. O'Leary and Cummings (2007) argue that geographic dispersion is multi-dimensional and has differing outcomes. Spatial distance effects face-to-face interactions, temporal distance has an effect on real time problem solving, configurational dispersion effects the awareness of fellow team member's activities (O'Leary & Cummings, 2007). O'Leary and Cummings (2007) developed three measures of geographic dispersion. The first was the spatial development index (SDI) this calculation measures the distance between team members based on the number of members at each location; the higher the resulting number the more spatial dispersion a team has (O'Leary & Cummings, 2007). The second measure developed was the time zone index (TZI) calculates the impact of time zones and overlapping work hours for ease of synchronous communications (O'Leary & Cummings, 2007). Imbalance index combines the site index and the isolation index to measure how teams are configured; this measure includes the number of sites and the isolation of employees based on how many co-workers they are collocated with (O'Leary & Cummings, 2007). Employees that are geographically isolated can benefit from the advances in technology to increase communication and feelings of connection (O'Leary & Cummings, 2007).

Birdie and Jain (2015) studied the impact of working virtually on job involvement and organizational climate among service workers. The sample included 100 male virtual workers in India working in various organizations including both IT and hospitality

industries. Organizational climate includes performance standards, the flow of communication, rewards, and recognition, conflict resolution, support systems and decision-making processes and was measured using two surveys; the Organizational Climate Inventory (Chattopadhaya & Aggarwal, 1976), job involvement was measured using the scales from Singh (1984). In addition, the researchers conducted interviews with 10 of the virtual workers (Birdie & Jain, 2015). Findings indicated that organizational climate and job involvement were not significantly correlated *r* = .00, p n.s. The researchers reported that employees interviewed found challenges with working virtually including balancing family obligations and working hours (Birdie & Jain, 2015).

Suh, Shin, Ahuja, and Kim, (2011) examined the influence of virtual technologies on work groups. The researchers examined the use of communication technologies including the use of personal computer-mediated communication PCMC (e.g., email, IM) and communal computer-mediated communications (CCMC) (video conferences, blogs) in creating social connections on intra-group and extra-group networks and the impact of structural holes on teams (Suh et al., 2011). Intra-group networks serve to create norms and rules on a team, extra-group networks expand the reach of the team members beyond the immediate team to larger external networks, and structural holes are gaps in connections that limit access to resources (Suh et al., 2011). Participants included 211 employees who worked across locations and time zones for five Korean global business consulting firms (Suh et al., 2011). Survey instruments, developed by the researchers, measured team member connections by asking how often they worked with a specific team member and then created a network density formula (Suh et al., 2011). Technological support was measured by asking the participants to report to what degree

they used technology to support communication, documentation, and decision-making (Suh et al., 2011). Finally, the temporal dispersion was measured by asking the participants to what extent they work overlapping hours (Suh et al., 2011). Results indicated that PCMC increased the ties and connections within groups that have a higher level of geographic dispersion $r = .16$, $p < .01$ (Suh et al., 2011). Employees that do not share working hours have a more difficult time maintaining effective communication in extra-group networks (Suh et al., 2011). Suh et al., (2011) assert that feeling part of a group is important for individual team members to feel connected and use of collaborative technology can offset the negative effects of geographic dispersion by paying careful attention to finding ways to include employees that have limited overlapping work hours to maintain a strong network for relating to others.

Goh and Wasko, (2012) studied the effects of leader-member exchange (LMX) on performance on virtual teams. The researcher's utilized gaming technology to study how teams, that are not located together, are affected the allocation of resources by the leader and form into interdependent collective groups (Goh & Wasko, 2012). The longitudinal study included 68 participants of a virtual gaming guild that were organized to complete tasks that required organization, coordination, teamwork and overall task that were very similar to a workplace (Goh & Wasko, 2012). Data was collected in three waves over an 8-week time frame (Goh & Wasko, 2012). The first wave included an online survey assessing leader-member exchange, the second analyzed task related logs associated with the gaming system over a five-week time frame, and in wave three an additional survey was deployed measuring resources and team performance (Goh & Wasko, 2012). Leader-member exchange was assessed using LMX-7 scale (Graen & Uhl-Bien, 1995), and items

compiled on empowerment (Spreitzer, 1995), and trust (Jarvenpaa & Leidner, 1999).

Results indicated that high-quality LMX supports employee performance through the

allocation of resources (Goh & Wasko, 2012). Goh and Wasko, (2012) assert that in

virtual team's empowerment is critical because it meets the psychological need of

competence $R^2 = .246$ and the composition of teams with complementary skills drives

interdependencies meeting the need of relatedness. The variance of LMX to perceptions

of competence, impact, and self-determination (24.6 to 32.3%) (Goh & Wasko, 2012).

Finally, the development of relational capital is important to move from a focus on the

individual to the collective and which aids in maintaining a positive belief about the

larger organizational outcomes (Goh & Wasko, 2012).

Gajendran and Joshi (2012) also studied the role of LMX communication

frequency and member influence the decisions on geographically distributed teams. An

online survey was distributed to 167 participants on 40 globally distributed teams in the

software services group of a large, multinational, Fortune 500 company with

headquarters in the United States (Gajendran & Joshi, 2012). A scale adapted from Lam,

Chen, and Schaubroeck's (2002), on participative decision-making assessed the influence

that team members had on team decision making, quality of LMX was measured using

items from a scale developed by Janssen and Yperen (2004), communication frequency

was assessed using the Measure of Dyadic Leader-Member (Kacmar, Witt, Zivnuska, &

Gully, 2003), team innovation was assessed using items from the supervisor-rated team

innovation scale (DeDreu & West, 2001). Findings indicated that the interaction between

LMX, team dispersion, and communication was significant $r = .34$, $p < .01$ suggesting

that LMX enhances member-influences on team decisions when leader-member

communication is frequent and sustained (Gajendran & Joshi, 2012). While high-quality LMX positively effects the dyad of the leader and the individual, additional findings indicated the team collective also benefits from a socialized form of LMX that enhances the involvement and inclusion of the members of the team through frequent communication; the interaction between the leader and team, communication frequency, and team decisions was positive $r = .36$, $p < .01$ (Gajendran & Joshi, 2012). Members of geographically dispersed teams often feel left out of decision making, Gajendran and Joshi (2012) assert that decision making is a critical driver of innovation.

Magni et al., (2013) studied how teams who are not collocated adapt to meet job demands and improvise to achieve collective objectives. Participants included 299 employees, representing 71 teams from two large technology firms in Italy (Magni et al., 2013). Participants completed surveys and at least three surveys were completed per team (Magni et al., 2013). Team improvisation, which is the ability to be spontaneous and creative, was measured using a scale developed by Vera and Crossan (2005), team dispersion was measured in three ways based on the work of O'Leary and Cummings's (2007), the Spatial Dispersion Index (SDI) which measures the distance between sites weighted by the number of members at the sites and index, the configurable dispersion or the distance between the sites, and the cognitive dispersion which measured the perception of being reachable. Magni et al., (2013) found that there is a significant negative relationship with team improvisation techniques used for complex tasks when a team's spatial dispersion $r = -.25$, $p < .01$, configurational dispersion $r = .79$, $p < .01$, cognitive dispersion $r = -.33$, $p < .05$ are high. Magni et al., (2013) assert that complex and intensive work is not ideal for geographically dispersed teams. When assigning

project teams, the type of task is an important consideration for managers (Magni et al., 2013). Tasks that are have limited information, scope, and high ambiguity may require collocated teams to collaborate to ensure success (Magni et al., 2013).

Segura et al., (2013) studied the effects of dispersion on the performance of systems and engineering teams. Global teams have a wide variety of demographic diversity variables to consider such as cultural diversity, knowledge diversity which refers to the education, skills and work experience of individual members and social category diversity (gender, race, ethnicity) (Segura et al., 2013). Data was gathered via a survey of 19 team leaders who were IT professionals representing 38 countries from America, Asia, and Europe and included a review of 30 projects geographically dispersed through 57 cities (Segura et al., 2013). Team dispersion was measured in two ways, the first the calculation based on spatial dispersion index (SDI) which measures the distance between sites weighted by the number of members at the sites based on the scale and the second measure was the Time Zone Index (TZI) which measuring the overlapping work hours (O'Leary & Cummings, 2007). Team performance was based on questions developed by the researchers (Segura et al., 2013), demographic dispersion was measured based on the scale developed by (Ting-Peng, Chih-Chung, Tse-Min, & Lin (2007). Segura et al., (2013) found that team performance is showed a positive relationship to geographic dispersion during the concept (adj. $R^2 = .521$) and development phases (adj. $R^2 = .477$) of technology related tasks. The researchers assert that during work activities, task conflict is moderated by geographic dispersion, especially in teams that have high-value differences in demographic diversity variables (Segura et al., 2013).

Jiang, Bazarova, and Hancock, (2013) studied reciprocity as a variable in how quickly people disclose information and increase levels of relationship intimacy using computer mediated technology compared to face-to-face interactions. An experimental design included 85 undergraduate students in attending university in the northeastern United States (Jiang et al., 2013). The groups were randomly assigned to have a discussion with a confederate face-to-face or using instant messaging (IM) with the confederate increasingly using or avoiding self-disclosure in the conversations as part of the manipulation (Jiang et al., 2013). Results indicated that when self-disclosure was included in conversations participants were more likely to reciprocate in communications regardless of the medium suggesting that CMC by itself does not always lead to more intimate self-disclosures than face-to-face interactions. Jiang et al., (2013) assert that the both the norm of reciprocity and the role of media are important considerations in how people share and make connections with others in online and face-to-face interpersonal communications.

Chang and Lee (2013) examined the effects of leadership style and conflict management on virtual teams. Participants included 318 undergraduate students in Taiwan participating in an online business course were divided into three groups with 106 participants in each group; one student was assigned to be the leader of the group (Chang & Lee, 2013). Participants completed surveys to assess leadership style using 9 items from the Multifactor Leadership Questionnaire (Kahai & Avolio, 2006), conflict management was measured using 19 questions from the Conflict Mode Instrument (Rahim, 1983). Part of the assessment included the mutual goal of the group creating a business plan which was evaluated based on the work of Vesper (1996) and Mason and

Stark (2004). Chang and Lee (2013) assert transformational leadership is more effective at conflict management through the use of collaborative strategies that promote performance through continuous learning resulting in performance when compared with the avoiding, competitive, compromising strategies utilized in transformational leadership (Chang & Lee, 2013). Collaboration and accommodation are the most effective techniques in conflict management $r = .000$, $p <. 001$ and $r = .000$, $p <. 001$ respectively (Chang & Lee, 2013). Chang and Lee, (2013) assert that the leader is responsible for planning for work assignments, and effectively manage conflict through team collaboration.

Tasks that involve a high degree of interdependence, collaboration and innovation are more negatively impacted by geographic dispersion than work tasks that are independent in nature (Magni et al., 2013). Employees who work remotely from their leader and team are common in organizations (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). Employees who work remotely, face isolation and may struggle to maintain motivation due to a lack of identification with the team (Gajendran & Joshi, 2012; Segura et al., 2013; Quisenberry & Burrell, 2012). Advances in technology make communicating remotely efficient and organizations benefit by expansion globally, innovation from hiring and retaining talent without being bound by location (Avolio et al., 2014; Hoch & Kozlowski, 2014; Magni et al., 2013; Quisenberry & Burrell, 2012; Segura et al., 2013). Disadvantages of geographically dispersed teams include effects to performance and work outcomes such as low team trust, cohesion, cooperative behavior and alignment with goals (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Achieving an inclusive environment in a virtual team is challenging; virtual team

members often report feeling left out of decision making resulting from an uneven

distribution of critical tasks and sharing of information when compared to employees

who are collocated (Hoch & Kozlowski, 2014; Gajendran & Joshi, 2012). The degree to

which teams are dispersed is an important consideration; team members that are within

driving distance may not experience the same disadvantages and disconnection as team

members that live across great distances (Magni et al., 2013). Traditional models of

hierarchal leadership are not as effective with geographically dispersed employees on

virtual teams (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

     Methodology. The quantitative methodology proposed is consistent with previous

research presented in the articles above, specifically that reviewed leadership style

(transformational, transactional, passive-avoidant), (Aasland et al., 2010; Breevaart et al.,

2014; Choi et al., 2015; ElKordy, 2013; Hamstra et al., 2014; Kahai et al., 2013;

Kovjanic et al., 2012; Kovjanic et al., 2013; Song et al., 2012; Strang, 2011; Tims et al.,

2011) employee engagement (Alacron & Lyons, 2011; Alessandri et al., 2015; Burch &

Guarana, 2014; Khan et al., 2015; Milam, 2015; Mone et al., 2011; Robertson & Cooper,

2010; Strom et al., 2014; Vogelgesang et al., 2013) psychological needs (autonomy,

competence, relatedness) (Chiniara & Bentein, 2016; Consiglio et al., 2016; De Cooman

et al., 2013; Graves & Luciano, 2013; Lloyd, 2008; Schreurs et al., 2014; Sisodia & Das,

2013; Trepanier et al., 2013; Vansteenkiste et al., 2007; Williams et al., 2014) social

support (Avanzi et al., 2015; Choo et al., 2013; Maslach & Leiter, 2008; Saks, 2006;

Schutte & Loi, 2014; Siedlecki et al., 2014; Stansfeld et al., 2013; Zhang et al., 2015) and

geographic dispersion (Avolio et al., 2014; Chang & Lee, 2013; Dunn et al., 2012;

Gajendran & Joshi, 2012; Goh & Wasko, 2012; Hoch & Kozlowski, 2014; Jiang et al.,

2013; Magni et al., 2013; O'Leary & Cummings, 2007; Segura et al., 2013; Suh et al., 2011). The current study explored the differences in psychological needs and social support based on leadership style and level of engagement. Quantitative methods were selected because of the alignment to the research question, selection and definition of the variables in advance, using a causal-comparative design that quantified observations (Edmonds & Kennedy, 2013).

Instruments. In the current study, the research collected data using instruments to answer the research questions. The most common survey deployed to review leadership style assessing transformational, transactional and passive-avoidant was Bass and Avolio's (2004), Multifactor Leadership Questionnaire (Aasland et al., 2010; Arnold et al., 2015; Breevaart et al., 2014; Burch & Guarana, 2014; Byrne et al., 2014; Burch & Guarana, 2014; Chang & Lee, 2013; ElKordy, 2013; Hamstra et al., 2014; Hoch & Kozlowski, 2014; Kovjanic et al., 2013; Skogstad et al., 2014a; Song et al., 2012; Strang, 2011; Strom et al., 2014; Tims et al., 2011). Similarly, the most common survey deployed to review employee engagement was the Utrecht Work Engagement Scale (UWES), which was developed by Schaufeli and Bakker (2003) (Alacron & Lyons, 2011; Alessandri et al., 2015; Breevaart et al., 2014; Burch & Guarana, 2014; Consiglio et al., 2016; Kovjanic et al., 2013; Milam, 2015; Schreurs et al., 2014; Song et al., 2012; Strom et al., 2014; Tims et al., 2011; Trepanier et al., 2013; Zhang et al., 2015). The Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) developed by Van den Broeck et al., 2010, was consistently used to assess the psychological needs (autonomy, competence, relatedness) (Chiniara & Bentein, 2016; De Cooman et al., 2013; Schreurs et al., 2014).The UK Health and Safety Executive (HSE) Management Standards Indicator

tool (MSIT), is utilized and measures seven dimensions of the work environment including job demands, social support, and working relationships (Cousins et al., 2004; Edwards et al., 2008; Houdmont, Randall, Kerr, & Addley, 2013).

This section summarized current research that examined how leadership styles (transformational, transactional and passive-avoidant), effected the ability to meet psychological needs (autonomy, competence, and relatedness) and provide social support that encouraged or discouraged engagement (Schreurs et al., 2014). The degree to which teams are dispersed is an important consideration that is also part of the research questions (Magni et al., 2013). The following section summarizes Chapter 2, followed by an introduction to Chapter 3.

Summary

This quantitative, non-experimental, causal-comparative study examined the variables of psychological needs (autonomy, competence, relatedness), social support and the effect on employees who show high or low levels of employee engagement based on the leader's style (transactional, transformational, passive-avoidant). An employee's direct leader is consistently reported as the primary connection between the organization and the employee (Breevaart et al., 2014; Song et al., 2012). The direct leader offers opportunities, assignments, development, and growth that fosters a connection and engagement to the organization, department, and team (Kahn, 1990; Loi et al., 2014; Shuck & Wollard, 2010). As theoretical foundations, LMX theory and SDT aligned and indicated the importance of relationships as a premise of engagement in the workplace. When psychological needs are met through autonomy, competence and relatedness there is growth and well-being according to SDT (Miniotaite & Buciuniene, 2013). Leaders

have limited resources, including time and energy, and do not have equivalent relationships with all their employees according to LMX, which effects the ability to meet psychological needs equitably as proposed by SDT (Goh & Wasko, 2012; Graen, 1976).

An individual's motivation at work and subsequent engagement are fostered by meeting psychological needs (autonomy, competence, and relatedness) through positive interactions with the leader that are repeated and become internalized to the self (Vansteenkiste et al., 2007; Vallerand et al., 2008). Increasing engagement is attractive to organizations because of the pressures for performance in demanding markets and the costs associated with attrition (Christian et al., 2011; Kovjanic et al., 2013; Macey & Schneider, 2008; Song et al., 2012). Costs of losing employees are not just in hard dollar productivity or recruiting and training expenses, there is a psychological cost when a well networked and collaborative individual leaves an organization (Ballinger et al., 2011). A limited amount of research has been organized to review these variables in the hospitality industry with the added complexity of geographic dispersion. Chapter 2 provided a review of the literature, primarily over the past 5 years, and presented an overview of leadership styles, psychological needs in the workplace (autonomy, competence, and relatedness), social support and the known effects and impact of geographic dispersions through evaluation of current and seminal literature.

Chapter 2 is divided into the themes of leadership styles, psychological needs (autonomy, competence, and relatedness), employee engagement, social support and geographic dispersion. Since employees working in remote locations from their leader and team are more common in today's workplace, the review presents the gaps and the

need for research to further explore the topic. The literature fails to compare transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. This quantitative, causal-comparative study examined employees who work virtually and those that are proximate to their leader in their ability to provide information that offers insight into employee engagement, through meeting psychological needs (autonomy, competence, and relatedness), and a leader's social support for employees based on their leadership style. Chapter 3 describes the steps in the data collection process and how the data were managed and evaluated while adhering the standards of ethical research.

Chapter 3: Methodology

Introduction

The purpose of this quantitative, causal-comparative study was to examine how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. Leaders are consistently reported as influential in an employee's level of engagement (Breevaart et al., 2014; Song et al., 2012). Employees form perceptions of their leader's ability to offer them opportunities to demonstrate their competence and capability, establish autonomy as a norm and relate to each team member in order meet psychological needs and provide social support (Burch & Guarana, 2014; Deci & Ryan, 2008; Meyer, 2013). Employees who are not collocated with their leader or team are more difficult to lead and motivate (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

Two research questions are stated, comparing transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry**.** The sample population included employees dispersed across locations in the United States, with one primary location in the southwestern U.S., and the other in the Mid-Atlantic region of the country. A population in the hospitality industry had not been studied, in relation to the study variables, based on the literature reviewed to date.

Chapter 2 reviewed relevant literature on the influence of leadership style (transformational, transactional, and passive-avoidant) on employee engagement through meeting the psychological needs (autonomy, competence, relatedness) and in providing social support. Chapter 2 also examined the theoretical foundations of this study. According to Leader-member exchange theory (LMX), and self-determination theory (SDT), relationships foster the fulfillment of psychological and social needs in the workplace (Burch & Guarana, 2014; Deci & Ryan, 2008). According to LMX, relationships matter at work and lead to opportunity through both contingent and social exchanges (Deci & Ryan, 2008; Meyer, 2013). Autonomy, competence and relatedness are universal psychological needs according to SDT (Chiniara & Bentein, 2016; Deci & Ryan, 2008). Self-determination theory is a primary theory of motivation in many areas of study including psychology, education, sports and organizational behavior (Chiniara & Bentein, 2016; Deschamps et al., 2016). Past theories of motivation claimed that people were motivated primarily by extrinsic rewards with an emphasis generally on reward and avoidance of negative consequences (Meyer & Gagne, 2008; Skinner, 1969). A limited amount of research has been organized to review the variables of leadership style, psychological needs, social support and employee engagement with the added complexity of geographic dispersion.

This chapter includes a review of the problem statement, research questions, and hypotheses for the non-experimental, quantitative research approach conducted for this study. Then, it provides a detailed description of the plan utilized for data collection and management, via survey administration to the target population and storage of data to support ethical considerations and future study replication. Following this, it discusses

the statistical procedures planned for data analysis, the known and potential limitations and delimitations of the study. This chapter concludes with an overall summary of the methodology.

Statement of the Problem

As workplace dynamics change, the study of leadership and followership is critical for supporting organizations as they develop talent to maintain a competitive advantage in a global marketplace (Christian et al., 2011; Kovjanic et al., 2013; Macey & Schneider, 2008; Song et al., 2012). While previous research has studied employees in the United States and internationally, across multiple working environments, to date there has not been a study located measuring the variables of leadership styles, psychological needs (autonomy, competence, and relatedness), and social support for employees working within the hospitality industry in several geographic locations. The following problem statement guided this study; it is not known how transformational, transactional, and passive-avoidant leaders compare in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. There are over 5 million hotel rooms in the United States and the hospitality industry is expected to grow by 6% adding close to a million new jobs in the U.S. by 2024 (Bureau of Labor Statistics, 2016; Yi-Lin et al., 2015).

The sample group for this study was comprised of employees who worked in the information technology and corporate marketing functions in the hospitality industry, across multiple working locations in the United States. The study findings may extend to

support other industries and organizations with responsibility for technology and marketing within corporate environments across several physical locations. Employees who have technical skills in information technology and in technical professional positions, such as marketing, are in high demand across a variety of industries (Bureau of Labor Statistics, 2016). This study contributed to increasing knowledge about teams that are not collocated. Working virtually is a trend that is increasing in the 21st century (Birdie & Jain, 2015; Mateyka et al., 2012). Making connections, both psychological and social, when employees are remote is bringing a new set of dynamics to teams and leadership (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Building the connection between the employee, the leader, and the virtual team members requires more effort to engage and different management strategies (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Geographically dispersed teams are more challenging to lead and motivate (Avolio et al., 2014; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

Research Question(s) or Hypotheses

Transformational, transactional, and passive-avoidant are distinct styles of leadership (Bass & Avolio, 2004). Comparing the ability to meet psychological needs (autonomy, competence, relatedness) to the ability to meet social support needs, on the basis of leadership style for employees who have high or low levels of engagement was the focus of this study. The survey instruments utilized were based on scholarly work, reliable and valid; Table 7 displays a visual summary of the instruments utilized in this study. An online web-survey platform administered 115 questions to approximately 800 employees of a corporate hospitality organization. The organization has locations across

the United States, with larger sites in the southwestern, Mid-Atlantic regions of the country. The employees in the sample included those that are collocated and those that were geographically dispersed from their leader and team. All 800 employees were offered the opportunity to take the entire survey.

The independent variables included leadership style and employee engagement. For the purposes of this research, employee engagement and leadership style were treated as preexisting traits, similar to how a naturally occurring independent variable is researched. The dependent variables were psychological needs (autonomy, competence, relatedness) and providing social support. The data source for each dependent variable included in this study was the collected responses to the online survey comprised of four instruments, see Table 7. The data was subsequently transferred to SPSS for statistical analysis. The data Tables 1-6 define the relationship of the variables included in this study. The following research questions guide this quantitative, non-experimental, causal-comparative study:

RQ1:   To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

$H1_0$:   There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to provide social support.

H1a: There is a statistically significant effect among leaders with transformational,

transactional, and passive-avoidant styles on perceived ability to provide

social support.

H2$_0$:   There is not a statistically significant effect among leaders on perceived

ability to provide social support by geographic location.

H2a: There is a statistically significant effect among leaders on perceived ability to

provide social support by geographic location.

H3$_0$:   There is not a statistically significant effect among leaders on perceived

ability to provide social support to employees with high and low engagement.

H3a: There is a statistically significant effect among leaders on perceived ability to

provide social support to employees with high and low engagement.

H4$_0$:   There is not a statistically significant leadership style effect by geographic

location on perceived ability to provide social support interaction.

H4a: There is a statistically significant leadership style effect by geographic

location on perceived ability to provide social support interaction.

H5$_0$:   There is not a statistically significant leadership style by employee

engagement effect on perceived ability to provide social support interaction.

H5a: There is a statistically significant leadership style by employee engagement

effect on perceived ability to provide social support interaction.

H6$_0$:   There is not a statistically significant employee engagement effect by

geographic location on perceived ability to provide social support interaction.

H6a: There is a statistically significant employee engagement effect by geographic

location on perceived ability to provide social support interaction.

H7$_0$: There is not a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

H7a: There is a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

H8$_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H8a: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H9$_0$: There is not a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H9a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H10$_0$: There is not a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H10a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H11$_0$: There is not a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H11a: There is a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H12$_0$: There is not a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H12a: There is a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H13$_0$: There is not a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H13a: There is a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14$_0$: There is not a statistically significant leadership style, by employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14a: There is a statistically significant leadership style by, employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

Research Methodology

Quantitative research methodology was selected to assess the differences in the dependent variables of social support and psychological needs (autonomy, competence, relatedness) based on the independent variables of employee engagement and leadership styles (transformational leaders compared with transactional and passive-avoidant) (Rudestam & Newton, 2001). When the variables are clearly known, the researcher should utilize a qualitative methodology according to Gravetter and Wallnau (2013). Quantitative research methods assessed the variables and provided numeric data for statistical analysis and testing of multiple variables and constructs associated with the topic of leadership (Podsakoff et al., 2003). In contrast, qualitative data was rejected because the aim to improve understanding and appreciation of the how and why of phenomena through individual viewpoints that reflect patterns when reviewed collectively would not align with the design of the research (DiCicco-Bloom & Crabtree, 2006). A quantitative research study was selected in order to measure variables by describing numerically the relationships and potential interactions (Leech & Onwuegbuzie, 2007). Selecting a quantitative research design was based on the research questions in this study, which aimed to explore the perceived ability to meet psychological needs and provide social support based on leadership style and level of engagement.

Even though numerous empirical studies and models describe leadership behaviors that are effective and ineffective, no studies located to date have studied the differences in employee perception of their immediate leader's leadership style, perceived ability to meet psychological needs (autonomy, competence, relatedness), provide social support among employees who are geographically dispersed from their leader and co-workers, particularly within the hospitality industry. This study was rooted in organizational engagement research, primarily measured through survey instruments, that suggests the importance of the relationship between the leader and the employee to positive organizational outcomes (Burch & Guarana, 2014). Technology is changing organizational systems at a fundamental level, including how leaders and employees interact and relate to one another (Avolio et al., 2014; Balthazard et al., 2009). This shift requires leaders and employees alike to adopt long-standing mindsets about interpersonal connection, social relationships, productivity, working hours and work-life separation to a new norm (Avolio et al., 2014; Balthazard et al., 2009).

The foundation for the research methodology was based on the review of literature of the selected variables. Survey methods are found as a common research method for quantitative research (Edmonds & Kennedy, 2013). The non-probability sampling technique of a purposive sampling was used to generalize the findings to the population of approximately 1,300, by including 800 employees in the target sample that represent the largest departments within the selected organization (Edmonds & Kennedy, 2013). The four survey instruments selected captured data about employee engagement, leadership styles (transformational leaders, transactional, and passive-avoidant), social support and psychological needs (autonomy, competence, relatedness) of employees in

the hospitality industry (Rudestam & Newton, 2001). The quantitative data collected enabled comparison between, the dependent variables of social support and psychological needs (autonomy, competence, relatedness) based on the presence of the independent variables of employee engagement, geographic location and leadership styles (transformational leaders compared with transactional and passive-avoidant) (Edmonds & Kennedy, 2013; Rudestam & Newton, 2001).

Research Design

The design of the investigation is important to be able to draw inferences from the resulting data and statistical analysis (Edmonds & Kennedy, 2013). The research design provided a strategy that added beneficial evidence to the body of information on the subject of the study (Jupp, 2006). This study was a non-experimental, utilizing a causal-comparative design. Data were gathered from a sample of employees in the hospitality industry, using a causal-comparative survey design, to understand their opinions and attitudes about the variables under study. This survey was completed at a single point in time, using one of the most common approaches to non-experimental design, surveying (Edmonds & Kennedy, 2013). Non-experimental, causal-comparative survey designs are utilized when there is no control or manipulation of the independent variables (leadership style, engagement level) and relationships are examined by a degree of association since causal relationships can only be inferred from experimental research (Edmonds & Kennedy, 2013). The four survey instruments captured data about engagement, leadership styles (transformational leaders, transactional, and passive-avoidant), perceived ability to provide social support and meet psychological needs (autonomy,

competence, relatedness) of employees in the hospitality industry (Rudestam & Newton, 2001).

The survey instruments utilized are reliable and valid. They include Bass and Avolio's (2004) Multifactor Leadership Questionnaire, short form (MLQ-5X), the Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2003), the Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) developed by Van den Broeck et al., 2010, and the UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT) (Cousins et al., 2004). The survey instruments that measured the independent and dependent variables are described in Table 7. An online web-survey platform was utilized to gather data from employees in the United States and included employees that are collocated and those that are geographically dispersed from their leader and team working in the hospitality industry. The sampling technique utilized was purposive based on the small size of the organization and the desire to include employees from the business area that have the larger employee populations (Lavrakas, 2008). A limitation of purposive sampling is the subjectivity of the selection process and the limited inferences in relating the results to the rest of the organization (Lavrakas, 2008).

The most appropriate research design was determined by the research questions (Edmonds & Kennedy, 2013), which explained that the literature failed to compare transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. To answer these questions,

employees were ideal to include in the research process. The data for this study were produced by the employees of the organization, through the completion of four survey instruments. Online survey techniques offered a method to gather data from a large number of employees over a short period of time, and they also offered the employee a convenient way to offer their opinions confidentially (Edmonds & Kennedy, 2013). Employee engagement, geographic location, and leadership styles were the independent variables, psychological needs (autonomy, competence, relatedness) and social support were the dependent variables and the unit of analysis was the survey responses of individual employees working in a hospitality organization. The independent variables were not manipulated in the design therefore quasi-experimental design was not appropriate for the study. Leadership styles (transformational leaders, transactional, and passive-avoidant), geographic location, and employee engagement naturally manifest in the environment being researched and were measured using causal-comparative design (Edmonds & Kennedy, 2013). The interaction effects between these variables occurring in the work environment were best researched by non-experimental research design (Edmonds & Kennedy, 2013; Vogt, 2011). Table 7 provides a visual summary of the instruments planned for use in this study.

The non-experimental, causal-comparative cross-sectional research design supported the seminal theories of LMX and SDT which were best measured by quantitative methods to combine finding with prior research observations according to Gravetter and Wallnau (2013). A holistic look at how employees were effected by their leader's style and perceived ability to meet psychological needs, along with the importance of social support in the workplace, and the virtual nature of work in the 21st

century, responded to scholarly requests for a more complete picture of the various drivers of employee engagement (Avolio et al., 2014; Birdie & Jain, 2015; Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). An observational, correlation approach was also considered and rejected, because the objective was to examine the effect of transformational, with transactional, and passive-avoidant leadership style on the ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, not explain the direction of the relationship between the variables (Edmonds & Kennedy, 2013).

Population and Sample Selection

The setting for of this quantitative non-experimental, causal-comparative, study was a mid-sized hospitality company in the United States. The general population included approximately 1,300 employees of a hospitality organization dispersed across locations in the United States; one primary location in the southwestern U.S. the other in the Mid-Atlantic region of the country, and finally employees who are working across many locations in the U.S., were described as field employees. The target population included approximately 800 employees who worked in the technology and marketing teams of the organization. This population was selected because the employees who support technology and marketing are core to the global demands and evolving business requirements of the hospitality industry (Marr, 2016). A non-probability sampling technique of a purposive sampling was used to generalize the findings to the population of approximately 1,300, by including employees that represent the largest departments within the selected organization (Edmonds & Kennedy, 2013).

All full and part-time employees in the IT and Marketing departments were recruited for participation with an email invitation from the organization's leadership. An employee was considered an adult, at least 18 years old who was employed by the organization on a full or part-time basis, not a temporary worker or worker on a contract assignment. The employees were informed of the voluntary and confidential nature of their participation in both the email from the leadership and again upon starting the survey via the notice of informed consent. Employees were able to give their consent to participate via the survey link provided or opt-out of participation. All surveys collected were anonymous, no identifiable information was asked and IP addresses were not tracked. Overall participation was monitored weekly with reminder emails sent to all participants until the minimum sample was exceeded. Permission to collect data was provided by the organization's legal counsel. Appendix D displays a copy of the site permission letter.

Power is the probability that the null hypothesis will be rejected and is vital to research design (Chartier & Allaire, 2007; VanVoorhis-Wilson & Morgan, 2007). The ability to reject the null hypothesis was directly related to sample size, hence a sample too small will not provide the level of sensitivity to make statements related to the research question or the subsequent hypotheses (Chartier & Allaire, 2007). Power, calculated prior to a study, is called a priori and was utilized for this research (Chartier & Allaire, 2007). Multivariate analysis of variance (MANOVA) was the appropriate statistical procedure due to having more than two dependent (psychological needs, social support) and three independent variables (leadership, engagement, geographic location) included in the research design (Chartier & Allaire, 2007). MANOVA has advantages over univariate

ANOVA tests in the ability to show interactions among variables, compare the dependent variables and contrast results among groups which is important to the analysis of this study (Chartier & Allaire, 2007; Haase & Ellis, 1987).

Power analysis for a MANOVA was conducted in G*Power to determine a sufficient sample size using an alpha of .05, a power of .95, and a medium effect size .25 (Faul, Erdfelder, Buchner, & Lang, 2009). Based on the aforementioned assumptions, the desired sample size is (*n* = 45). This power analysis was based on MANOVA, special effects and interactions; Appendix E includes an image of the sample calculation.

Instrumentation

Survey approaches are the most common type of research for causal-comparative designs (Edmonds & Kennedy, 2013). This design supports the problem statement, which explained that the literature failed to compare transformational, transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. Employee engagement, geographic location, and leadership styles were the independent variables and psychological needs (autonomy, competence, relatedness) and social support were the dependent variables. The non-experimental study relied on interpretations of the data through statistical controls and analysis (Edmonds & Kennedy, 2013). Leadership styles (transformational, transactional, and passive-avoidant) geographic location, and employee engagement were naturally found in the environment being researched and were measured using the survey design instruments. The interactions between variables occurring in the work environment were best researched

using a non-experimental research design in the natural setting of the work environment

(Vogt, 2011). The survey instruments planned for use were based on scholarly work,

reliable and valid; Table 7 provides a visual summary of the instruments. Appendix D has

a copy of each instrument and the related approvals for academic or general use.

Table 7

Table of Survey Instruments

Instrument	Scale	Variable	Validity	Reliability Subscales		Sample
MLQ-5X	0 indicating not at, 1 once in a while, 2 sometimes, 3 fairly often, and 4 indicating frequently, if not always	Leadership Style (IV1)	CFI = .91, RMSEA =.05,	IA IB IM IS IC CR MBEA MBEP LF EE EFF SAT	.70 .64 .76 .64 .62 .60 .75 .64 .60 .79 .67 .78	N = 3,755
UWES-17	0 indicating never, 2 rarely, 3 sometimes, 4 often, 5 very often, to 6 indicating almost always	Employee Engagement (IV2)	CFI = .95, RMSEA = .06	Vigor .85 Dedication .86 Absorption .82		N = 9,404
WBNS	1 totally disagree, 2 disagree, 3 somewhat disagree/somewhat agree, 4 agree, 5 totally agree	Psychological Needs (DV2)	CFI = .93, RMSEA = .05;	Autonomy.81 Competence.85 Relatedness.82		N = 1,185
HSE/MSIT	1 indicating never, 2 seldom, 3 sometimes, 4 often, 5 always for the first 23 items; 1 strongly, disagree, 2 disagree, 3 neutral, 4 agree, 5 strongly agree on items 24-35	Social Support (DV1)	CFI = .91, RMSEA = .05	Demands .87 Control .82 Mgr Support .88 Peer Support .82 Relationships .78 Role .83 Change .80		N = 26,382

The quantitative survey instruments were selected in order to examine employee perceptions of differences among leaders with transformational, transactional, and passive-avoidant styles in perceived ability to meet psychological needs and provide social support for employees with high or low engagement. The combination of the validated and reliable surveys minimized bias, by presenting the same questions to the participants in order to gather information about the range of variables being assessed (Tucker, McCoy, & Evans, 1990). For the independent variable of the leadership style, scores retrieved from Bass and Avolio's (2004), Multifactor Leadership Questionnaire, short form (MLQ-5X), were utilized to assess the leadership behavior of the manager. This instrument is one of the most commonly utilized to measure leadership behavior in scholarly literature and was chosen because of the prevalence and consideration of validity and reliability (Antonakis, Avolio, & Sivasubramaniam, 2003). The Multifactor Leadership Questionnaire (MLQ-5X) subscales include idealized attributes (IA), idealized behaviors (IB), inspirational motivation (IM), intellectual stimulation (IS), individualized consideration (IC), contingent reward (CR), management-by-exception active (MBEA), management by exception passive (MBEP), laisse-faire (LF), extra effort (EE), effectiveness (EF), satisfaction (SAT) (Bass & Avolio, 2004) The MLQ-5X is a licensed instrument available from Mindgarden.com for a per user fee based on the number of surveys planned for deployment. In addition, there was a fee for the MLQ Manual, which provided the permission documentation for academic use and a sample set of questions.

The rater subscale included 45 questions rated on a Likert scale of 0 to 4, representing how frequently each statement represents the leader from the follower's

perspective with 0 (not at all), 1 (once in a while), 2 (sometimes), 3 (fairly often), and 4 (frequently, if not all the time) (Bass & Avolio, 2004). Twenty questions in the survey, measure the "5 I's" of transformational leadership, including (1) idealized attributes which instill a sense of pride from being associated with the leader, (2) idealized behaviors are demonstrated by the leader communicating a clear sense of mission that aligns with values and a moral compass, (3) inspirational motivation includes the ability to articulate with clarity and enthusiasm a compelling vision of the future, (4) intellectual stimulation, defined as arousing a questioning attitude and quest for continuous improvement, (5) individualized consideration, defined as encouraging each employee to develop based on their unique potential (Bass & Avolio, 2004). Eight questions assess transactional leadership characteristics including, contingent reward, defined as an extrinsic benefit to meeting stated goals and objectives and management-by-exception active, defined as oversight of work with a focus on errors and avoidance of problems with immediate corrective actions taken upon discovery (Bass & Avolio, 2004). Finally, 8 questions measure passive avoidant leadership, including laisse-faire, defined by being absent, unavailable and general avoidance of making decisions and management-by-exception passive, characterized by only taking action when errors are serious (Bass & Avolio, 2004).

The MLQ has undergone several iterations since it was initially developed (Bass & Avolio, 2004). A total of 14 studies were used in the 2004 evaluation of the MLQ-5X ($N = 27, 285$) with reliability for each scale ranging from .74 to .94. Both discriminatory and confirmatory factor analysis have validated the MLQ-5X (Bass & Avolio, 2004). The present nine-factor MLQ-5X addressed, clarification of charismatic and transformational

leadership and added a scale to assess idealized influence (Bass & Avolio, 2004). The nine-factor MLQ-5X was assessed and found to be reliable and valid (Antonakis et al., 2003).

The independent variable of employee engagement was measured by the scores retrieved from the Utrecht Work Engagement Scale (UWES-17), Schaufeli and Bakker (2003), which is considered valid, reliable and a commonly utilized measure of engagement. (Alacron & Lyons, 2011; Alessandri et al., 2015; Breevaart et al., 2014; Burch & Guarana, 2014; Consiglio et al., 2016; Kovjanic et al., 2013; Milam, 2015; Schreurs et al., 2014; Song et al., 2012; Strom et al., 2014; Tims et al., 2011; Trepanier et al., 2013; Zhang et al., 2015). Development of the UWES-24 originated from positively rephrased questions from the Maslach Burnout Inventory (MBI; Maslach et al., 1996). Assuming that engagement and burnout are two ends of a continuum is problematic according to Schaufeli and Bakker (2003). The researchers argue that burnout and engagement are two separate constructs and low engagement does not automatically indicate that an employee is burned out, nor that employees who are highly engaged will never experience elements of burnout (Schaufeli & Bakker, 2003). Validity studies have confirmed that engagement is negatively associated with burnout (Schaufeli & Bakker, 2003).

The original UWES assessment included 24 items which were refined to 17 after seven items were proven problematic (Schaufeli & Bakker, 2003). Engagement in the UWES 17 is assessed on three factors, vigor, dedication and absorption and is measured on a Likert scale from 0 (never), 2 (rarely), 3 (sometimes), 4 (often), 5 (very often), to 6 (almost always) (Schaufeli & Bakker, 2003). Vigor is assessed by six items that refer to

energy, effort, and resilience, dedication is assessed by five items that refer to the level of

challenge, inspiration, and pride, and finally, absorption is measured on six items that

refer to immersion in work activities (Schaufeli & Bakker, 2003). Cronbach's α values

exceed .70 indicating good internal consistency of the three scales of the UWES

(Schaufeli & Bakker, 2003). The reliability statistics for this instrument were based on 25

studies between 1999 to 2003; a total sample population of (N = 9,679) including a range

of professions such as managers, white collar workers, college staff, nurses and farmers

(Schaufeli & Bakker, 2003). The UWES-15 which is used primarily for psychometrical

analyses had 14 studies with a sample population of (N = 7,366), and the UWES-17,

included a sample of (N =2,313) included 42.8% men and 57.2% women (Schaufeli &

Bakker, 2003). The internal consistency values for vigor, dedication, and absorption are

.82 .89, and .83, respectively with a high-re-test reliability in two longitudinal studies

ranging between .61 and .71 (Schaufeli & Bakker, 2003).

The dependent variable of psychological needs (autonomy, competence,

relatedness) was measured by scores retrieved from the Work-Related Basic

Psychological Need Satisfaction Scale (W-BNS) developed by Van den Broeck et al.,

2010; considered valid and reliable survey to measure autonomy, competence and

relatedness (Chiniara & Bentein, 2016; De Cooman et al., 2013; Schreurs et al., 2014).

The W-BNS has a total of 18 questions, six questions related to autonomy, six questions

that assess competence, and six questions that measure relatedness on a Likert scale

ranging from 1 (totally disagree), 2 (disagree), 3 (somewhat disagree/somewhat agree), 4

(agree), 5 (totally agree) (Van den Broeck et al., 2010). Four samples of managers,

professionals, blue collar workers and administrative personnel ($N = 1,185$) 59% female and 41% male across four samples (Van den Broeck et al., 2010).

The dependent variable of social support was measured by scores retrieved from the UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT), which measures seven dimensions of the work environment including job demands, social support, and working relationships and is considered valid and reliable based on past utilization (Cousins et al., 2004; Edwards et al., 2008; Houdmont et al., 2013).The MSIT was initially designed for use in the U.K. as a method to meet the legal obligation of employers for assessing risk related to psychosocial work factors and overall workplace safety (Cousins et al., 2004; Houdmont et al., 2013). In nine studies from 2009-2013, MSIT scores correlate with psychological health and have been utilized in research to assess an employee's exposure to psychological hazards (Houdmont et al., 2013). The survey contains 35 items and measures seven dimensions of the psychosocial work environment including eight items assessing job demands, six items measuring job control, five items assessing managerial support, four items assessing peer support, four items measuring relationships, five items assessing role and three items measuring change management (Cousins et al., 2004; Houdmont et al., 2013). A Likert scale ranging from (never) to (always) for the first 23 items, and (strongly disagree) to (strongly agree) on items 24-35. The initial pilot of the MSIT included 22 organizations from a wide variety of industries with participants ($N = 11,000$) including managers, factory workers, front-line office staff, teachers, salespeople, call center staff, police, health care workers and scientists (Cousins et al., 2004).

Data were collected using online survey distribution. Selected employees, in the field, southwestern and Mid-Atlantic area of the United States were provided notification of the study via email. Considering the organization's current internal engagement survey process, the expected participation was 350-400 completed surveys. The first page of the survey provided informed consent with the option to discontinue participation if desired and instructions on how to obtain a summary report. Basic demographic information relevant to the study was collected including, gender, department, and level within the organization and work location. Surveymonkey.com was the data collection site; information was only available via a login for the survey administrator. To protect participant data, neither participant names nor internet protocol (IP) addresses, which is the unique number assigned to a computer in use, was collected to ensure confidentiality.

Validity

Validity indicates the extent to which the results can be interpreted for use based on the measurement, it is a measure of quality, not of the instrument, but of the underlying construct (Kimberlin & Winterstein, 2008; Messick, 1995). Construct validity provides evidence of and rationale for the trustworthiness of the assessment scores and interpretation (Messick, 1995). Construct validity is often based on evidence from numerous studies that have used the specific instrument, with the same or similar variables known to be related to the construct measured by the instrument (Kimberlin & Winterstein, 2008). Confirmatory factor analysis (CFA) is a powerful statistical model, which tests that the relationship between the underlying constructs and the observed and latent variables in the researcher's theory have a relationship (Long, 1983). CFA was used to determine if the existing instruments are appropriate for use with the population

under study (Harrington, 2009). Fit is evaluated by using three common indicators; the root mean square error of approximation (RMSEA), the standardized root mean square residuals (SRMR), and the comparative fit index (CFI) (Hu & Bentler, 1999). RMSEA below .05 in combination with SRMR values below .09 indicate excellent fit, whereas values below .08 and .10, respectively, indicate good fit (Byrne, 2001). The second is CFI cut-off values of .95 indicate excellent fit, whereas values of .90 indicate good fit (Hu & Bentler, 1999).

Many scholars have contributed to the knowledge of leadership behaviors by using the MLQ-5X; the instrument is one of the most commonly utilized to assess transformational, transactional and laisse-fair leadership styles. The subscales on the 6-factor model indicate a good overall fit measure (charisma, intellectual stimulation, individualized consideration, contingent reward, management-by-exception active, passive avoidant). Table 7 lists the validity and reliability measures for the subscales for the MLQ-5X (Bass & Avolio, 2004; Schriesheim, Wu, & Scandura, 2009). The MLQ-5X has been criticized for a lack of clarity and a gap in content validity in the development of the questions for various constructs, that leave the respondent to interpret if the items are referring to an individual, a group, or the entire organization (Schriesheim, et al., 2009). Most researchers that have used the MLQ-5X, have assumed the content refers to the individual (Schriesheim et al., 2009). Zhu, Riggio, Avolio, and Sosik (2011) second-order confirmatory factor analysis (CFA) on a study evaluating transformational leadership, revealed that data fit the model well ($\chi2 = 735.93$, df $= 166$, $p < .01$, CFI $= .91$, RMSEA $=.09$, SRMR $= .03$) on 24 items utilized from the subscales, idealized influence (eight items), intellectual stimulation (four items), inspirational motivation

(four items), individualized consideration (four items), and management by exception active (four items).

The CFA results for the Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) supported the three-factor (autonomy, competence, relatedness) structure of the questionnaire and indicated good fit in Sample 3, SBS-χ^2(132) = 234.91, $p < .001$; CFI = .93, RMSEA = .07; SRMR = .09, and Sample 4, SBS-χ^2 (132) = 232.42, $p < .001$; CFI = .92, RMSEA = .08; SRMR = .08 (Van den Broeck et al., 2010). Schreurs et al., (2014) noted the importance to psychological needs satisfaction and the importance of the social environment effect on employee functioning. The model included intrinsic and extrinsic variables in addition to assessing the need for autonomy, competence and relatedness and provided and adequate fit CFI=.92, RMSEA= .09, SRMR = .07 (Schreurs et al., 2014).

The CFA results for the Utrecht Work Engagement Scale (UWES-17) supported the three-factor (vigor, dedication, absorption) structure of the questionnaire and indicated good fit CFI = .93, RMSEA = .07 (Schaufeli & Bakker, 2003). Seppala et al., (2009) conducted two longitudinal studies, using five samples for the UWES the three-factor model (vigor dedication, absorption) results indicated Sample 1 ($N = 674$) CFI = .97, RMSEA = .061, Sample 2 ($N = 730$) CFI = .97, RMSEA = .066 Sample 3 ($N = 1,275$) CFI = .97, RMSEA = .067 Sample 4 ($N = 2,971$) CFI = .94, RMSEA = .061 Sample 5 ($N = 2,723$) CFI = .94, RMSEA = .067 (Seppala et al., 2009). Test-retest reliability indicated internal consistency indicated that the scale is both valid and reliable (Seppala et al., 2009). Table 7 provides a summary of the results CFI = .95, RMSEA = .06 for the UWES-17

sub scales as reported by Seppala et al., (2009). Work engagement that results in performance is correlated to vigor, dedication and absorption (Seppala et al., 2009).

The CFA results for the UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT) supports the seven-factor model structure of the survey with the subscales of demands .89, control .78, managerial support .87, peer support .81, relationships .78, role .83, change .83 (Cousins et al., 2004). Cousins et al., (2004) explained that no single instrument can measure work-related stress, the MSIT provided organizations with an indication of how well the employees are managing stress and related risks. The MSIT was piloted with 22 employers with approximately 11,000 employees (Cousins et al., 2004). The MSIT was validated again in 2008 with 39 employers ($N = 26,382$) and indicated good fit CFI = .91, RMSEA = .05 (Edwards et al., 2008). The tool was found to be a psychometrically valid tool with an overall reliability of .92 (Edwards et al., 2008). Table 7 lists the measures for the subscales for the MSIT 2008 validation (Edwards et al., 2008).

Reliability

Reliability measures evaluate the stability and internal consistency of instruments (Kimberlin & Winterstein, 2008). Stability is measured by issuing the same instrument at a different time to the same sample (test-retest reliability) or by using an equivalent set of items within the same instrument (internal consistency) (Kimberlin & Winterstein, 2008). The most common estimate for internal consistency is Cronbach's alpha, which is an average of the interrelations of the items in a scale within an instrument (Kimberlin & Winterstein, 2008). Reliability was measured on a range from 0.00 to 1.00, with higher coefficients indicating higher levels of reliability (Kimberlin & Winterstein, 2008). The

greater the number of items in a scale the higher the Cronbach alpha tends to be, additionally, more constructs in a scale improve the reliability and precision of measurement (Kimberlin & Winterstein, 2008).

Bass & Avolio (2004) found the reliabilities for each of the six leadership factor subscales in the Multifactor Leadership Questionnaire (MLQ-5X) ranged from .63 to .92 in the initial sample set, and .64 to .92 in the re-test set with the following results reported: (1) charisma .92, .92, (2) intellectual stimulation .83, .78, (3) .79, .78 individualized considerations 79, .78, (4) contingent reward, .80, .74 (5) management-by-exception active, .63, .65, (6) passive avoidant.84, .86, respectively. Zhu et al., (2011) found an overall transformational leadership composite score Cronbach's α= .96 for the MLQ-5X. The six-factor model was found to be the best fit and most parsimonious (Bass & Avolio, 2004). Originally designed as part of an assessment on burnout, reliability for the Utrecht Work Engagement Scale (UWES-17) was reported on results from two samples on three factors, vigor .78, .79, dedication .84, .89 and absorption .73, .72 respectively (Schaufeli & Bakker, 2003). The total of the three subscales calculates the total work engagement score on a continuum from zero to 102; the subscales of vigor, dedication and absorption (Takaki, Taniguchi, & Fujii, 2014). Seppala et al., (2009) conducted two longitudinal studies for the UWES and test-rests reliability indicated internal consistency result of .85, .86, .82 respectively and results indicated that the scale is both valid and reliable. Work engagement that results in performance is correlated to vigor, dedication, and absorption (Seppala et al., 2009). Reliability for the Work-Related Basic Psychological Need Satisfaction Scale (W-BNS) three factors of autonomy, competence, and relatedness were .81, .85, .82, respectively (Van den Broeck et al.,

2010). Prior studies combine the three dimensions of autonomy, competence, and relatedness into a single engagement score in (Schaufeli et al., 2006; Schreurs et al., 2014). The UK Health and Safety Executive (HSE) Management Standards Indicator tool (MSIT) was found to be a psychometrically valid tool with an overall reliability of .92 (Edwards et al., 2008). The tool was initially developed to measure the work related and psychological safety of worker to comply with labor laws in the United Kingdom and has since spread into academic use for measuring the psychological and social support needs of the workforce (Cousins et al., 2004). The reliability factors for the MSIT include (1) demands .87, (2) control .82, (3) managerial support .88, (4) peer support, .82, (5) relationships .78, (6) role, .83, (7) change .80 (Edwards et al., 2008). For the current study, the four instruments selected to measure quantitative data on leadership behavior, engagement, psychological needs (autonomy, competence, relatedness) and social support were considered reliable based on past research.

Data Collection and Management

The employees identified in the target population received an invitation via company email to participate in the research from the leadership of their respective departments. Employees who decided to participate were directed to a link in the email to surveymonkey.com and the specific online survey designed for this research appeared. Employees were presented with a notice of informed consent offering the ability to opt out of participation at that time or anytime during the survey process. Employees took a five-page online survey with 115 questions measuring engagement, leadership behavior, psychological needs (autonomy, competence, relatedness) and social support in the

workplace using ranking systems on Likert Scales. There were five additional questions on gender, role, location, collocation and department they worked within.

Table 7 provides a visual summary of the instruments included in the research design. Surveymonkey.com produces a unique URL link for distribution through an anonymous electronic collection of data over the internet. No personally identifiable information was collected nor was the employee's IP address tracked. The survey took approximately 15 minutes to complete per participant. When the employee had completed all questions in the survey, a completion page thanked them for taking the survey and indicating how to correspond with the researcher should they have had any questions. The survey remained open for a three-week period of time in which the minimum participation requirement for the study was met. Three weeks was planned to account for spring holidays and vacation in the U.S. which are common at the time this survey was deployed along with work demands. At the end of each week, participation was checked and reminders were sent to all participants to reach the minimum sample size required.

The data collected was stored on surveymonkey.com servers, accessible via the web using a password protected account. Only the student had access to the survey monkey account and downloaded the data from sureymonkey.com to Excel and stored the files on an external hard drive to complete the data analysis. The external hard drive was kept in a locked drawer in the office at the student's home when not in use. Only the student has the key. Once the data was exported to Excel, the files were deleted from surveymonkey.com. All raw data were analyzed using SPSS and all output files were stored on an external hard drive. The external hard drive which contains all the raw data

and SPSS files will be stored for a period of three years and then all records will be permanently deleted and the external hard drive will be physically destroyed.

Data Analysis Procedures

In this quantitative, causal-comparative study, a series of steps were used to perform the data analysis procedures. Retrieving data from the combined survey instruments using the secure online platform, Surveymonkey.com downloaded the data to Excel and then uploaded the cleaned data into version 24 of IBM SPSS Statistics. Data cleaning and screening were performed to ensure an adequate minimum sample was met for completion of all instruments outlined.

Sample. The setting for this quantitative, non-experimental, causal-comparative study was a mid-sized hospitality company in the United States. The population is approximately 1,300 employees from in different geographies; one primary location in the Southwest and one in the Mid-Atlantic region of the country. The target sample included the Information Technology (IT) and Marketing departments of the selected organization; a group limited to a maximum sample size of approximately 800 employees. These groups were selected by the organization participating due to the size of the teams and the indicator that recent internal engagement results are showing declines. The non-probability sampling technique of a purposive sampling is being used to generalize the findings to the population by including employees in the target sample that represent the largest departments within the selected organization (Edmonds & Kennedy, 2013). G*Power 3.1.9.2 calculated a minimum sample of 45 participants (Faul et al., 2009).

Testing assumptions. The research design proposed to test the hypotheses was a multivariate analysis of variance (MANOVA). A MANOVA will test for variation among styles of leadership (transformational, transactional and passive-avoidant), high and low employee engagement, and geographic location as the independent variables in meeting psychological needs (autonomy, competence, relatedness) and providing social support, for the two dependent variables. A MANOVA is the appropriate statistical procedure due to the number of dependent variables (psychological needs, social support) included in the research design (Chartier & Allaire, 2007). In this study, the MANOVA will interpret the interaction and main effects of three independent variables (leadership style, employee engagement, and geographic location) on the dependent variables (psychological needs and social support). Tables 8 and 9 list assumptions for MANOVA and how they were met or tested in this study

Table 8

Testing Assumptions for MANOVA

Assumption	Met
There are two or more dependent variables measured at the interval level	(DV1): Psychological Needs (DV2): Social Support
There are independent variables that have two or more categorical, independent groups	(IV1): Leadership style: Transformational, Transactional, Passive-avoidant (IV2): Employee Engagement: high or low (IV3): Geographic Location: Mid-Atlantic, Southwest, Field
There is an independence of observations (no relationship between the observations in each group or between the groups	Employees reported through the IT Organization or the, Marketing Organization; an employee cannot report to both organizations
There is an adequate sample size	Sampling summarized in Appendix E

Note. Adapted from Laerd Statistics: https://statistics.laerd.com/spss-tutorials/two-way-manova-using-spss-statistics.php

Table 9

Testing Assumptions for MANOVA in SPSS

Assumption	SPSS Test
There are no univariate or multivariate outliers	Boxplots (univariate) Mahalanobis distance (multivariate
There is multivariate normality	Skewness & Kurtosis
There is linearity in the DV's and for each group in the MAONVA	Scatterplots
There is homogeneity of variance-covariance matrices/There is homogeneity of variances	Box's M Test of Equality of Covariance Matrices

Note. Adapted from Laerd Statistics: https://statistics.laerd.com/spss-tutorials/two-way-manova-using-spss-statistics.php

Parametric testing. Likert methodology is among the most commonly used in research (Carifio & Perla, 2008). Likert scales include structured responses that are related, make up a whole and are based on a continuum resulting in interval data, rather than independent and autonomous points of measure. Carifio and Perla (2008) argue that Likert scales result in interval data, therefore F-tests are statistically robust and powerful parametric analysis at the item level. The survey questions will be rated based on well-defined interval responses based on the instruments included in this study, summarized in Table 7. The assumptions for parametric tests are met, however, if during the analysis any assumptions are not met, non-parametric tests will be used. A MANOVA allows for the examination of the two dependent variables in one analysis for combined effect (Chartier & Allaire, 2007). In addition, determining if an interaction effect exists among the three independent variables of leadership style, geographic location, employee engagement, is accomplished in a MANOVA (Chartier & Allaire, 2007).

Research Questions/Hypothesis. The following research questions and

subsequent hypotheses guided this quantitative, causal-comparative study:

RQ1: To what extent are there main and interactive effects of leaders with

transformational, transactional, and passive-avoidant styles on perceived

ability on social support for employees with high or low engagement who are

dispersed geographically?

H1a: There is a statistically significant effect among leaders with transformational,

transactional, and passive-avoidant styles on perceived ability to provide

social support.

$H2_0$: There is not a statistically significant effect among leaders on perceived

ability to provide social support by geographic location.

H2a: There is a statistically significant effect among leaders on perceived ability to

provide social support by geographic location.

$H3_0$: There is not a statistically significant effect among leaders on perceived

ability to provide social support to employees with high and low engagement.

H3a: There is a statistically significant effect among leaders on perceived ability to

provide social support to employees with high and low engagement.

$H4_0$: There is not a statistically significant leadership style effect by geographic

location on perceived ability to provide social support interaction.

H4a: There is a statistically significant leadership style effect by geographic

location on perceived ability to provide social support interaction.

$H5_0$: There is not a statistically significant leadership style by employee

engagement effect on perceived ability to provide social support interaction.

H5a: There is a statistically significant leadership style by employee engagement effect on perceived ability to provide social support interaction.

H6$_0$: There is not a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H6a: There is a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H7$_0$: There is not a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

H7a: There is a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

H8$_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H8a: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H9$_0$:   There is not a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H9a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H10$_0$:   There is not a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H10a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H11$_0$:   There is not a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H11a: There is a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H12$_0$:   There is not a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H12a: There is a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H13₀: There is not a statistically significant employee engagement effect by

geographic location among leaders on perceived ability to meet psychological

needs interaction.

H13a: There is a statistically significant employee engagement effect by geographic

location among leaders on perceived ability to meet psychological needs

interaction.

H14₀: There is not a statistically significant leadership style, by employee

engagement effect, by geographic location among leaders on perceived ability

to meet psychological needs interaction.

H14a: There is a statistically significant leadership style by, employee engagement

effect, by geographic location among leaders on perceived ability to meet

psychological needs interaction.

Application of MANOVA. MANOVA allows for the analysis of several outcomes

(Field, 2013). ANOVA could be considered separately for each dependent variable

(psychological needs, social support), however, the ability to compare the dependent

variables and contrast results among groups was important to this study and are

limitations of this approach (Field, 2013; Haase & Ellis, 1987). For the research questions

and hypotheses, the main and interaction effects were simultaneously tested for the

variables using multivariate testing by applying MANOVA. Table 10 outlines the main

and interaction effects for the dependent variable of social support, and Table 11 does the

same for the dependent variable of psychological needs. The application of MANOVA to

the research questions and hypotheses will result in F values. For the F tests to be valid

there are four assumptions that must be met, (1) the sample is random and measured at an

interval level, (2) the observations are statistically independent, (3) the observations have multivariate normality (4) there are common within-groups variance-covariance matrices (Field, 2013; Haase & Ellis, 1987). The design of this study aligns with the theoretical basis of MANOVA (Field, 2013). After gathering data and running tests in SPSS, three main effects and four interaction effects for each dependent variable (psychological needs, social support) will result in F values.

Table 10

Application of MANOVA Social Support

Effect Type	Description of Effect	Hypothesis	Scale of Measurement	Produced by
Main Effect 1	Leadership Style IV1	H1	Interval	Employee
Main Effect 2	Geographic Location IV3	H2	Nominal	Employee
Main Effect 3	High/Low EE Engagement IV2	H3	Interval	Employee
Interaction Effect 1	Two-way interaction: Leadership Style IV1/Geographic Location IV3 (IV1 x IV3)	H4		
Interaction Effect 2	Two-way interaction: Leadership Style IV1/ High/Low EE Engagement IV2 (IV1 x IV2)	H5		
Interaction Effect 3	Two-way interaction: High/Low EE Engagement IV2/Geographic Location IV3 (IV2 x IV3)	H6		
Interaction Effect 4	Three-way interaction: Leadership style, by Geographic Location, by High/Low EE Engagement (IV1 x IV3 x IV2)	H7		

Table 11

Application of MANOVA Psychological Needs

Effect Type	Description of Effect	Hypothesis	Scale of Measurement	Produced by
Main Effect 1	Leadership Style IV1	H8	Interval	Employee
Main Effect 2	Geographic Location IV3	H9	Nominal	Employee
Main Effect 3	High/Low EE Engagement IV2	H10	Interval	Employee
Interaction Effect 1	Two-way interaction: Leadership Style IV1/Geographic Location IV3 (IV1 x IV3)	H11		
Interaction Effect 2	Two-way interaction: Leadership Style IV1/ High/Low EE Engagement IV2 (IV1 x IV2)	H12		
Interaction Effect 3	Two-way interaction: High/Low EE Engagement IV2/Geographic Location IV3 (IV2 x IV3)	H13		
Interaction Effect 4	Three-way interaction: Leadership style, by Geographic Location, by High/Low EE Engagement (IV1 x IV3 x IV2)	H14		

Ethical Considerations

Survey methods for academic research involving human subjects and research at the participant's place of employment require that steps and preparation be taken to protect participant rights (Byerly, 2009). While the individual participants completing the study will be unknown to the researcher, the researcher and participants are both employed at the organization where the study was conducted and ethical

considerations exist. In compliance with the requirements of Grand Canyon University, IRB approval was sought prior to starting research. A broad communication about the study and subsequent online survey was sent to the target sample of employees who work in the Information Technology (IT) and Marketing teams within the organization from their leadership introducing the research. All employees had access to computers and the internet at work.

The communication explained the voluntary nature of the study, in which all responses were anonymous and all response data was shared in aggregate back to the organization and summarized in the dissertation research findings. All participants were provided a notice of informed consent (see Appendix C) at the start of the survey explaining the purpose of the study and the option to opt-out of participation without penalty at any time. The researcher did not coerce participation or influence participation in compliance with the principles of respect, beneficence and justice outlined as ethical principles for human subject research in the Belmont Report codified in 1981 by the U.S. Department of Health and Human Services (Byerly, 2009).

The researcher maintained respect for the target population by ensuring that participants had adequate information about the study and clarified that participation was voluntary and that participation could be ended at any time during the survey through the notice of informed consent. The researcher maintained beneficence by giving advance thought and consideration to the research design, methods, and instruments that would maximize the benefits of the research and minimize potential harm. Finally, the researcher maintained justice by ensuring that there was not a

burden placed by participating in the study. Respondents completed the effort during working hours in a relatively short amount of time and the opportunity to participate was offered equally to all employees in the target population.

The survey instruments were issued via an online site, using Surveymonkey.com. This site requires an administrator login that only the doctoral candidate had access to in order to avoid any disclosure of confidential information. The organization was provided summary reports, but not specific data files related to the survey information that employees provided. All data collected was personally identifiable; no names were collected and no narratives were collected. Labels such as supervisors, managers, directors and executive management were used to refer to specific leadership levels within the organization to maintain the integrity of the feedback provided. Department labels were also generic in nature (Information Technology, Marketing, etc.) to avoid disclosing of employee-specific information. The data was downloaded and stored on an external hard drive that only the doctoral student had access to and all materials were locked in the student's home office when not in use. Only the student had access to the key to the office and locked drawer. Data collected online was destroyed by deleting all reporting, eliminating the survekymonkey.com link after the completion of the survey timeline. All response data in any file except the external hard drive will be deleted upon successful completion of the dissertation. Data utilized for analysis downloaded on the external hard drive will be stored for the required time period (3 years), at which time all data will be destroyed and the external hard drive physically destroyed.

IRB approvals was sought as required for the successful completion of the study. The organization will remain confidential; the doctoral student, IRB representative, Dissertation Committee members are aware of the actual organization, however, only the size of the organization, the geographic location and industry will be noted in the research and dissertation as requested by the organization (see Appendix E). By taking the steps outlined, the researcher will protect the integrity of the research process and ensure participant's rights are properly protected.

Limitations and Delimitations

The limitations and delimitations related to the methodology, sample, instrumentation, data collection process, and analysis are presented, with an explanation as to why the existing limitations are unavoidable or determined necessary. Explanation of these limitations provides a generalization of the possible unavoidable contributing factors that may have impacted the results of this study.

Limitations.

1. Employees will be truthful in their responses about the social support, psychological needs (autonomy, competence, relatedness), and their level of engagement at the point in time the survey is distributed. There was a risk that the employee's ability to be completely honest may be compromised if they believe their responses are traceable or that responses have an impact on their employability.

2. Employees with both high and low levels of engagement would participate. There was a risk that employees with low engagement may be apathetic to providing information and may show lower levels of participation, potentially impacting the results (Lynch, et al., 2005).

3. Employees may or may not be collocated with their leader in the sample responding. This circumstance unevenly weighted the sample size of the three groups identified (Mid-Atlantic, Southwest, and field). This resulted in a weighting towards employees who are collocated with their leader. The reverse could have also been true if more employees in the sample work on virtual teams with geographic dispersion, the results could be affected (Gajendran & Joshi, 2012; Goh & Wasko, 2012).

4. Employees could identify their leader's style and had worked with the leader a sufficient amount of time to provide an accurate assessment of their leadership style. Since it is not known how long it takes for employees to fully interpret their leader style (Dvir et al., 2002), there was a limitation for employees who may not be able to effectively identify their manager's style of leadership.

5. The sample was from a single organization which may have limited the external validity of the results to the hospitality industry (Dvir et al., 2002).

6. A causal relationship could not be established due to the non-experimental design of the study (Dvir et al., 2002).

7. The surveys were deployed at a single point in time, limiting the benefits of understanding how leadership influences employees over time (Dvir et al., 2002).

Delimitations.

1. The sample was from a single industry which may have limited the external validity of the results to other industries (Dvir et al., 2002). The selection of the organization was purposeful to include a company that had a naturally dispersed workforce as part of the business model. The researcher is also employed by this organization.

2. The instruments selected for use were purposefully chosen to gather data on the variables included in the study, reliable and valid and commonly appeared in prior research and required little to no cost to utilize. Table 7 shows a visual display of the instruments selected.

3. Using an online survey tool (Surveymonkey.com) as a data collection method was selected in order to gather responses in a reasonable time frame, efficiently across multiple locations at no cost.

4. Leader-member exchange (LMX) and self-determination theory (SDT) were selected as the theoretical frameworks, which excluded other possible psychological and social theories in order to manage the scope of the study.

5. Leadership styles were delimited to the Full Range Leadership (Bass & Avolio, 1994) model to manage the scope of the study, however, other leadership styles are documented and transformational, transactional and passive-avoidant may not cover all possible leadership approaches.

Summary

Chapter 3 described the steps in the data collection process and how the data were managed and evaluated while adhering the standards of ethical research. The limitations

and delimitations related to the methodology, sample, instrumentation, data collection process, and analysis were presented, with an explanation as to why the existing limitations are unavoidable and determined necessary. Chapter 4 summarizes the data analysis collected from the (N=342) participants who responded to four surveys (UWES, WBNS, MSIT and MLQ-5X) and provided demographic information about gender, location, department, role, and collocation. A MANOVA was run to determine main and interaction effects between the independent variables of employee engagement, leadership style, geographic dispersion on the combined dependent variables of psychological needs (autonomy, competence, relatedness) and social support. Chapter 4 concludes with the findings of the study.

Chapter 4: Data Analysis and Results

Introduction

This chapter will summarize the data analysis and conclude with the findings. The results of the data analysis are explained and illustrated by graphs and tables. Even though numerous empirical studies and models describe leadership behaviors that are effective and ineffective, to date there has not been a study located measuring the variables of leadership styles, psychological needs and social support for employees working within the hospitality industry in several geographic locations. A quantitative research methodology was selected to assess the effects on the differences in the dependent variables of social support and psychological needs (autonomy, competence, relatedness) based on the independent variables of employee engagement and leadership style (transformational compared with transactional and passive-avoidant leadership styles) and geographic dispersion.

To examine the two research questions, fourteen hypotheses were constructed to determine if transformational, transactional, and passive-avoidant leadership styles effect the perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. This study was rooted in organizational engagement research, measured through survey instruments, which suggests the relationship between the leader and the employee is important to positive organizational outcomes (Burch & Guarana, 2014). The survey instruments used were based on scholarly work, reliable and valid; Table 7 provides a visual summary of the instruments used in this study.

An online web-survey platform, Surveymonkey.com, was utilized to gather data on 115 questions from a target population of 800 employees of a hospitality organization. The organization has locations across the United States, with larger corporate offices in the southwestern and mid-Atlantic regions of the country. The employees who responded to the survey included those that were collocated and those that are geographically dispersed from their leader and team. Geographic dispersion, measured by collocation, was one of the independent variables studied and for the purposes of this research, employee engagement was treated as preexisting traits, similar to how naturally occurring independent variables are researched. The following research questions and subsequent hypotheses guided this quantitative, non-experimental, causal-comparative study:

RQ1: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

$H1_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to provide social support.

$H1_a$: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to provide social support.

$H2_0$: There is not a statistically significant effect among leaders on perceived ability to provide social support by geographic location.

H2a: There is a statistically significant effect among leaders on perceived ability to provide social support by geographic location.

H3$_0$: There is not a statistically significant effect among leaders on perceived ability to provide social support to employees with high and low engagement.

H3a: There is a statistically significant effect among leaders on perceived ability to provide social support to employees with high and low engagement.

H4$_0$: There is not a statistically significant leadership style effect by geographic location on perceived ability to provide social support interaction.

H4a: There is a statistically significant leadership style effect by geographic location on perceived ability to provide social support interaction.

H5$_0$: There is not a statistically significant leadership style by employee engagement effect on perceived ability to provide social support interaction.

H5a: There is a statistically significant leadership style by employee engagement effect on perceived ability to provide social support interaction.

H6$_0$: There is not a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H6a: There is a statistically significant employee engagement effect by geographic location on perceived ability to provide social support interaction.

H7$_0$: There is not a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

H7a: There is a statistically significant leadership style, by employee engagement effect, by geographic location on perceived ability to provide social support interaction.

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

$H8_0$: There is not a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

H8a: There is a statistically significant effect among leaders with transformational, transactional, and passive-avoidant styles on perceived ability to meet psychological needs.

$H9_0$: There is not a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

H9a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs by geographic location.

$H10_0$: There is not a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H10a: There is a statistically significant effect among leaders on perceived ability to meet psychological needs to employees with high and low engagement.

H11$_0$: There is not a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H11a: There is a statistically significant leadership style by geographic location effect among leaders on perceived ability to meet psychological needs interaction.

H12$_0$: There is not a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H12a: There is a statistically significant leadership style by employee engagement effect among leaders on perceived ability to meet psychological needs interaction.

H13$_0$: There is not a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H13a: There is a statistically significant employee engagement effect by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14$_0$: There is not a statistically significant leadership style, by employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

H14a: There is a statistically significant leadership style by, employee engagement effect, by geographic location among leaders on perceived ability to meet psychological needs interaction.

All of the data in this research study were collected from the participants' responses to four surveys, the UWES, WBNS, MLQ-5X, MSIT. The presentation of the data analysis included the use of MANOVA to assess interaction effect. An ANOVA was conducted to examine main effects. Chapter 4 presents a concise summary of the data analysis procedures, results, and descriptive data, and is organized by the research question and hypotheses.

Descriptive Data

The data were collected from a sample of ($N = 492$) employees responding from a target population of 800 employees working for a hospitality organization, resulting in a 62% overall response rate. A total of four survey instruments consisting of 115 questions were presented in an online survey utilizing Surveymonkey.com. The survey was open for three weeks in March of 2017. A review of the data was completed to ensure complete statistical analysis could be performed to test the assumptions for MANOVA. Because the survey design allowed respondents to skip questions they preferred not to answer, or mark the response as not applicable, 134 responses were considered missing or incomplete and removed from the data set, resulting in ($N = 358$) completed responses. The ($N = 358$) sample resulted in a response rate of 45% of the respondents following through all portions of the survey and a 62% response rate for the target population completing some portion of the survey. Survey results from were downloaded from Surveymonkey.com, organized in Excel and entered into version 24 IBM Statistical

Package for the Social Sciences (SPSS) for processing. Table 12 show the response rates based each instrument when compared to ($N =492$) the population responding to some portion of the survey.

Table 12

Instrument Responses

Instrument	Responses	%
WBNS Psychological Needs	415	84%
UWES-17 Engagement	404	82%
MSIT-Social Support	388	79%
MLQ-5X Complete Responses	358	73%
Overall Response Rate	492	62%
Completed All Instruments	358	73%

Demographic questions were asked as part of the survey for descriptive information about the participants, including geographic location, gender, role, department, and if the employee was in the same physical location as their leader. The purpose of gathering these descriptions was to gain a better understanding of the characteristics of the employees who fully participated by answering all instruments ($N =358$). This was representative because the G*Power calculation required a minimum sample size of ($n = 45$), see Appendix E for the calculation. The organization studied has two main corporate locations in the US. Of those responses included in the analysis, (64%) worked in the Southwest, (21%) worked in the mid-Atlantic office, (12%) worked in the field, and (3%) preferred not to identify their geographic work location. By gender

there were equal male (48%) and female (48%) responses, (4%) preferred not to provide their gender. By role, the largest group of responses was from employees who identified as individual contributors (65%), management which includes the categories of manager, director/senior director, vice presidents, and senior leadership (32%) and those who preferred not to identify their role in the organization consisted of (3%) of the respondents. When asked to identify the department in the organization, (50%) indicated they worked within IT (information technology), (27%) worked in marketing/distribution/sales, (9%) worked in corporate functions such (finance, legal or human resources), (6%) listed other, (6%) preferred not to identify their department, and (2%) of the responses were missing. The last demographic question asked if the employee was collocated in the same geographic location as their leader, (79%) indicated they were collocated, (19%) indicated that they were not and (2%) of the responses were missing. Table 13 summarizes the demographic information provided by the respondents.

Table 13

Demographic Characteristics of the Sample

Demographic Category (*N* =358)		*N*	%
Location			
	Southwest	229	64.0
	Mid-Atlantic	74	20.7
	Field	43	12.0
	Prefer not to answer	12	3.4
Gender			
	Female	173	48.3
	Male	173	48.3
	Prefer not to answer	12	3.4
Role			
	Director/Senior Director	43	12.0
	Individual contributor	234	65.4
	Manager	59	16.5
	Vice President	7	2.0
	Senior Leadership	3	0.8
	Prefer not to answer	12	3.4
Department			
	Corporate Functions	31	8.7
	IT	180	50.3
	Marketing/Distribution/Sales	98	27.4
	Field	9	2.5
	Other	20	5.6
	Prefer not to answer	20	5.6
Geographic Dispersion (Collocation)	No	67	18.7
	Yes	282	78.8
	Missing	9	2.5

Data Analysis Procedures

The purpose of this non-experimental, causal-comparative, quantitative study was

to explore how transformational leaders compare with transactional, and passive-avoidant

leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. The differences among leaders with transformational, transactional, and passive-avoidant styles in perceived ability to provide social support and meet psychological needs for employees with high or low engagement who are dispersed geographically was the focus of this study. The research design was a causal-comparative and the inferential procedure used to test the hypotheses was a multivariate analysis of variance (MANOVA). The power of using MANOVA is the ability to combine the two dependent variables to correlate and investigate the differences between the groups of the independent variables (Field, 2013). MANOVA tested for variation among styles of leadership (transformational, transactional and passive-avoidant), high and low employee engagement, and geographic dispersion in meeting psychological needs (autonomy, competence, relatedness) and providing social support.

Data cleaning. The results from the survey were downloaded from Surveymonkey.com to Excel. The field containing the date stamp was removed, and the ten-digit respondent identification number was replaced with an identifying number assigned to each responded from one to 492. The number assignment was based on the order each survey response was received chronologically. All blank columns were removed including name, email address, IP address and a field for custom data. Surveymonkey.com output provides a space for this information; however, it was not collected for this study. The file from Surveymonkey.com lists the scale responses in text for each question, these were converted to the appropriate numeric score based on the

defined scale in the instrument instructions. The scoring of each instrument was performed in Excel based on the directions provided in the associated manuals or instrument instructions. Because the survey design allowed respondents to skip questions they preferred not to answer, or mark the response as not applicable, 134 responses were considered missing or incomplete and removed from the data set, resulting in ($N = 358$) completed responses. There were 16 univariate outliers as evidence by the boxplots. These outliers were removed, which reduced the sample size to ($N = 342$). The post hoc power analysis for a MANOVA was conducted in G*Power to determine observed power based on an alpha of .05, a sample of 342, and a medium effect size .25 (Faul et al., 2009). The post hoc G*Power resulted in an observed power of 1.0. This power analysis was based on MANOVA, special effects and interactions. Appendix E provides a summary to the sample calculation. The results for each variable were imported to SPSS, and the data was transformed and values assigned to obtain descriptive statistics and perform statistical tests.

  Testing for assumptions MANOVA. There were ten tests of assumptions for MANOVA. (1) The first assumption of MANOVA is that the analysis is used with continuous dependent variables. The dependent variables were continuous. Likert scales included structured responses that were related, make up a whole, and were based on a continuum resulting in interval data, rather than independent and autonomous points of measure; this assumption was met. The second assumption to MANOVA is that the independent variables are categorical (nominal). Each of the independent variables had two or more categorical groups. The third assumption is that there is independence of

observations. The observations were independent, a respondent could not identify with more than one group in each of the dependent variables.

The remaining tests for assumptions required analysis in SPSS. The fourth assumption of MANOVA is that there was a linear relationship between the dependent variables. There was a linear relationship between the dependent variables, as assessed by scatterplot shown in Figure 1. A scatterplot of psychological support against social support was plotted. Visual inspection of this scatterplot indicated a positive linear relationship between the dependent variables. The fifth assumption of MANOVA is that there is no multicollinearity. There was no evidence of multicollinearity, as assessed by Pearson correlation ($|r| < 0.9$); results are shown in Table 14.
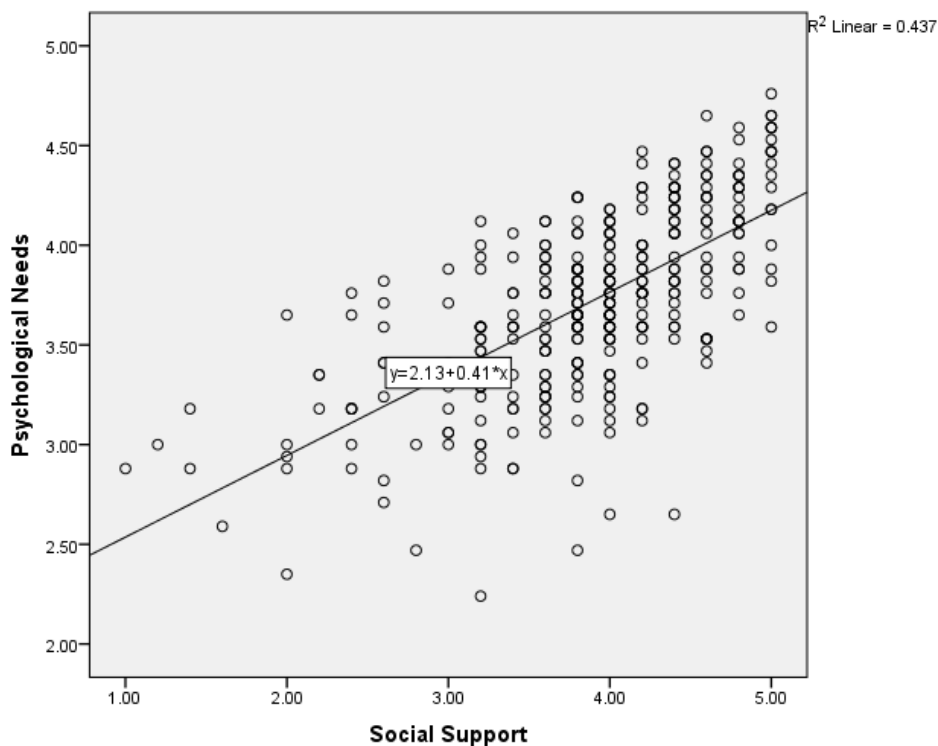
Figure 1. Scatterplot: Positive Linear Relationship.

Table 14

Pearson's Correlations

		Psychological Needs	Social Support
Psychological Needs	Pearson Correlation	1	.661**
	Sig. (2-tailed)		.000
	N	342	342
Social Support	Pearson Correlation	.661**	1
	Sig. (2-tailed)	.000	
	N	342	342

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

The sixth assumption of MANOVA is that there are no univariate or multivariate outliers. There were 16 univariate outliers as evidence by the boxplots. These outliers were removed, which reduced the sample size to (*N* =342). After removal, no additional univariate outliers were found. After removing the univariate outliers, no multivariate outliers were found in the data set, as assessed by Mahalanobis distance (p > .001). (7) The seventh assumption of MANOVA is that there is multivariate normality.

To test normality, skewness and kurtosis were calculated. Z-scores were then calculated by dividing skewness and kurtosis values by their respective standard errors (www.statistics.laerd.com). Psychological needs scores were normally distributed with a skewness of -0.312 (SE = 0.132) z-score -2.36 and kurtosis of 0.033 (SE = 0.263), z-score 0.13. A statistical significance level of p >.01 equates to a z-score of ±2.58. Figure 2 displays the histogram which confirms a normal distribution. Social support distribution, shown in Figure.3, was skewed to the left, the median of 4.0 is larger than

the ($M =3.87$) with a skewness with of -0.968 (SE = 0.132) z-score of -7.34 and kurtosis

of 1.441 (SE = 0.263), z-score 5.48.
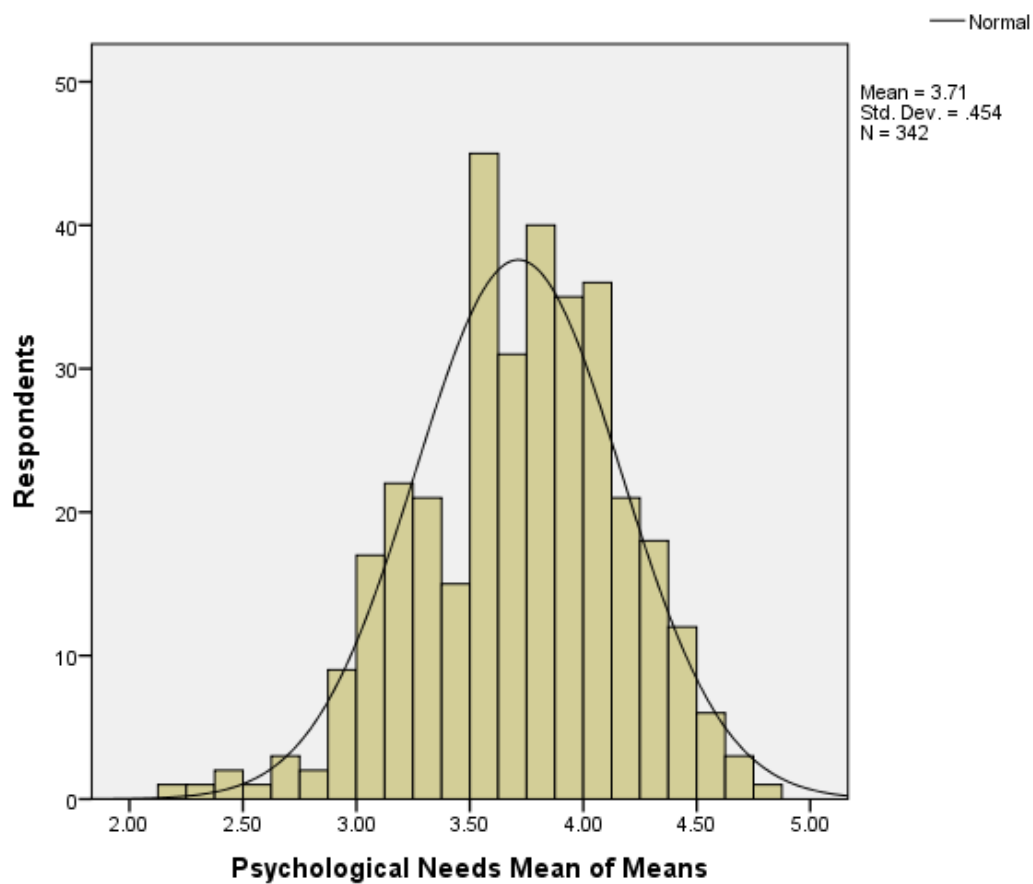
Figure 2. Histogram: Normal Distribution for Psychological Needs.
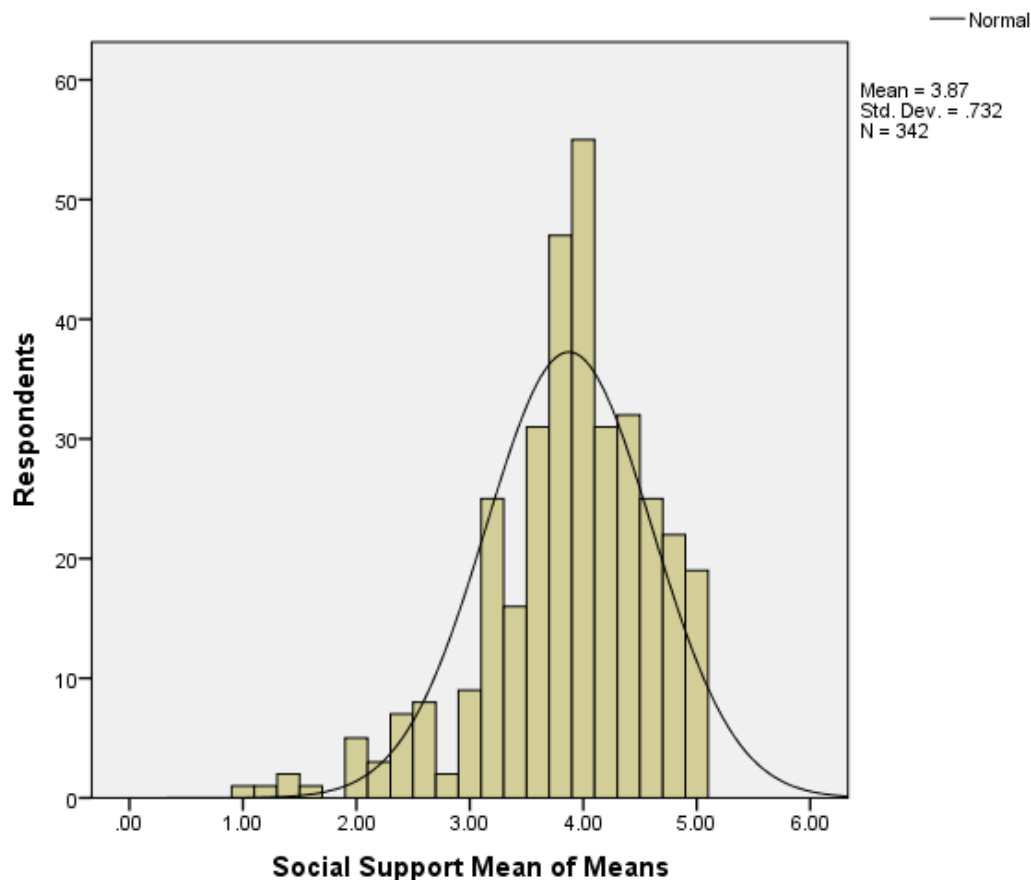
Figure 3. Histogram: Social Support Skewed Left.

The eighth assumption of MANOVA is that there is an adequate sample size. The sample contained (*N* =342) responses that were tested in SPSS for the assumptions for MANOVA. To utilize MANOVA there must be as many cases (respondents) in the sample groups as there are dependent variables (www.statistics.laerd.com). In this study, there were two dependent variables; Table F1 in Appendix F shows the distribution of the responses by group.

The ninth assumption of MANOVA is that there is homogeneity of covariance matrices. A significant (*p* < .05) Box's M value indicates that the homogeneity of covariances assumption was violated. Because Box's M indicates that the assumption of

homogeneity of covariate matrices is violated, Pillai's Trace was used. (10) The tenth

assumption of MANOVA is that there should be homogeneity of variances

(www.statistics.laerd.com). As assessed by Levene's Test of Homogeneity of Variance

included in Table 15, ($p < .05$), homogeneity of variances was violated.

Table 15

Levene's Test of Homogeneity of Variance

Variables	F	Df1	Df	Sig.
Psy Needs	2.446	9	323	.011
Social Support	2.460	9	323	.010

Psychological needs. The dependent variable of psychological needs was

measured using the 18 questions in the Work-Related Basic Psychological Need

Satisfaction Scale (WBNS). Three psychological factors (autonomy, competence,

relatedness) were measured with six questions for each factor along with an overall score

on a 5-point scale from totally disagree to totally agree ($M = 3.71$). For each factor

(autonomy, competence, relatedness), negatively worded questions were included to test

for alignment in responses to positively phrased questions. In the scoring, three questions

for autonomy, two questions for competence, and three questions for relatedness required

scoring reversal. The total for each factor was averaged per respondent and the total

average for all the 18 questions included in the instrument was calculated for each

respondent by completing the average function in Excel. The results for this variable

were then loaded into SPSS.

Social support. The dependent variable of social support was measured using

questions from the UK Health and Safety Management Safety Indicator Tool (MSIT),

which measured seven factors of work-related stress (Demands, Control, Managerial Support, Peer Support, Relationships, Role, Change) on a five-point scale. Questions for the manager support sub-scale were used to measure social support in this study. Managerial support assessed the encouragement and advocacy offered to the employee by the leader using five questions ($M = 3.47$) (Edwards et al., 2008). The total score for the five questions measuring manager support were calculated for each respondent by completing the average function in Excel. The scores for each respondent were then uploaded to SPSS.

Leadership style. The independent variable of leadership style was measured using the Multifactor Leadership Questionnaire (MLQ-5X). The MLQ-5X has nine sub-factor scales described in Table 16 (IA=idealized attributes, IB= idealized behaviors, IM=inspirational motivation, IS=intellectual stimulation, IC=individualized consideration, CR=contingent reward, MBEA= management-by-exception active, MBEP=Management by exception passive, LF=laisse-faire) that were each scored for each factor by averaging the four questions associated with each factor in Excel. Table 16 lists a brief description of each sub-factor scale.

Table 16

MLQ-5X Factor Descriptions

Sub Factor Scale Name	Abbreviation	Descriptors
Idealized Attributes	IA	Instills pride in others by association
Idealized Behaviors	IB	Behaviors align with values and beliefs
Inspirational Motivation	IM	Talks optimistically about the future, expresses confidence that goals will be achieved
Intellectual Stimulation	IS	Encourages multiple viewpoints on a problem, seeks different ways to complete work
Individual Consideration	IC	Spends time coaching others, considers each individual as unique and does not manage all team members in the same manner; helps others develop strengths
Contingent Rewards	CR	Reserves praise or reward based on performance. Discusses in specific terms what is required for performance goals to be met
Management-by-exception active	MBEA	Focus attention on mistakes and corrections
Management-by-exception passive	MBEP	Fails to intervene until problems are serious or chronic
Passive-avoidant	LF	Avoids getting involved, avoids making decisions and is often unavailable or absent

Note. Descriptions adapted from the MLQ Manual (Bass & Avolio, 2004).

First, the 117 blank responses were labeled as no response, an additional 16 incomplete responses were also labeled, and one response that listed an identical score for every question was labeled an outlier leaving ($N = 358$) completed responses remaining for analysis. There were 16 univariate outliers as evidence by the boxplots. These outliers were removed, which reduced the sample size to ($N = 342$). Determining the results for each respondent for the MLQ-5X started with calculating the mean for each of the nine scale factors in the instrument in SPSS. Table 17 lists the questions in the MLQ-5X that

were asked for each of the nine sub-factors. To calculate an average by leadership style, the scores for all responses for the questions indicated for each leadership style (transformational, transactional, passive-avoidant) were divided by the total number of responses to get a mean of means per respondent for each style. For example, to get the total passive-avoidant average per respondent questions (3, 5, 7, 12,17, 20, 28, 33) were averaged; the same process was followed to calculate the transformational and transactional styles per the instrument instructions (Bass & Avolio, 1995a).

Table 17

MLQ-5X Questions per Factor

Leadership Style	Sub-Factor Scale	Abbreviation	Questions	Lower Level Mean	Lower Level SD
Transformational	Idealized Attributes	IA	10,18,21,25	2.93	.82
Transformational	Idealized Behaviors	IB	6,14,23,34	2.73	.76
Transformational	Inspirational Motivation	IM	9,13,26,36	2.97	.79
Transformational	Intellectual Stimulation	IS	2,8,30,32	2.76	.75
Transformational	Individual Consideration	IC	15,19,29,31	2.78	.88
Transactional	Contingent Reward	CR	1,11,16,35	2.84	.78
Transactional	Mgmt by Exception Passive	MBEA	4,22,24,27	1.67	.92
Passive-avoidant	Mgmt by Exception Active	MBEP	3,12,17,20	1.02	.79
Passive-avoidant	Passive-avoidant	LF	5,7,28,33	.66	.72

Note. Adapted from the MLQ-5X Scoring Guide (Bass & Avolio, 1995b).

To reveal how the employees perceived their leader, the mean for each of the nine factors was compared to the Percentiles for Individual Scores (based on Lower Level Ratings) in the MLQ Manual (Bass & Avolio, 2004). Lower level rating indicated the

person completing the questions was in a lower hierarchical position in the organization than the person they were rating. Each response of the nine factors was aligned with the percentile indicated to determine where the responses calculated in comparison to the norm based on what is listed in Appendix B of the MLQ Manual (Bass & Avolio, 2004). The leadership style was assigned as more transformational, more transactional, or more passive-avoidant based on the highest of the three mean of means.

In the example, shown in Figure 4, respondent 80 was marked as more passive avoidant, indicating that this respondent perceived their leader as more passive avoidant than the norm. The sub-factors in the passive-avoidant leadership style, MBEP (3.0) and LP (3.25) scores indicated 95% of the normed population scored lower, according to the Percentiles for Individual Scores Based on Lower Level Ratings table listed in Appendix B of the MLQ Manual (Bass & Avolio, 2004). In this case, the respondent also scored their leader management by exception active, MBEA (2.75). While this result was also something the respondent perceived as more typical of their leader's characteristics, it is a factor under transactional leadership. The scores for passive-avoidant style scored a higher mean of means, therefore this respondents leader was categorized as more passive-avoidant than the norm for the purpose of analyzing the data in this study. Leaders display all characteristics at various times depending on the circumstance, and are commonly characterized by their followers into the most frequently observed behaviors (Kahai et al., 2013; Rowold, 2014).

ID	Style Assigned	TRANSFORMATIONAL					TRANSACTIONAL		PASSIVE-AVOIDANT		Mean of Means for Transformational (IA,IB,IM,IS,IC)	Mean of Means of Transactional (CR,MBEA)	Mean of Means Passive-Avoidant (MBEP,LF)
		IA	IB	IM	IS	IC	CR	MBEA	MBEP	LF			
78	More Transactional	3	2.5	2.25	2	2.25	3.25	2.25	0.75	0.25	2.4	2.75	0.5
79	More Transformational	4	3.5	4	3.25	2.75	3.25	1.5	0.75	0.25	3.5	2.375	0.5
80	More Passive Avoidant	0	0.75	0.25	0	1	0	2.75	3	3.25	0.4	1.375	3.125
81	Incomplete Response	3.33	3.25	3.5	2.33	2.75	3	3		0			
82	No Response												

Figure 4. Example: Leadership Style Assignment

The majority of the respondents in this study perceived their leader as more transformational (N =259) compared to transactional (N =29) or passive-avoidant (N =25). Transactional and passive-avoidant leaders were underrepresented in the sample based on the perceptions of the employees within the organization studied. As detailed in F1 in Appendix F, transformational leadership was shown to positively influence the meeting of psychological needs (M =3.80) and providing social support (M =4.08) in this study. Interestingly, similar results were found for those employees who were not collocated but perceive their leader's style as more transformational (M =3.86) for psychological need and (M =4.07) for social support, indicating that the more transformational leadership style was effective for both employees who are collocated and those who are geographically dispersed from their leader. This is an important consideration for organizations as the workforce is increasingly virtual and leading remote teams requires leaders who can remove the barriers that time and distance naturally create (Avolio et al., 2014; Fusco et al., 2015).

Employee engagement. The independent variable of employee engagement was measured using the Utrecht Work Engagement Scale (UWES-17). For the purposes of this research, employee engagement was treated as a preexisting trait, similar to how naturally occurring independent variables are used in research. The total score for all 17 questions included in the instrument was calculated for each respondent by completing the average function in Excel. The average function aligns with the instructions, which state to add the scores for each of the numbered items and divide the sum by the total number of items (Schaufeli & Bakker, 2003). The results of the subscales and total score range between zero and six. A mean score ranging from ($M = 4.67$-5.53) is considered high engagement and ($M \geq 5.54$) is very high engagement based on the instrument instructions (Schaufeli & Bakker, 2003). In Excel, the averaged results were assessed in an IF function to indicate any result greater than ($M =4.67$) were labeled as high engagement, and any result lower labeled as low engagement for each respondent. The results were imported into SPSS as high or low results for each respondent.

Geographic dispersion. The independent variable of geographic dispersion was assessed by asking respondents if they were collocated with their leader. Each response was labeled as yes, no, or prefer not to answer by the respondents. In addition, as described in Chapter 3, the work location for each respondent was collected (field, Mid-Atlantic, Southwest), however, this data point would not have determined if the employee was in the same location as the leader, therefore the additional question was added to the survey. These results were uploaded to SPSS and recoded for statistical analysis.

MANOVA was the appropriate statistical procedure due to the number of continuous dependent variables (psychological needs, social support) and categorical

independent variables included in the research design (Chartier & Allaire, 2007). In this study, the MANOVA results were interpreted to determine if an interaction effect existed. In addition, the main effects of the three independent variables (leadership style, employee engagement, and geographic dispersion) were interpreted.

Results

MANOVA has advantages over univariate ANOVA tests in the ability to show interactions among variables, compare the dependent variables and contrast results among groups which was important to the analysis of this study (Chartier & Allaire, 2007; Haase & Ellis, 1987). To answer the research questions, a MANOVA was run in SPSS to determine if there was a statistically significant interaction effect between the three independent variables (geographic dispersion, leadership style, engagement) on the combined dependent variables (psychological needs, social support). Box's M was statistically significant ($p = .000$) the sample sizes were unequal; therefore, Pillai's Trace was used to analyze interaction effects for the study (Tabachnick & Fidell, 2014).

RQ1: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

Interaction effects. There was not a statistically significant interaction effect between geographic dispersion (collocation) and engagement on the combined dependent variables, $F(2, 322) = .532$, $p = .588$, Pillai's Trace $= .532$, partial $\eta^2 = .003$, nor was not a statistically significant interaction effect between geographic dispersion and leadership on the combined dependent variables, $F(4, 646) = .645$, $p = .631$, Pillai's Trace $= .008$, partial $\eta^2 = .004$. Finally, there was not statistically significant interaction effect between engagement and leadership on the combined dependent variables, $F(4, 646) = 1.975$, $p = .097$, Pillai's Trace $= .024$, partial $\eta^2 = .012$. Overall, for the ($N = 342$) respondent's engagement was high ($N = 311$), most leaders in this organization were perceived as transformational ($N = 259$) by the respondents, and the majority of the respondents were collocated with the leader ($N = 268$). There was an unequal distribution of the sample sizes and underrepresentation in employees with low engagement, geographically dispersed from the leader and transactional and passive-avoidant leadership styles. The primary goal of running a MANOVA was to determine if an interaction occurred between the variables. There was not sample size strength to determine the interaction effect between geographic dispersion, leadership style, and engagement on the combined dependent variables; there was not statistical significance, therefore only the main effects were analyzed.

Main effects. There was not a statistically significant geographic dispersion (collocation) effect on the combined dependent variables. $F(2, 322) = .056$, $p = .945$, Pillai's Trace $= .000$, partial $\eta^2 = .000$. The majority of the respondents were collocated with their leader, not geographically dispersed. Table 18 displays the descriptive statistics for the sample ($N = 342$) for the independent variable geographic dispersion (collocation).

Table 18

Descriptive Statistics: Geographic Dispersion (Collocation)

	Response	Frequency	%	Valid %	Cumulative %
Valid	Yes	268	78.4	80.5	80.5
	No	65	19.0	19.5	100
	Total	333	97.4	100.0	
Missing	99	9	2.6		
Total		342	100		

There was a statistically significant leadership style effect on the combined dependent variables, $F(4, 646) = 24.071$, $p = .000$, Pillai's Trace = .259, partial $\eta^2 = .130$. These findings support the importance of leadership throughout literature. Several studies have reported that high engagement is linked to psychological needs of having a say in how work gets accomplished (autonomy), demonstrating the ability to solve relevant issues (competence), and the ability to connect with others and share ideas (relatedness) (Deci & Ryan, 2008; Kovjanic et al., 2012; Lynch et al., 2005; Van den Broeck et al., 2010). The psychological phenomena and drivers of engagement are linked to intent to stay, employee well-being and performance, proving beneficial for organizational outcomes, making efforts around engagement, a practical investment (Alessandri et al., 2015; Christian et al., 2011; Meyer, 2013).

There was a statistically significant engagement effect on the combined dependent variables, $F(2, 322) = 33.949$, $p = .000$, Pillai's Trace = .174, partial $\eta^2 = .174$. Past research has indicated that both a positive orientation and one's outlook toward the world effects their job performance and work engagement (Alessandri et al., 2015). In

addition, Choo et al., (2013) concluded that organizational practices do have a major
impact on employee engagement. Since there were statistically significant main effects
for leadership and engagement, the main effects for each dependent variable were
followed up on separately (Pituch & Stevens, 2016).

Univariate main effects. There was not a statistically significant main effect of
geographic dispersion on the combined dependent variables, the univariate main effects
were not statistically significant for geographic dispersion (collocation) for psychological
needs, $F(1, 323) = 0.014$, $p = .905$, partial $\eta^2 = .000$ nor social support $F(1, 323) = .106$, $p = .745$, partial $\eta^2 = .000$. Most of the respondents were collocated and those that were
dispersed were underrepresented and limited the findings related to geographic
dispersion. There was a statistically significant main effect of engagement on
psychological needs, $F(1, 323) = 67.942$, $p = .000$, partial $\eta^2 = .174$, and on social
support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. In addition, there was a
statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p = .009$, partial $\eta^2 = .029$, and on social support, $F(2, 323) = 43.716$, $p = .000$,
partial $\eta^2 = .213$. Results from this study support past literature which indicates that there
is a strong relationship between psychological needs, transformational leadership and
engagement (Kovjanic et al., 2012).

ANOVA social support. Table 23 shows the output table of the ANOVA
demonstrating there was a statistically significant effect between group means for
leadership style on the dependent variable of social support ($p = .000$), indicating there
was a statistically significant effect in the mean in the perceived ability to meet social
support needs based on leadership style. In order to know how each leadership style

differed, the Multiple Comparisons Table, Table 19 shows the results of the Tukey post hoc test. There was a statistically significant effect in social support for all the leadership styles with ($p = .000$) for all leadership styles. There was a statistically significant effect among leaders with transformational, transactional and passive-avoidant styles in perceived ability to provide social support Welch's $F(2, 339) = 102.603$, $p =.000$. There was not a statistically significant effect between groups as determined by one-way Welch's ANOVA $F(3,338) = .262$, $p = .853$ in social support by geographic location, see Table 25. Table 24 shows there was statistically significant effect on social support by level of engagement Welch's $F(1,340) = 87.396$, $p = .000$.

ANOVA psychological needs. There was a statistically significant effect between groups as determined by one-way ANOVA on leadership style for psychological needs, Welch's $F(2, 339) = 23.486$, $p =.000$. Table 23 shows the output table of the ANOVA demonstrating there was a statistically significant effect between group means for leadership style on the dependent variable of psychological needs ($p = .000$), indicating there was a statistically significant effect in the mean in the perceived ability to meet psychological needs based on leadership style. There was a statistically significant effect in psychological needs for all the leadership styles with ($p = .000$) for all styles except passive-avoidant ($p = .743$), shown in Table 23. There was a statistically significant effect among leaders with transformational, transactional styles but not passive-avoidant styles in perceived ability to provide psychological needs. There was not a statistically significant effect between groups as determined by one-way ANOVA Welch's $F(3,338) = .954$, $p = .415$ in psychological needs by geographic location, see Table 25. Table 24

shows there was statistically significant effect on psychological needs by level of engagement Welch's $F(1,340) = 198.360$, $p = .000$.

Post-hoc analysis (Tukey). To follow up a statistically significant main effect, a post hoc Tukey analysis was interpreted for the three groups of the independent variable, leadership, there were three possible pairwise comparisons for leadership listed in Table 19. There was a statistically significant effect in social support for all the leadership styles with ($p = .000$) for all leadership styles. There was a statistically significant effect in psychological needs for all the leadership styles with ($p = .000$) for all styles except passive-avoidant ($p = .743$).

Table 19

Multiple Comparisons Tukey HSD Leadership Style

Variable	(I) Leadership Style	(J) Leadership Style	Mean Difference (I-J)	Std. Error	Sig.	95% CI LL	95% CI UL
Psy Needs	More Transformational	More Transactional	.354*	.065	.000	.199	.508
		More Passive Avoidant	.430*	.089	.000	.221	.640
	More Transactional	More Transformational	-.354*	.065	.000	-.508	-.199
		More Passive Avoidant	.076	.104	.743	-.169	.322
	More Passive Avoidant	More Transformational	-.430*	.089	.000	-.640	-.221
		More Transactional	-.076	.104	.743	-.322	.169
Social Support	More Transformational	More Transactional	.639*	.089	.000	.428	.849
		More Passive Avoidant	1.595*	.121	.000	1.309	1.880
	More Transactional	More Transformational	-.639*	.089	.000	-.849	-.428
		More Passive Avoidant	.956*	.141	.000	.621	1.290
	More Passive Avoidant	More Transformational	-1.595*	.121	.000	-1.880	-1.309
		More Transactional	-.956*	.141	.000	-1.290	-.621

*. The mean difference is significant at the 0.05 level.

Psychological needs and leadership style. (1) Psychological needs score was 0.44, 95% CI [.2609, .6107] higher with the more transformational leadership style compared to the more passive-avoidant leadership style, a statistically significant difference, ($p < .001$). (2) The psychological needs score was 0.35, 95% CI [.2198, .4801] higher for the more transformational leadership style compared to the more transactional leadership style, a statistically significant difference, $p < .001$. (3) The psychological needs score was -0.09, 95% CI [-.2911, .1195] lower following the more passive-avoidant style compared to the more transactional leadership style, this difference was not statistically significant, ($p = .587$).

Marginal means. The marginal means for psychological needs shown in Table 20 were 3.37 (SE = .70) for the more transformational leadership style and 3.29 (SE = .61) for the more transactional leadership style, a statistically significant mean difference of .08, 95% CI [.2198, .4801], $p < .001$. The marginal means for psychological needs were 3.37 (SE = .70) for the more transformational leadership style and 3.38 (SE = .86) for the more passive-avoidant style, a statistically significant mean difference of - .01, 95% CI [.2609, .6107], $p < .001$. The marginal means for psychological needs were 3.38 (SE = .86) for the more passive-avoidant style and 3.29 (SE = .61) for the more transactional leadership style, not a statistically significant mean difference of .09, 95% CI [.2911, .1195], $p = .587$.

Table 20

Marginal Means- Psychological Needs

Marginal Means		Mean Difference	CI 95%	Sig
Transformational 3.37 SE = .070	Passive Avoidant 3.38 SE = .086	-.01	[.2609, .6107]	.000
Transformational 3.37 SE = .070	Transactional 3.29 SE = .061	.08	[.2198, .4801]	.000
Passive Avoidant 3.38 SE = .086	Transactional 3.29 SE = .061	.09	[-.2911, .1195]	.587

Social support and leadership style. (1) Social support scores were 1.59, 95% CI [1.3311, 1.8659] higher with the more transformational leadership style than the more passive-avoidant leadership style, a statistically significant difference, $p < .001$. (2) Social support scores were 0.63, 95% CI [.4304, .8283] higher with the more transformational leadership style than the more transactional leadership style, this was statistically significant, $p < .001$. (3) Social support scores were -.97, 95% CI [-1.2830, -.6553] lower in the more passive-avoidant style than the more transactional leadership style, a statistically significant difference, $p < .001$. The marginal means for the social support scores shown in Table 21 were 3.847 (SE = .107) for the more transformational leadership style and 2.447 (SE = .132) for the more passive-avoidant style, a statistically significant mean difference of 1.41, 95% CI [-1.8659, -1.3311], $p < .001$. The marginal means for social support scores were 2.447 (SE = .132) for the more passive-avoidant style and 3.245 (SE = .093) for the more transactional leadership style, a statistically significant mean of -.80, 95% CI [-1.2830, -.6553], $p < .001$.

Table 21

Marginal Means- Social Support

Marginal Means		Mean Difference	CI 95%	Sig
Transformational 3.847 SE = .107	Passive Avoidant 2.447 SE = .132	1.4	[-1.8659, -1.3311]	.000
Transformational 3.847 SE = .107	Transactional 3.245 SE = .093	.60	[.4304, .8283]	.000
Passive Avoidant 2.447 SE = .132	Transactional 3.245 SE = .093	-.80	[-1.2830, -.6553]	.000

To follow up a statistically significant main effect, a post hoc analysis was interpreted for the two groups of the independent variable, engagement. As a result, there are four possible pairwise comparisons for leadership. Table 22 lists the pairwise comparisons included in this study.

Table 22

Comparisons Employee Engagement

	Engagement	Compared to
1	High	Psychological Needs
2	Low	Psychological Needs
3	High	Social Support
4	Low	Social Support

ANOVA. ANOVA was interpreted to follow up on a statistically significant main effect. Because there was not homogeneity of variances, the sample size was not the same, a Welch ANOVA was calculated for leadership style, engagement and geographic dispersion. Table 23 shows that there was a statistically significant difference between

groups as determined by one-way ANOVA on leadership style for social support Welch's $F(2, 339) = 102.603$, $p = .000$ and psychological needs, Welch's $F(2, 339) = 23.486$, $p = .000$. Table 24 shows that there was a statistically significant difference between groups as determined by one-way ANOVA on engagement for social support Welch's $F(1, 340) = 87.396$, $p = .000$ and for psychological needs, Welch's $F(1, 340) = 198.360$, $p = .000$. Table 25 shows that there was not a statistically significant difference between groups for geographic dispersion on psychological needs Welch's $F(3, 338) = .954$, $p = .415$ or social support Welch's $F(3, 338) = .262$, $p = .853$.

Table 23

ANOVA Leadership Style

		Sum of Squares	df	Mean Square	F	Sig.
Psy Needs	Between Groups	8.542	2	4.271	23.486	.000
	Within Groups	61.652	339	.182		
	Total	70.194	341			
Social Support	Between Groups	68.949	2	34.474	102.603	.000
	Within Groups	113.904	339	.336		
	Total	182.853	341			

Table 24

ANOVA Engagement

		Sum of Squares	df	Mean Square	*F*	Sig.
Psy Needs	Between Groups	25.863	1	25.863	198.360	.000
	Within Groups	44.331	340	.130		
	Total	70.194	341			
Social Support	Between Groups	37.391	1	37.391	87.396	.000
	Within Groups	145.462	340	.428		
	Total	182.853	341			

Table 25

ANOVA Geographic Location

		Sum of Squares	df	Mean Square	*F*	Sig.
Psy Needs	Between Groups	.589	3	.196	.954	.415
	Within Groups	69.605	338	.206		
	Total	70.194	341			
Social Support	Between Groups	.424	3	.141	.262	.853
	Within Groups	182.429	338	.540		
	Total	182.853	341			

A MANOVA was conducted with three independent variables (geographic

dispersion, leadership style, engagement) and two dependent variables (psychological

needs, social support). The combined psychological needs and social support scores were

used to compare geographic dispersion, leadership style, and engagement. The interaction effect between geographic dispersion (collocation), leadership style and engagement on the combined dependent variable was not statistically significant. There was a statistically significant leadership style effect on the combined dependent variables, $F(4, 646) = 24.071$, $p = .000$, Pillai's Trace = .259, partial $\eta^2 = .130$. There was a statistically significant engagement effect on the combined dependent variables, $F(2, 322) = 33.949$, $p = .000$, Pillai's Trace = .174, partial $\eta^2 = .174$. Since there was a statistically significant main effect for leadership and engagement, the main effects for each dependent variable were followed up on separately (Pituch & Stevens, 2016).

There was a statistically significant main effect of engagement for psychological needs, $F(1, 323) = 67.942$, $p = .000$, partial $\eta^2 = .174$, and for social support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. In addition, there was a statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p = .009$, partial $\eta^2 = .029$, and for social support, $F(2, 323) = 43.716$, $p = .000$, partial $\eta^2 = .213$. To follow up a statistically significant main effect, a post hoc Tukey pairwise comparisons were run for the differences in mean psychological differences for independent variable, leadership. The marginal means for the social support score were 3.847 (SE = .107) for the more transformational leadership style and 2.447 (SE = .132) for the more passive-avoidant style, a statistically significant mean difference of 1.41, 95% CI [-1.8659, -1.3311], $p < .001$. The marginal means for social support scores were 2.447 (SE = .132) for the more passive-avoidant style and 3.245 (SE = .093) for the more transactional leadership style, a statistically significant mean difference of -.80, 95% CI [-1.2830, -.6553], $p < .001$. The marginal means for psychological needs scores were 3.37 (SE = .70) for the more

transformational leadership style and 3.29 (SE = .61) for the more transactional

leadership style, a statistically significant mean difference of .08, 95% CI [.2198, .4801],

$p < .001$. The marginal means for psychological needs were 3.37 (SE = .70) for the more

transformational leadership style and 3.38 (SE = .86) for the more passive-avoidant style,

a statistically significant mean difference of - .01, 95% CI [.2609, .6107], $p < .001$. The

marginal means for psychological needs were 3.38 (SE = .86) for the more passive-

avoidant style and 3.29 (SE = .61) for the more transactional leadership style, not a

statistically significant mean difference of .09, 95% CI [.2911, .1195], $p = .587$.

Summary

All of the data in this research study were collected from the ($N = 342$)

participants who responded to four surveys (UWES, WBNS, MSIT and MLQ-5X) and

provided demographic information about gender, location, department, role, and

collocation. A MANOVA was run to determine main and interaction effects between the

independent variables of employee engagement, leadership style, geographic dispersion

on the combined dependent variables of psychological needs (autonomy, competence,

relatedness) and social support. The combined psychological needs and social support

scores were used to compare geographic dispersion, leadership style and engagement.

The interaction effect between geographic dispersion (collocation), leadership style and

engagement on the combined dependent variable was not statistically significant. There

was a statistically significant leadership style effect on the combined dependent variables,

$F(4, 646) = 24.071$, $p = .000$, Pillai's Trace = .259, partial $\eta^2 = .130$. There was a

statistically significant engagement effect on the combined dependent variables, $F(2,$

$322) = 33.949$, $p = .000$, Pillai's Trace = .174, partial $\eta^2 = .174$. Since there were

statistically significant main effects for leadership and engagement, the main effects for each dependent variable were followed up on separately (Pituch & Stevens, 2016).

There was a statistically significant main effect of engagement for psychological needs, $F(1, 323) = 67.942$, $p = .000$, partial $\eta^2 = .174$, and for social support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. In addition, there was a statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p = .009$, partial $\eta^2 = .029$, and for social support, $F(2, 323) = 43.716$, $p = .000$, partial $\eta^2 = .213$. To follow up a statistically significant main effect, a post hoc Tukey pairwise comparisons were run for the differences in mean psychological differences for independent variable, leadership.

The marginal means for the social support score were 3.847 (SE = .107) for the more transformational leadership style and 2.447 (SE = .132) for the more passive-avoidant style, a statistically significant mean difference of 1.41, 95% CI [-1.8659, -1.3311], $p < .001$. The marginal means for social support score were 2.447 (SE = .132) for the more passive-avoidant style and 3.245 (SE = .093) for the more transactional leadership style, a statistically significant mean difference of -.80, 95% CI [-1.2830, -.6553], $p < .001$. The marginal means for psychological needs score were 3.37 (SE = .70) for the more transformational leadership style and 3.29 (SE = .61) for the more transactional leadership style, a statistically significant mean difference of .08, 95% CI [.2198, .4801], $p < .001$. The marginal means for psychological needs score were 3.37 (SE = .70) for the more transformational leadership style and 3.38 (SE = .86) for the more passive-avoidant style, a statistically significant mean difference of - .01, 95% CI [.2609, .6107], $p < .001$. The marginal means for psychological needs score were 3.38 (SE = .86) for the more passive-avoidant style and 3.29 (SE = .61) for the more transactional

leadership style, not a statistically significant mean difference of .09, 95% CI [.2911, .1195], *p* = .587.

ANOVA was interpreted to follow up on a statistically significant main effect. Engagement in respondents who scored high (*n* = 311, *M* = 3.80, SD = 0.371), compared to low engagement (*n* = 31, *M* = 2.84, SD = .222), for psychological needs. Engagement in those who scored high (*n* = 311, *M* = 3.98, SD = 0.630), compared to low (*n* = 31, *M* = 2.83, SD = .860), for social support. Because there was not homogeneity of variances, the sample size was not the same, a modified version of the ANOVA called a Welch ANOVA was used. Table 24 shows the social support score was statistically significantly for different levels of engagement, Welch's *F(*1, 340) = 87.396, *p* =.000. The psychological needs score was statistically significantly different for different levels of engagement, Welch's *F(*1, 340) = 198.360, *p* =.000. Table 26 displays a concise summary of the main and interaction effect results in this study.

Table 26

Summary of the Main and Interaction Effects

Effect Type	Description of Effect	Sig.
Main Effect 1	Leadership Style IV1	$p = .000$
Main Effect 2	Geographic Location IV3	$p = .945$
Main Effect 3	High/Low EE Engagement IV2	$p = .000$
Interaction Effect 1	Two-way interaction: Leadership Style IV1/Geographic Location IV3 (IV1 x IV3)	$p = .631$
Interaction Effect 2	Two-way interaction: Leadership Style IV1/ High/Low EE Engagement IV2 (IV1 x IV2)	$p = .097$
Interaction Effect 3	Two-way interaction: High/Low EE Engagement IV2/Geographic Location IV3 (IV2 x IV3)	$p = .588$
Interaction Effect 4	Three-way interaction: Leadership style, by Geographic Location, by High/Low EE Engagement (IV1 x IV3 x IV2)	$p = $ n.s.

All of the data in this research study were collected from the participants'
responses to four surveys, the UWES, WBNS, MLQ-5X, MSIT. The presentation of the
data analysis included the use of MANOVA to assess interaction effect. An ANOVA was
conducted to examine main effects. Chapter 5 discusses the implications of the study,
findings, conclusions, and recommendations for future research.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

Antonakis et al., (2003) called for further research on the topic of leadership in strong and weak conditions and to assess variables such as location. This study addressed leadership attributes, based on high and low levels of employee engagement and included an assessment of geographic location since virtual teams have become more commonplace in the 21st-century workplace. The behaviors that leaders exhibit when influencing followers in pursuit of achieving goals is referred to as a leadership style (Hamstra et al., 2014). Transformational, transactional and passive-avoidant styles of leadership are some of the most commonly studied in literature (Bass & Avolio, 1994; Skogstad et al., 2014a). Leadership styles are associated with positive and negative work outcomes based on employee's perceptions of daily interactions with leaders; these interactions are the foundation of engagement or disengagement (Avery et al., 2007; Fusco et al., 2015; Kahn, 1990; Kovjanic et al., 2013). Employees who are not collocated with their leader or team are more difficult to lead and motivate (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012).

Summary of the Study

The purpose of this quantitative causal-comparative study was to explore how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. Leaders are consistently reported as influential in an employee's level of engagement (Breevaart

et al., 2014; Song et al., 2012). Employees form perceptions of their leader's ability to offer them opportunities to demonstrate their competence and capability, establish autonomy as a norm and relate to each team member in order to meet psychological needs and provide social support (Burch & Guarana, 2014; Deci & Ryan, 2008; Meyer, 2013). Leadership competencies include both the ability to achieve business results and the interpersonal and social skills required to connect with employees (Lombardo & Eichinger, 2009).

As workplace dynamics change, the study of leadership and followership is critical for supporting organizations as they develop talent to maintain a competitive advantage (Christian et al., 2011; Kovjanic et al., 2013; Macey & Schneider, 2008; Song et al., 2012). It was not known how transformational, transactional, and passive-avoidant leaders compare in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. To understand this problem two research questions were asked:

RQ1: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support for employees with high or low engagement who are dispersed geographically?

RQ2: To what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on the psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically?

A target population of approximately 800 employees from a population of 1,300 working in a hospitality organization were invited to participate in an online survey measuring engagement, leadership behavior, psychological needs (autonomy, competence, relatedness) and social support in the workplace using ranking systems on Likert Scales. An online web-survey platform, Surveymonkey.com, was utilized to gather data on 115 questions from employees of a hospitality organization. Demographic questions on gender, role, location, collocation with leader and department were asked to understand more about the respondents in order to answer the research questions and subsequent hypotheses. The organization has locations across the United States, with larger corporate offices in the southwestern and mid-Atlantic regions of the country. The ($N = 492$) employees responded to the survey included those that are collocated and those that are geographically dispersed from their leader and team with a sample of ($N = 358$) completing all instruments and responses. Chapter 5 contains a summary of the findings and conclusions, implications for future research and practice, and a final section on recommendations derived from the study.

Summary of Findings and Conclusion

This section provides a summary of the key findings that emerged from the data analysis presented in Chapter 4. Prior to analyzing the findings for each of the research questions, a general overview of the descriptive analysis of the perceptions that respondents have regarding their overall engagement, perceptions of leadership style and the effects of geographic dispersion are reviewed. This descriptive analysis describes the level of influence that leadership style, geographic dispersion and level of engagement had on perceptions of meeting psychological needs and providing social support in the work environment studied. The findings are subsequently organized according to the research questions that guided this

study and subsequent hypotheses. After examining the findings for each question, conclusions will be drawn in comparison to existing research.

Leadership style. Commonly referenced in literature, the full-range leadership model includes styles of leadership on a continuum from passive to active and include passive-avoidant, transactional, and transformational styles (Rowold, 2014). These styles are not mutually exclusive but do have differing work outcomes, and most leaders use a combination of styles depending on the situation and circumstance (Kahai et al., 2013). Transactional leadership is characterized by an exchange of rewards and recognition or avoidance of sanctions between the leader and the follower for meeting performance expectations (Kahai et al., 2013). Transformational leaders appeal to followers to identify with the greater needs of the group and motivate individuals through their individual needs, providing intellectual challenges and being a role model towards the achievement of the group's objectives (Hamstra et al., 2014; Kahai et al., 2013). Passive-avoidant leadership is characterized by a general lack or avoidance of leadership, which includes being physically absent from the workplace, avoiding making decisions and limited interaction with direct reports, peers, and bosses (Arnold et al., 2015).

As the descriptive data of Chapter 4 demonstrated, respondents in this study indicated having a perception weighted towards transactional leadership (78%) perceived their leader as more transformational than the norm, (15%) perceived their leader as more transactional than the norm, and (7%) perceived their leader as more passive-avoidant than the norm. Transformational leadership was supported throughout literature as displaying the interpersonal savvy to support people while meeting organizational objectives (Kahai et al., 2013; Kovjanic et al., 2012; Williams et al., 2014). Transformational leaders are defined by the ability to set high expectations. They are optimistic about the future and

effectively communicate their support that followers can achieve (Kovjanic et al., 2012). Respondent perception that many leaders demonstrate these attributes had a positive relationship to engagement.

Employee engagement. The most common definition of employee engagement includes the factors of vigor, dedication and absorption in organizational life (Alacron & Lyons, 2011; Kahn, 1990; Song et al., 2012). Engagement, which was studied as a pre-existing trait in the environment, was reported as high for $N = 321$ (90%) of the respondents scoring a ($M \geq 4.67$) and low for 37 (10%) ($M < 4.67$) of the respondents. The relationship between transformational leadership and high employee engagement was supported by the results of this study as (90%). Tims et al., (2011) asserted that transformational leadership positively enhances an employee's level of engagement. Kahn (1990) was the first to make the connection between employee engagement and psychological needs as conditions that have to be met for an employee to perform effectively.

Geographic dispersion. Feeling part of a group is important for individual team members to maintain a connection to an organization. Therefore, geographic dispersion can have negative effects if no attention is paid to finding ways to include employees that have limited overlapping work hours. (Suh et al., 2011). Respondents in this study were more often collocated in the same physical location as their leader ($N = 282$, 78%). The remaining ($N = 67$, 19%) were not in the same physical location. The location of the sample violated the assumption of equal variances and as a result, some of the statistical tests for interactions did not return data.

Social support. At work, social support structures are found in the relationships with peers, top management and the employee's direct leader (Consiglio et al., 2016; Sarason et al., 1983). Social support structures are based on the notion that employees can turn to others for help who care about them as individuals, are competent and available to provide assistance (Sarason et al., 1983). Engaged employees are more likely to create social systems that are supportive of teamwork leading to a more effective performance in job assignments (Christian et al., 2011). Since employees often work in teams in organizations, the leader has an important role to promote dynamic interaction between co-workers and build a compelling vision for employees (Song et al., 2012). The overall results for social support needs resulted in ($M = 3.87$) on a Likert scale from strongly disagree (1) to strongly agree (5) for questions on the MSIT related to Managerial Support indicating an overall moderate level of meeting social support needs as perceived by the respondents. When engagement was reported high by respondents, the mean for social support increased ($M = 3.97$) and when engagement was reported low the mean for social support decreased ($M = 2.82$)

Psychological needs. Psychological needs are foundational to employee engagement, which requires leadership to foster an organizational environment where employees feel comfortable expressing themselves authentically in the course of their work (Christian et al., 2011). Self-determination theory also focuses on intrinsic and extrinsic goals and the relationship to job performance and psychological health (Deci & Ryan, 2008). When employees internalize their connection to the organization, acquire social support and have their psychological needs met, they are more likely to be engaged, take responsibility for less desirable tasks and put forth discretionary effort to

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accomplishing all aspects of work (Deci & Ryan, 2000; Williams et al., 2014).The overall results for psychological needs resulted in ($M = 3.71$) on a Likert scale from totally disagree (1) to totally agree (5) indicating an overall moderate level of meeting psychological needs as perceived by the respondents. When engagement was high the mean score for psychological needs was ($M = 3.80$) and when engagement was low the mean for psychological needs was ($M = 2.84$).

The proposed study extends existing research by investigating how transformational leaders compare with transactional, and passive-avoidant leaders in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who show high or low levels of engagement, in a geographically dispersed corporate environment within the hospitality industry. Prior research has shown that transformational leaders are effective in fostering follower engagement (Dvir et al., 2002; Tims et al., 2011; Zhu et al., 2009). Transactional leaders that utilize contingent reward are also effective in facilitating follower engagement (Breevaart, et al., 2014). Passive-avoidant leadership is considered the most ineffective leadership style, shows a negative impact on job satisfaction over time and includes counterproductive work behaviors such as withdrawal, passivity and reduced attendance (Skogstad et al., 2014b).

The gap present in the research is a lack of understanding of how leadership styles (transformational, transactional, passive-avoidant) compare in perceived ability to meet the psychological needs (autonomy, competence, relatedness) and provide social support for employees who report high or low levels of engagement, and geographical dispersion (Birdie & Jain, 2015; Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010).

Organizations are relying more on virtual teams for innovation and diversity of ideas (Gajendran & Joshi, 2012). Geographic dispersion has been shown to have a negative effect on performance and satisfaction (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). The employee's perception of the leader's ability to meet psychological needs and facilitate social support on a team is an important consideration in making connections with the drivers of engagement (Deci & Ryan, 2008). However, there has been limited review of the influence of geographic dispersion and virtual teams on perceptions of leadership effectiveness based on comparison of style (transformational, transactional and passive-avoidant) in perceived ability to meet psychological needs (autonomy, competence, relatedness) and providing social support to employees that demonstrate high and low levels of engagement (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010).

Comparing a leader's ability to meet psychological needs (autonomy, competence, relatedness) and social support needs, on the basis of leadership style for employees who work on virtual teams in geographically dispersed locations and show high or low levels of engagement was the focus of this study. The survey instruments used were based in scholarly work; reliable and valid. A visual representation of the instruments is included in Table 7. The independent variables were leadership style, employee engagement, and geographic location. The dependent variables were psychological needs (autonomy, competence, relatedness) and providing social support.

Research Question 1. The first research question and subsequent hypothesis explored was whether there was a statistically significant effect of leadership style on perceived ability to provide social support for employees with high or low engagement

who are dispersed geographically. Table 23 shows the output table of the Welch's ANOVA demonstrating there was a statistically significant effect between group means for leadership style on the dependent variable of social support ($p = .000$), indicating there was a statistically significant effect in the mean in the perceived ability to meet social support needs based on leadership style supporting H1. In order to know how each leadership style differed, the Multiple Comparisons Table 19 shows the results of the Tukey post hoc test. There was a statistically significant effect in social support for all the leadership styles with ($p = .000$) for all leadership styles. There was evidence to suggest that the null hypothesis $H1_0$ can be rejected. There was a statistically significant effect among leaders with transformational, transactional and passive-avoidant styles in perceived ability to provide social support Welch's $F(2, 339) = 102.603$, $p = .000$. There was evidence to suggest that the null for H2 can be accepted. There was not a statistically significant effect between groups as determined by one-way Welch's ANOVA $F(3,338) = .262$, $p = .853$ in social support by geographic location, see Table 25. There was evidence to suggest that H3 can be accepted, Table 24 shows there was statistically significant effect on social support by level of engagement Welch's $F(1,340) = 87.396$, $p = .000$.

Hypothesis four through seven analyze interaction effects. There was evidence to suggest that the null H4 can be accepted. The interaction effect between leadership style and geographic collocation on perceived ability to provide social support was not statistically significant, Welch's $F(2, 323) = 1.116$, $p = .329$ partial $\eta^2 = .007$. There was evidence to suggest that the null hypothesis H5 can be accepted. There was not a statistically significant leadership style by employee engagement interaction in perceived ability to provide social support Welch's $F(2, 323) = .954$, $p = .386$ partial $\eta^2 = .006$.

There was evidence to suggest that the null hypothesis H6 can be accepted. There was not a statistically significant employee engagement by geographic location interaction in perceived ability to provide social support Welch's $F(1, 323) = .347$, $p = .556$ partial $\eta^2 = .001$. Finally, there was evidence to suggest that the null hypothesis H7 can be accepted. When the data was split, the number of cases (respondents) for leadership style by employee engagement, by geographic location interaction effect for hypothesis H7 could not be sufficiently evaluated and analyzed. The sample violated the assumption of equal variances and as a result, some of the statistical tests for interactions did not return data.

Research Question 2. The second research question and subsequent hypothesis explored was whether there was a statistically significant effect of leadership style on perceived ability to provide psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically. There was a statistically significant effect between groups as determined by one-way ANOVA on leadership style for psychological needs, Welch's $F(2, 339) = 23.486$, $p = .000$. Table 23 showing the output table of the ANOVA demonstrating there was a statistically significant effect between group means for leadership style on the dependent variable of psychological needs ($p = .000$), indicating there was a statistically significant effect in the mean in the perceived ability to meet psychological needs based on leadership style supporting H8. In order to know how each leadership style differed, the Multiple Comparisons Table 19 shows the results of the Tukey post hoc test. There was a statistically significant effect in psychological needs for all the leadership styles with ($p = .000$) for all styles except passive-avoidant ($p = .743$). There was evidence to suggest that the null hypothesis H8 can be partially rejected. There was a statistically significant effect

among leaders with transformational, transactional styles but not passive-avoidant styles in perceived ability to provide psychological needs. There was evidence to suggest that the null for H_9 can be accepted. There was not a statistically significant effect between groups as determined by one-way Welch's ANOVA $F(3,338) = .954$, $p = .415$ in psychological needs by geographic location, see Table 25. There was evidence to suggest that H10 can be accepted, Table 24 shows there was statistically significant effect on psychological needs by level of engagement Welch's $F(1,340) = 198.360$, $p = .000$.

Hypothesis eleven through fourteen analyze interaction effects. There was evidence to suggest that the null hypothesis H11 can be accepted. The interaction effect between leadership style and geographic collocation on perceived ability to meet psychological needs was not statistically significant, $F(2, 323) = .803$, $p = .449$ partial η^2 $=.005$. There was evidence to suggest that the null hypothesis H12 can be accepted. There was not a statistically significant leadership style by employee engagement in perceived ability to meet psychological needs interaction $F(2, 323) = 1.282$, $p = .279$ partial $\eta^2 = .008$. There was evidence to suggest that the null hypothesis H13 can be accepted. There was not a statistically significant employee engagement by geographic location in perceived ability to meet psychological needs interaction $F(1, 323) = .135$, $p = .714$ partial $\eta^2 = .000$. There was evidence to suggest that the null hypothesis H14 can be accepted. When the data was split, the number of cases (respondents) for the leadership style, by employee engagement, by geographic location in perceived ability to meet psychological needs interaction had weakness and the interaction effect for hypothesis H14 could not be sufficiently evaluated and analyzed.

Findings. All of the data in this research study were collected from the ($N =342$) participants who responded to four surveys the UWES, WBNS, MSIT and MLQ-5X and provided demographic information about gender, location, department, role, and collocation. A MANOVA was run to determine main and interaction effects between the independent variables of employee engagement, leadership style, geographic dispersion on the combined dependent variables of psychological needs (autonomy, competence, relatedness) and social support. The combined psychological needs and social support scores were used to compare geographic dispersion, leadership style, and engagement.

Interaction effects. The interaction effect between geographic dispersion, leadership style and engagement on the combined dependent variable was not statistically significant. There was a statistically significant leadership style effect on the combined dependent variables, $F(4, 646) = 24.071$, $p =.000$, Pillai's Trace $= .259$, partial $\eta^2 = .130$. There was a statistically significant engagement effect on the combined dependent variables, $F(2, 322) = 33.949$, $p =.000$, Pillai's Trace $= .174$, partial $\eta^2 = .174$. The main effects for each dependent variable were followed up on separately (Pituch & Stevens, 2016).

Main effects. There was a statistically significant main effect of engagement on psychological needs, $F(1, 323) = 67.942$, $p =.000$, partial $\eta^2 = .174$, and for social support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. In addition, there was a statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p =.009$, partial $\eta^2 = .029$, and for social support, $F(2, 323) = 43.716$, $p = .000$, partial $\eta^2 = .213$.

Conclusions. This study supported past research that meeting psychological needs affects engagement (Kovjanic et al., 2013). In this study, there was evidence to suggest that the null hypothesis can be rejected. There was a statistically significant effect based on leadership style on perceived ability to provide social support and meet psychological needs. For the 78% of the respondents in this study who perceived their leader as more transformational, employee engagement was also high for 91% of the sample. There was a statistically significant leadership style effect on the combined dependent variables, $F(4, 646) = 24.071$, $p = .000$, Pillai's Trace = .259, partial $\eta^2 = .130$. There was a statistically significant engagement effect on the combined dependent variables, $F(2, 322) = 33.949$, $p = .000$, Pillai's Trace = .174, partial $\eta^2 = .174$. In this sample, 78% of the respondents were in the same geographic location as the leader however, collocation did not show an effect to leadership style $F(4, 646) = .645$, $p = .631$, Pillai's Trace = .008, partial $\eta^2 = .004$ or engagement, $F(2, 322) = .532$, $p = .588$, Pillai's Trace = .003, partial $\eta^2 = .003$.

Chapter 1 introduced the importance of leadership styles and the association with positive and negative work outcomes based on employee's perceptions of daily interactions with leaders. These interactions are the foundation of engagement (Avery et al., 2007; Fusco et al., 2015; Kahn, 1990; Kovjanic et al., 2013). Engaged employees are more likely to create social systems that are supportive of teamwork leading to a more effective performance in job assignments (Christian et al., 2011). While self-efficacy fosters engagement, the ability to adapt, adjust and persevere is not completed in a silo. People need others for social outlets to persist and perform (Consiglio et al., 2016;

Sarason et al., 1983). The next sections describe the theoretical, practical and future implications of this research.

Implications

The objective of this quantitative study was to compare leadership styles in the perceived ability to provide social support and meet psychological needs of employees with both high and low engagement based on geographic dispersion. The previous chapters outlined the rationale for the study, the prior research, and literature on the topic, the study design and research methods, and the data analysis and results. This study added to the knowledge of both leader-member exchange (LMX) theory and self-determination theory (SDT) by specifically researching the how these theories are realized in organizations based on the perception of the employee. The results of this study indicated leadership style has an effect on meeting psychological needs and providing social support. Leaders in this study were identified by the majority of respondents as more transformational than the norm. In addition, the respondents were more often highly engaged, which supported past research stating there was a positive effect on engagement when transformational leadership styles are utilized (Breevaart et al., 2014).

Theoretical implications. This study provided contributions within the theoretical framework of leader-member exchange (LMX) and self-determination theory (SDT). The objective of this study aligned with the premise of LMX theory, that leaders build unique relationships with employees based on time, resource or cognitive pressures (Goh & Wasko, 2012). When the data was split the number cases (respondents) for all the interaction effects had weakness and the interaction effect for hypotheses H7 and H14 could not be sufficiently evaluated and analyzed.

The first research question and subsequent hypothesis explored was whether there was a statistically significant effect of leadership style on perceived ability to provide social support for employees with high or low engagement who are dispersed geographically. ANOVA showed that there was a statistically significant effect between group means for leadership style on the dependent variable of social support ($p = .000$), indicating there was a statistically significant effect in the mean in the perceived ability to meet social support needs based on leadership style supporting H_1. In addition, there was a statistically significant effect in social support for all the leadership styles with ($p = .000$) for all leadership styles. There was evidence to suggest that the null hypothesis $H1_0$ can be rejected. There was a statistically significant effect among leaders with transformational, transactional and passive-avoidant styles in perceived ability to provide social support Welch's $F(2, 339) = 102.603$, $p = .000$. There was evidence to suggest that the null for H_2 can be accepted. There was not a statistically significant effect between groups as determined by one-way Welch's ANOVA $F(3,338) = .262$, $p = .853$ in social support by geographic location. There was evidence to suggest that H_3 can be accepted, there was statistically significant effect on social support by level of engagement Welch's $F(1,340) = 87.396$, $p = .000$.

Hypothesis four through seven analyze interaction effects. There was evidence to suggest that the null H4 can be accepted. The interaction effect between leadership style and geographic collocation on perceived ability to provide social support was not statistically significant, $F(2, 323) = 1.116$, $p = .329$ partial $\eta^2 = .007$. There was evidence to suggest that the null hypothesis H5 can be accepted. There was not a statistically significant leadership style by employee engagement interaction in perceived ability to

provide social support $F(2, 323) = .954$, $p = .386$ partial $\eta^2 =. 006$. There was evidence to suggest that the null hypothesis H6 can be accepted. There was not a statistically significant employee engagement by geographic location interaction in perceived ability to provide social support $F(1, 323) = .347$, $p = .556$ partial $\eta^2 = .001$. Finally, there was evidence to suggest that the null hypothesis H7 can be accepted. H7 could not be sufficiently evaluated and analyzed.

In this study, geographic dispersion did not show evidence of an effect on the leader's ability to meet psychological needs or provide social support. In this sample, the majority of the respondents (78%) were collocated with their direct leader. When engagement was high and the employee was in the same location, transformational, transactional and passive-avoidant leadership styles all showed a significant effect on social support. However, when the employee was not collocated with the leader, only transformational leadership showed a statistically significant effect to providing social support; lending support to the positive effects of more transformational leadership when employees are working virtually.

The second research question and subsequent hypothesis explored was whether there was a statistically significant effect of leadership style on perceived ability to provide psychological needs (autonomy, competence, relatedness) for employees with high or low engagement who are dispersed geographically. There was a statistically significant effect between groups as determined by one-way ANOVA on leadership style for psychological needs, Welch's $F(2, 339) = 23.486$, $p =.000$. ANOVA showed that there was a statistically significant effect between group means for leadership style on the dependent variable of psychological needs ($p = .000$), indicating there was a statistically

significant effect in the mean in the perceived ability to meet psychological needs based on leadership style supporting H_8. There was a statistically significant effect in psychological needs support for all the leadership styles with ($p = .000$) for all styles except passive-avoidant ($p = .743$). There was evidence to suggest that the null hypothesis H_8 can be partially rejected. There was a statistically significant effect among leaders with transformational, transactional styles but not passive-avoidant styles in perceived ability to provide psychological needs. There was evidence to suggest that the null for H_9 can be accepted. There was not a statistically significant effect between groups as determined by one-way Welch's ANOVA $F(3,338) = .954$, $p = .415$ in psychological needs by geographic location. There was evidence to suggest that H10 can be accepted, there was statistically significant effect on psychological needs by level of engagement $F(1,340) = 198.360$, $p = .000$.

Hypothesis eleven through fourteen analyze interaction effects. There was evidence to suggest that the null hypothesis H_{11} can be accepted. The interaction effect between leadership style and geographic collocation on perceived ability to meet psychological needs was not statistically significant, $F(2, 323) = .803$, $p = .449$ partial η^2 =. 005. There was evidence to suggest that the null hypothesis H_{12} can be accepted. There was not a statistically significant interaction effect on leadership style by employee engagement in perceived ability to meet psychological needs interaction $F(2, 323) = 1.282$, $p = .279$ partial $\eta^2 = .008$. There was evidence to suggest that the null hypothesis $H13_0$ can be accepted. There was not a statistically significant effect of employee engagement by geographic location in perceived ability to meet psychological needs interaction $F(1, 323) = .135$, $p = .714$ partial $\eta^2 = .000$. There was evidence to suggest

that the null hypothesis H13 can be accepted. When the data was split the number cases (respondents) for the leadership style, by employee engagement, by geographic location in perceived ability to meet psychological needs interaction had weakness and the interaction effect for hypothesis H14 could not be sufficiently evaluated and analyzed.

Both research questions included the variable of geographic dispersion, which was measured based on the respondent indicating if they were collocated with their leader. Geographic dispersion, in which the employee is not collocated in the same physical work location as the employee, can limit the amount of time employees and leaders have to interact, especially if they are located in different time zones (O'Leary & Cummings, 2007). Disadvantages of geographically dispersed teams include effects to performance and work outcomes such as low team trust, cohesion, cooperative behavior and alignment with goals (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Overall, for the ($N = 342$) respondents ($N = 268$) were collocated with the leader. There was an unequal distribution in the sample sizes and underrepresentation in employees geographically dispersed from the leader ($N = 65$).

The second theoretical framework guiding this study was self-determination theory, which argues the best outcomes are achieved in the workplace by meeting the psychological needs (Chiniara & Bentein, 2016; Deci & Ryan, 2000; Miniotaite & Buciuniene, 2013; Vallerand et al., 2008). There was a statistically significant main effect of engagement on psychological needs, $F(1, 323) = 67.942$, $p = .000$, partial $\eta^2 = .174$, and on social support, $F(1, 323) = 18.685$, $p = .000$, partial $\eta^2 = .055$. In addition, there was a statistically significant main effect of leadership style on psychological needs, $F(2, 323) = 4.813$, $p = .009$, partial $\eta^2 = .029$, and on social support, $F(2, 323) = 43.716$, $p = .000$, partial $\eta^2 = .213$. Advancing scientific knowledge regarding the theoretical

foundations of LMX theory and SDT emphasizes the importance of the relationship between the leader and follower as fundamental to well-being and high employee engagement.

According to SDT, when psychological needs are met through autonomy, competence, and relatedness, there was growth and well-being (Miniotaite & Buciuniene, 2013). Leaders do not have equivalent relationships with all their employees, according to LMX theory which influences their ability to meet psychological and social support needs equitably as proposed by SDT (Goh & Wasko, 2012; Graen, 1976). In this study, the leadership style that was effective in both employees collocated and those geographically dispersed was a more transformational leadership style. In addition, this sample, the respondents perceived the majority of the leaders in the organization as transformational (78%) and (90%) of the respondents reporting high engagement, the highest means for social support ($M = 4.11$) psychological needs ($M = 3.84$) resulted when compared with respondents with low engagement, psychological needs ($M = 2.88$) and social support ($M = 3.49$) for a more transformational leadership style ($N = 254$).

When compared to a more transactional leadership style with high engagement ($N = 40$) psychological needs ($M = 3.61$) and social support ($M = 3.62$) compared to low engagement for psychological needs ($M = 2.73$) and social support ($M = 2.72$), ($N = 10$). Finally, comparing a more passive-avoidant leadership style with high engagement ($N = 17$) psychological needs ($M = 3.57$) and social support ($M = 2.77$) compared to low engagement for psychological needs ($M = 2.91$) and social support ($M = 1.87$), ($N = 8$). These results support a more transformational leadership style in meeting psychological and social support needs.

The results of this study supported both research questions; there was an effect based on leadership style in perceived ability to provide social support for employees with high or low engagement who are dispersed geographically. An individual's motivation at work is fostered by meeting psychological needs (autonomy, competence, and relatedness) through positive interactions with the leader that are repeated and become internalized to the self (Vallerand et al., 2008; Vansteenkiste et al., 2007). These finding and the interpretation of each give support to both SDT and LMX theory through the data presented and the implications compared to the review of literature in Chapter 2 and the data analysis in Chapter 4.

Practical implications. This present study complemented the literature review that showed that leadership style effects engagement. Leadership style effects psychological needs and social support. From this knowledge, the most immediate practical implication for organizations is to create awareness around the characteristics of leadership style that make up transformational leadership and offer development in the key attributes to develop skills for idealized attributes (instills pride by association), idealized behaviors (behaviors align with values and beliefs), inspirational motivation (optimism about the future), intellectual stimulation (seek new ideas and viewpoints on how to complete work) and individualized consideration (spend time coaching others, considers each individual as unique and looks to develop the strength of others).

Transformational leadership had a positive effect on engagement and as indicated in the literature review, when an employee has high engagement there are positive effects to performance, satisfaction, and overall well-being. Alessandri et al., (2015) found that performance outcomes are built through a cycle of experience and opportunity offered by

the leader who has a critical role in the path to engagement at work. Transformational leadership was shown to affect the meeting of psychological needs and providing social support in this study, including those employees who are not collocated but perceive their leader as more transformational. Employees who work remotely from their leader and team are common in organizations (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). Employees that are not working in the same geographic location, face isolation and are more likely to struggle with motivation due to a lack of identification with the team (Gajendran & Joshi, 2012; Segura et al., 2013; Quisenberry & Burrell, 2012). Transformational leaders are supported throughout literature as having the interpersonal savvy to support people while meeting organizational objectives (Kahai et al., 2013; Kovjanic et al., 2012; Williams et al., 2014). This study validated an effect between a more transformational leadership style and employee engagement. Tims et al., (2011) similarly found that transformational leadership positively enhances an employee's level of engagement. Transformational leadership aimed to shape the values and norms of the employees; employees are motivated to work beyond their current capability and align with the goals of the organization based on the influence of the leader (Tims et al., 2011).

Future implications. This study revealed the need for future research to look closer at the interactions between meeting psychological needs and providing social support to employees that are geographically dispersed. Even though the population under study had the potential for geographic dispersion, those that responded to the survey were more often collocated with their leader. This type of data collection will be better represented with a larger sample population that has an environment where geographic dispersion is more common and to gather an optimal number of cases

(respondents) for each interaction at a minimum to support independent sample size strengths. Recommendations are detailed in the next section.

Strengths and weaknesses. Upon critical evaluation of this study, there are strengths that can be identified. First, the study employed a quantitative research methodology and a causal-comparative design for the two research questions, and the fourteen hypotheses that were constructed to determine to what extent are there main and interactive effects of leaders with transformational, transactional, and passive-avoidant styles on perceived ability on social support and psychological needs for employees with high or low engagement who are dispersed geographically. This design offered the ability to collect a large amount of data from the target population for statistical analysis. As a result, the researcher was able to draw conclusions about employee perceptions and characteristics of the sample participants and the target population they represented. Second, the data collection process was a strength. Using an online survey instrument for data collection resulted in a time efficient process with responses from multiple locations in the organizations including employees who work virtually. The final sample ($N = 342$) resulted in a response rate of 45% of the respondents following through all portions of the survey and a 62% response rate ($N = 492$) for the target population completing some portion of the survey. Third, the sample size was a strength. The sample size ($N = 342$) exceeded the minimum requirement for this study. The sample size was sufficient and representative of the 800 employees in the target population at a 95% confidence level. G*Power priori calculated a minimum sample of 45 participants in order to achieve a 95% confidence level on a target population of 800 (Faul et al., 2009). Obtaining a sufficient sample size was necessary to generalize the findings to the broader target population.

The fourth strength of this study was regarding the findings that support transformational leadership styles in an industry that has been under-represented in literature. There were no articles located that compared how leadership styles effect the employee's perceptions of the leader's ability to meet psychological needs and provide social support that consequently encourages or discourages engagement in the workplace in a geographically dispersed corporate environment within the hospitality industry. The hospitality industry is expected to add close to a million new jobs in the United States by 2024. (Bureau of Labor Statistics, 2016). Studying an organization, in the hospitality industry, with employees that work in multiple locations, with both a heavy service and professional technology footprint, is timely and relevant to understanding how the needs of individuals are changing in a growing industry (Birdie & Jain, 2015).The causal relationship between leadership style and meeting psychological and social support needs is worthy of understanding for the over 200 million people globally, and 2 million people employed in the U.S. in hospitality (American Hotel & Lodging Association, 2016; Gaille, 2014).

It is important to also acknowledge the weaknesses in this study. The first weakness was related to the sampling method that was used for the study. The target population included approximately 800 employees who worked in the technology and marketing teams of the organization. This population was selected because the employees who support technology and marketing are core to the global demands and evolving business requirements of the hospitality industry (Marr, 2016). In order to gather sufficient responses for the required sample, a non-probability sampling technique of a purposive sampling was used and invited specifically employees that represent the largest

departments within the organization under study. Although this approach worked in achieving the required participation, the sample was unequally represented between locations with the Mid-Atlantic representing (24%), Southwestern representing (64%) and Field representing (12%) of the employees in the Unites States. While the final sample size of ($N = 342$) employees was representative of the target population, it is difficult to generalize the results to the larger population of hospitality employees because the sample was not randomly selected nor equally distributed.

A second weakness of the data collection in this study concerned the assumption that because the study included employees from various geographic locations, some of the employees who responded would be collocated with their leader and some would be geographically dispersed. In this study, 79% respondents were collocated with their leader, leaving the number of responses limited for the variable of geographic dispersion. Future research may benefit from collecting data from employees who are not collocated with their team or leader. The global nature of the workforce is bringing the world much closer, fundamentally altering the workplace (Birdie & Jain, 2015). This globalization that has networked virtual and dispersed employees has not been accompanied by an understanding of the social and psychological needs to create an effective work environment (Birdie & Jain, 2015).

A third weakness of the study was the use of only one organization in the hospitality industry. There are several sectors of the hospitality industry and each have unique organizational characteristics. The use of several organizations in several sectors of the hospitality industry would provide broader generalizability to the findings. Future studies may consider a broader sample with a wide variety of hospitality organizations.

Similar results would further validate the current study by confirming the generalizability of the results.

Recommendations

Recommendations for future research. This study supported past research that meeting the psychological needs and providing social support, effects engagement (Kovjanic et al., 2013). In this study, there was evidence to suggest that the null hypothesis can be rejected, there was a statistically significant effect based on leadership style in perceived ability to provide social support and meet psychological needs. The majority of the respondents in this study (78%), perceived their leader as more transformational, in addition, employee engagement was also high for 91% of the sample. There was a statistically significant leadership style effect and engagement effect on the combined dependent variables. In the sample, 78% of the respondents were in the same geographic location as the leader and collocation did not show a correlation to leadership style or engagement. However, a more transformational leadership style showed a positive, statistically significant correlation to providing social support when employees were working virtually.

First, future research should focus on how leadership attributes, for effective results, will differ when employees are diverse and not in the same physical location as their leader or team. Employees who work remotely from their leader and team are common in organizations (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). In this study, when the employee was not collocated with the leader, only a more transformational leadership style showed a positive, statistically significant correlation to providing social support. This finding lends support to the positive effects of more

transformational leadership when employees were working virtually. Even though the population under study had the potential for geographic dispersion, those that responded to the survey were more often collocated with their leader. This type of data collection would be better represented with a larger sample population that has an environment where geographic dispersion is more common and to gather an optimal number of cases (respondents) for each interaction at a minimum to support independent sample size strengths.

Second, organizations are relying more on virtual teams for innovation and diversity of ideas (Gajendran & Joshi, 2012). With talent requirements global in scale, leaders will be supporting team members from many cultures and diverse backgrounds (Horney, 2016). Another recommendation for future research is to understand if the leadership styles researched in the past are effective based on diversity culture and educational background outside of western cultures. The sample populations noted in the literature review on the study of the MLQ-5X and other instruments were primarily from the United States or western cultures. There is a gap in the literature of understanding how leadership styles, engagement, psychological needs (autonomy, competence, relatedness) and social support needs are perceived by employees not raised in a western culture and are now working for an organization that is founded in western cultural values.

A third recommendation for future research is to expand the research on the use of technology and the effects of LMX theory on global teams. Globalization has networked virtual and dispersed employees through technology, however the pace of technology changes has not been accompanied by an understanding of how to meet the social and

psychological needs necessary to create an effective working environment (Birdie & Jain, 2015). Advances in technology make connecting face-to-face through virtual methods commonplace in organizations, but there is a gap in literature on how this effects the relationship between the leader, the employee and their team. Tasks that involve a high degree of interdependence, collaboration and innovation are more negatively impacted by geographic dispersion than work tasks that are independent in nature (Magni et al., 2013).

A final recommendation is for future researcher's is to consider that contingent workers make up one-third of the US workforce (Dishman, 2017). There is a gap in literature in understanding how leaders interact and meet the needs of this type of transient workforce. The gig economy is growing with many younger workers working several jobs, and the one career system is changing (Dishman, 2017). Leading a portfolio of talent and a coalition of contractors and continent workers is more difficult that a group of employees that are part of a traditional organization with rules and norm (Horney, 2016). This fact will require leaders of a non-traditional workforce to address the many facets of the social and psychological needs in the workplace uniquely. (Horney, 2016).

As the workplace changes and technology influences our daily interpersonal interactions, there is a gap in understanding how leaders will need to adapt. The characteristics of leadership that are considered important in a face to face interactions and a fairly homogenous environment may evolve as the workforce becomes more virtual and global in nature. Population changes, advancing technology, the gig economy and globalization of commerce will make the workplace more diverse and complex.

Leadership challenges involving inclusivity and cultural awareness will be important considerations that should be studied in future research.

Recommendations for future practice. Based upon the findings in this study, the following recommendations for future practice are suggested: First, leaders should ask their direct reports to take the Multifactor Leadership Questionnaire (MLQ-5X) rater assessment each year and compare the results to the self-assessment. This will provide the leader insight on employee perceptions of their leadership style as compared to their own and determine what adjustment and development the leader would like to work on in the following year. Since transformational leadership had a positive relationship to meeting psychological needs and providing social support development in the related attributes would be effective for the organization. As part of the delivery of the results, leaders should be provided education on the individual attributes and demonstrated competencies effectively utilized. Following up with an individual development plan and supportive coaching to establish effective leadership behaviors.

Second, the organizational engagement survey should be updated to a reliable and valid instrument such as the UWES. After obtaining permission and paying applicable fees, the organization would have access to a set of questions that are translated into three languages English, French, and German for future use. Seppala et al., (2009) conducted two longitudinal studies for the UWES and test-rests reliability indicated internal consistency result of .85, .86, .82 respectively and results indicated that the scale is both valid and reliable.

Finally, leaders who have direct reports who are not collocated in the same geographic area need to build awareness around the effects of leadership style on remote

employees. Since the organization has two geographically distant locations and many field based employees giving attention to the nuances of building connections and supporting virtual teams would benefit the organization. Disadvantages of geographically dispersed teams include impacts to performance and work outcomes such as low team trust, cohesion, cooperative behavior and alignment with goals (Hoch & Kozlowski, 2014; Quisenberry & Burrell, 2012). Achieving an inclusive environment in a virtual team is challenging; virtual team members often report feeling left out of decision making resulting from an uneven distribution of critical tasks and sharing of information when compared to employees who are collocated (Hoch & Kozlowski, 2014; Gajendran & Joshi, 2012).

Summary. Employees who are invested in their work and the goals of their organization, give extra effort, put forward personal drive and energy over sustained periods, and intertwine part of their identity with an organization. (Brajer-Marczak, 2014; Consiglio et al., 2016; Kovjanic et al., 2013). Understanding what drives a high level of commitment to an organization and the resulting benefits of engagement has become an important consideration for organizations as the workforce evolves in the 21st century (Brajer-Marczak, 2014; Consiglio et al., 2016). Adding to the challenge of social connection and engagement, employees may not be in the same physical location as their leader or team; the global economy and technological advances are making geographic dispersion of teams more common (Fusco et al., 2015; Mateyka et al., 2012; Schreurs et al., 2014).

Employees have psychological needs (autonomy, competence, relatedness) and a need for social support in the workplace that drives their engagement and performance

(Consiglio et al., 2016; Kovjanic et al., 2013). According to leader-member exchange theory, the relationship between an employee and their leader uniquely matures until partnerships are formed in dyadic interactions (Gajendran & Joshi, 2012; Graen, 1976; Graen & Uhl-Bien, 1995). The dyad continues to be shaped by other social relationships within organizations that influence the interactions between the leader and the employee (Graen & Uhl-Bien, 1995). In an organization that has employees and leaders working in different locations, there was an added complexity to forming relationships, meeting psychological needs (autonomy, competence, and relatedness) and providing social support (Gajendran & Joshi, 2012; Segura et al., 2013; Quisenberry & Burrell, 2012).

Styles of leadership, engagement, and psychological needs are well studied in the workplace as constructs (Bass & Avolio, 1994; Deci & Ryan, 2000; Kovjanic et al., 2012; Lynch et al., 2005; Skogstad et al., 2014b; Van den Broeck et al., 2010) however, there is a gap in the literature on interaction of theses variables and influence of social support growing work dynamic of geographic dispersion and globalization. Meeting the psychological needs and social support needs of employees has been established as an important predictor of employee engagement (Deci & Ryan, 2000; Christian et al., 2011). The ability to work remotely, away from a traditional office is increasingly an option for employees based on advances in technology and is steadily increasing as an approach to hiring talent in organizations in the United States based on information from the US Census Bureau (Mateyka et al., 2012). Social support and psychological needs (autonomy, competence, relatedness) are part of the motivation that keeps employees engaged and offering their discretionary efforts to the benefit of the organization in the form of productivity and profitability (Consiglio et al., 2016). This study offered insights

related to differences among leaders with transformational, transactional, and passive-avoidant styles in perceived ability to provide social support for employees with high or low engagement who are dispersed geographically. This study complemented the literature review that showed that a relationship exists between leadership style and engagement. Leadership style also had a relationship with psychological needs and social support. Transformational leadership was shown to positively influence the meeting of psychological needs and providing social support in this study, including those employees who are not collocated with their leader but perceive their leader as more transformational than transactional or passive-avoidant.

Organizations are relying more on virtual teams for innovation and diversity of ideas (Gajendran & Joshi, 2012). Geographic dispersion has been shown to have a negative effect on performance and satisfaction, particularly if traditional hierarchal leadership styles (transformation, transactional) are utilized (Hoch & Kozlowski, 2014; Schweitzer & Duxbury, 2010). The employee's perception of the leader's ability to meet psychological needs and facilitate social support on a team is an important consideration in making connections with the drivers of engagement (Deci & Ryan, 2008). Research on leaders who have responsibility for forming a relationship with team members who are geographically dispersed has been scarce and application of LMX has received limited exploration in literature to date (Gajendran & Joshi, 2012; Goh & Wasko, 2012; Hoch & Kozlowski, 2014). The results of this study provided further support for the benefits of transformational leadership approaches. Future research should continue to explore the effects on employees who do not have regular face-to-face leader interactions with their leader and team to determine how they have their psychological and social support needs

met in the workplace, or if theses variables are important drivers of engagement to

employees of non-western cultures.

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Appendix A

IRB Approval Letter

GRAND CANYON
UNIVERSITY

GCU D-50 IRB Approval to Conduct Research

(IRB initiates form)

Instructions: This form must be signed prior to initiating data collection.

Learner Information

Learner Last Name	Edwards	Learner First Name	Karyn

GCU E-mail KEdwards9@my.gcu.edu

Title of Dissertation Proposal Comparison of Leadership Styles and Perceived Ability to meet the Psychological and Social Support nee

IRB Approval to Conduct Research

Protocol # 1000262-1

Office of Academic Research Dr. Cynthia Bainbridge   Signature *Dr. Cynthia Bainbridge* Date February 8, 2017

DocuSigned by:
063B81524FF044E

Grand Canyon University - College of Doctoral Studies

Appendix B

Informed Consent

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
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INFORMED CONSENT FORM (SOCIAL BEHAVIORAL) MINIMAL RISK SAMPLE   Comparison of Leadership Styles and Perceived Ability to meet the Psychological and Social Support needs of Employees Who Show High or Low Levels of Engagement
INTRODUCTION
The purpose of this form is to record your consent to participate in a research study.
RESEARCH
Karyn Edwards, a doctoral student at Grand Canyon University and Choice Associate has invited you to participate in a research study. You are receiving an invitation to participate voluntarily because your input is important.
STUDY PURPOSE
The workplace is changing, many employees work remotely on matrixed and cross-functional teams, which brings the benefit of great experiences. It also means that keeping talented people engaged is a constantly evolving target for organizations and leaders. Several research studies conducted have looked into the subject of leadership style and needs that employees have in the workplace to feel engaged. None have explored the added element of geographic dispersion (not working in the same physical location as your team or manager), particularly in the hospitality industry.
DESCRIPTION OF RESEARCH STUDY
If you decide to participate in this survey-based research study, partially funded by a grant from Grand Canyon University you will complete a survey with questions related to the areas mentioned above and you may skip questions that you do not wish to offer a response to.   If you say YES, then your participation will last for approximately 40-50 minutes in order to complete the survey. The survey will be offered to employees in identified work groups

both Phoenix, AZ and Rockville, MD. Approximately 500 employees will be participating in this study.

RISKS

There are no known risks from taking part in this study, but in any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS

Although the research may not directly benefit you, your participation in the research includes providing insights and information to this organization on leadership style, employee engagement and the present ability to meet psychological and social needs in the workplace.

NEW INFORMATION

If the researchers find new information during the study that would reasonably change your decision about participating, then they will provide this information to you.

CONFIDENTIALITY

All information obtained in this study is strictly confidential. The results of this research study may be used in reports, presentations, and publications, but the researcher will not identify you. In order to maintain the confidentiality of your records, Karyn Edwards will report all information in aggregate and will not track any identifiable information. The survey results will be collected using an online collection tool (Survey Monkey) and the responses will be secured and password protected; only the researcher will have access to the individual responses.

WITHDRAWL PRIVILEGE

Participation in this study is completely voluntary. It is ok for you to say no. Even if you say yes now, you are free to say no later and withdraw from the study at any time.

COSTS AND PAYMENTS

There is no payment for your participation in the study.

VOLUNTARY CONSENT

The information you provide is important. Neither ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮, Grand Canyon University or Karyn Edwards will know if you participated. In no way, are you be impacted by withdrawing as all information is anonymous.

Any questions you have concerning the research study or your participation in the study, before or after your consent, will be answered by Karyn Edwards▮▮▮▮▮▮▮▮▮▮ or email kedwards9@my.gcu.edu. If you have questions about your rights as a subject/participant in this research, you can contact the Chair of the Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804.

Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be given (offered) to you upon request.

By clicking the "YES" box below you are electronically signing and indicating that you consent to participate in this research study and agree to all of the above.

☐ Yes
☐ No

Note: If NO is chosen the survey will route to an opt-out page and the questions will not be displayed. If YES is chosen, the survey will route to begin the questions. This is noted for survey license purposes.

INVESTIGATOR'S STATEMENT

"I certify that I have explained to the above individual the nature and purpose, the potential benefits and possible risks associated with participation in this research study, have offered to answer any questions that have been raised."

These elements of Informed Consent conform to the Assurance given by Grand Canyon University to the Office for Human Research Protections to protect the rights of human subjects. I have provided electronically (offered) the subject/participant a copy of this consent document; a signed copy can be obtained by contacting kedwards9@my.gcu.edu or ▮▮▮▮▮▮▮▮▮.

Signature of Investigator   Date
2/6/2017

Appendix C

Copy of Instruments and Permissions Letters to Use the Instruments

This appendix includes permission correspondence and copies of the following survey instruments:

- Work & Well-being Survey (UWES 17)

- Work-Related Basic Psychological Need Satisfaction Scale (W-BNS)

- HSE Management Standards Indicator Tool (MSIT)

- Multifactor Leadership Questionnaire (MLQ05X)

From: Schaufeli, W.B. (Wilmar)
Sent: Sunday, June 26, 2016 7:39 AM
To: Karyn Edwards
Subject: Re: Request to Utilize (2002) Measurement of Engagement and Burnout scale

Dear Karyn,

Unfortunately, the copyright of the MBI is one by Mind Garden Inc. (http://www.mindgarden.com/117-maslach-burnout-inventory)

However, you may use the UWES freely as long as it is not for commercial, but exclusively for academic purposes. The UWES can be downloaded from my website (address below).

With kind regards,
Wilmar Schaufeli

Wilmar B. Schaufeli, PhD | Social and Organizational Psychology | P.O. Box 80.140 | 3508 TC Utrecht, The Netherlands |
Tel: (31) 30 253 3460 |Mobile: (31) 6514 75784 | Fax: (31) 30-253 7842 | Site: www.wilmarschaufeli.nl

Op 25 jun. 2016, om 02:31 heeft Karyn Edwards <karynjedwards@gmail.com> het

volgende geschreven:

WILMAR B. SCHAUFELI
Department of Psychology
Utrecht University
P.O. Box 80140
3508 TC Utrecht
The Netherlands
E-mail: W.Schaufeli@fss.uu.nl

June 24, 2016

Dear Dr. Schaufeli,

I am writing to request your written permission to utilize the Measurement of
Engagement in Burnout as an instrument for my dissertation research. My concentration
of study is in organizational leadership, and more specifically, the style of leadership and
the influence of meeting the psychological and emotional needs of employees. I am
excited to undertake this next step in my studies.

If you can supply your written approval or questions to me at your earliest convenience, I
would appreciate it.

Reference
Schaufeli, W., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The
measurement of engagement and burnout: A two sample confirmatory factor analytic
approach. Journal of Happiness Studies, 3, 71–92. doi:10.1023/A:1015630930326

Sincerely,

Karyn Edwards
Grand Canyon University
Candidate for Doctor of Psychology
Karynjedwards@gmail.com

Conditions for Use UWES

Instructions
From website: **http://www.wilmarschaufeli.nl/downloads/test-manuals/**

Notice for potential users of the UWES and the DUWAS

You are welcomed to use both tests provided that you agree to the following two conditions:

The use is for non-commercial educational or research purposes only. This means that no one is charging anyone a fee.

2. You agree to share some of your data, detailed below, with the authors. We will add these data to our international database and use them only for the purpose of further validating the UWES (e.g., updating norms, assessing cross-national equivalence).

Data to be shared:
For each sample, the raw test-scores, age, gender, and (if available) occupation. Please adhere to the original answering format and sequential order of the items.
For each sample a brief narrative description of its size, occupation(s) covered, language, and country.

Please send data to: w.schaufeli@uu.nl. Preferably the raw data file should be in SPSS or EXCEL format.

No explicit, personal permission is required — and will be given — as long as both previously mentioned conditions are fulfilled.

By continuing to the TEST FORMS you agree with the above statement.

Copy of Instrument-English (Long)
http://www.wilmarschaufeli.nl/after-agreeing/

Copy of Instrument Work & Well-being Survey (UWES) ©

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Never	Almost Never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. _____ At my work, I feel bursting with energy
2. _____ I find the work that I do full of meaning and purpose
3. _____ Time flies when I'm working
4. _____ At my job, I feel strong and vigorous
5. _____ I am enthusiastic about my job
6. _____ When I am working, I forget everything else around me
7. _____ My job inspires me
8. _____ When I get up in the morning, I feel like going to work
9. _____ I feel happy when I am working intensely
10. _____ I am proud of the work that I do
11. _____ I am immersed in my work
12. _____ I can continue working for very long periods at a time
13. _____ To me, my job is challenging
14. _____ I get carried away when I'm working
15. _____ At my job, I am very resilient, mentally
16. _____ It is difficult to detach myself from my job
17. _____ At my work I always persevere, even when things do not go well

Work-Related Basic Psychological Need Satisfaction Scale (WBNS)

From: Anja Van den Broeck

Sent: Sunday, June 26, 2016 11:38 PM

To: Karyn Edwards

Subject: Re: Request to use Work-Related Basic Psychological Need Satisfaction

Scale

Dear Karyn,

Thanks for the interest in our work. You can find the scale, the conditions upon

which it can be used and a recent meta-analysis in attach! Good luck with your

research! It sounds really interesting!

 Cheers,

Anja

On Sat, Jun 25, 2016 at 6:15 PM, Karyn Edwards <karynjedwards@gmail.com> wrote:

Anja Van den Broeck
University of Leuven
Tiensestraat 102,3000
Leuven, Belgium
anja.vandenbroeck@psy.kuleuven.t

June 25, 2016

Dear Dr. Van den Broeck,

I am writing to request your written permission to utilize the Work-Related Basic Psychological Need Satisfaction Scale as an instrument for my dissertation research. My concentration of study is in organizational leadership, and more specifically, the style of leadership and the influence of meeting the psychological and emotional needs of employees. I am excited to undertake this next step in my studies.

If you can supply your written approval or questions to me at your earliest convenience, I would certainly appreciate it.

Reference

Van den Broeck, A., Vansteenkiste, M., DeWitte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. Journal of Occupational & Organizational Psychology, 83(4), 981-1002. doi:10.1348/096317909X481382

If you have any questions, please let me know.

Sincerely,

Karyn Edwards
Grand Canyon University
Candidate for Doctor of Psychology
Karynjedwards@gmail.com

Conditions of Use for Work-related Basic Need Satisfaction Scale

Information about the validity of this scale can be found in:

Van den Broeck, A., Vansteenkiste, M., DeWitte, H., Soenens, B. & Lens, W. (in press). Capturing Autonomy, Competence and Relatedness at Work: Construction and Initial Validation of the Work-related Basic Need Satisfaction Scale. Journal of Occupational and Organizational Psychology.

You are welcomed to use the W-BNS provided that you agree to the following two conditions:

1. The use is for non-commercial educational or research purposes only.
2. You agree to share some of your data, detailed below, with the authors. These data will be used to further validate and shorten the scale and calculate norms.

* Data to be shared:
For each sample, the translation (if necessary), raw test-scores, age, gender, and (if available) occupation. Please adhere to the original answering format and sequential order of the items. It would be helpful if you could also include for each sample a brief narrative description of its size, occupation(s) covered, language, country and how the data was collected.
* Please send data to: vandenbroeck.anja@gmail.com, preferably in SPSS or EXCEL format.
By using the W-BNS you agree with the above statement.

Copy of Instrument W-BNS

The following statements aim to tap your personal experiences at work. Would you please indicate in which degree you agree with these statements? You can indicate the most suitable number between 1 (totally disagree) and 5 (totally agree).

1	2	3	4	5
Totally disagree	Disagree	Somewhat disagree / somewhat agree	Agree	Totally agree

Dutch (original)	English	French
Autonomy Satisfaction		
Ik heb het gevoel dat ik mezelf kan zijn in mijn job	I feel like I can be myself at my job.	J'ai le sentiment de pouvoir être moi-même dans mon travail
Op mijn werk heb ik vaak het gevoel dat ik moet doen wat anderen mij bevelen.	At work, I often feel like I have to follow other people's commands.*	Au travail, j'ai souvent l'impression de devoir suivre les ordres des autres
Als ik mocht kiezen, dan zou ik mijn werk anders aanpakken	If I could choose, I would do things at work differently.*	Si j'avais le choix, je m'y prendrais autrement au travail
Mijn taken op het werk stemmen overeen met wat ik echt wil doen	The tasks I have to do at work are in line with what I really want to do.	Mes tâches au travail correspondent à ce que je veux vraiment faire
Ik voel me vrij mijn werk te doen zoals ik denk dat het goed is	I feel free to do my job the way I think it could best be done.	Je me sens libre de faire mon travail tel que je l'entends.
Op mijn werk, voel ik me gedwongen dingen te doen die ik niet wil doen	In my job, I feel forced to do things I do not want to do.*	A mon travail, je me sens forcé(e) de faire des choses que je ne veux pas faire.

Competence Satisfaction		
Ik voel me niet echt competent in mijn job.	I don't really feel competent in my job.*	Je ne me sens pas vraiment compétent(e) dans mon travail.
Ik heb de taken op mijn werk goed onder de knie	I really master my tasks at my job.	Je maîtrise bien les tâches à mon travail
Ik voel me bekwaam in mijn werk	I feel competent at my job.	Je me sens capable dans mon travail.
Ik twijfel eraan of ik mijn werk goed kan uitvoeren	I doubt whether I am able to execute my job properly.*	Je doute que je sois capable de bien réaliser mon travail
Ik ben goed in mijn job	I am good at the things I do in my job.	Je suis bon dans les choses que j'ai a faire dans mon travail.

Ik heb het gevoel dat ik ook de moeilijke taken op mijn werk tot een goed einde kan brengen	I have the feeling that I can even accomplish the most difficult tasks at work.	J'ai le sentiment de pouvoir accomplir même les tâches les plus difficiles à mon travail
Relatedness Satisfaction		
Ik voel niet echt een band met de andere mensen op mijn werk	I don't really feel connected with other people at my job.*	Dans mon travail, je ne me sens pas vraiment de lien avec les autres personnes à mon travail.
Ik voel me een deel van een groep op het werk	At work, I feel part of a group.	Au travail, j'ai le sentiment de faire partie d'un groupe
Ik ga niet echt met de andere mensen op mijn werk om	I don't really mix with other people at my job.*	A mon travail, je n'ai pas vraiment de contact avec les autres.
Ik kan met anderen op het werk praten over wat ik echt belangrijk vind	At work, I can talk with people about things that really matter to me.	Dans mon travail, je peux parler avec d'autres personnes de choses qui sont réellement importantes pour moi.
Ik voel me vaak alleen als we onder collega's zijn	I often feel alone when I am with my colleagues.*	Je me sens souvent seul lorsque nous sommes entre collègues.
De mensen op mijn werk zijn echte vrienden	Some people I work with are close friends of mine.	Certaines personnes avec qui je travaille sont de vrais amis

HSE Management Standards Indicator Tool (MSIT) Open License

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See also

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Copy of Instrument HSE Management Standards Indicator Tool (MSIT)

<u>Instructions</u>: It is recognised that working conditions affect worker well-being. Your responses to the questions below will help us determine our working conditions now, and enable us to monitor future improvements. In order for us to compare the current situation with past or future situations, it is important that your responses reflect your work in the last six months.

		Never	Seldom	Sometimes	Often	Always
1	I am clear what is expected of me at work	1	2	3	4	5
2	I can decide when to take a break	1	2	3	4	5
3	Different groups at work demand things from me that are hard to combine	5	4	3	2	1
4	I know how to go about getting my job done	1	2	3	4	5
5	I am subject to personal harassment in the form of unkind words or behaviour	5	4	3	2	1
6	I have unachievable deadlines	5	4	3	2	1
7	If work gets difficult, my colleagues will help me	1	2	3	4	5
8	I am given supportive feedback on the work I do	1	2	3	4	5
9	I have to work very intensively	5	4	3	2	1
10	I have a say in my own work speed	1	2	3	4	5
11	I am clear what my duties and responsibilities are	1	2	3	4	5
12	I have to neglect some tasks because I have too much to do	5	4	3	2	1
13	I am clear about the goals and objectives for my department	1	2	3	4	5
14	There is friction or anger between colleagues	5	4	3	2	1
15	I have a choice in deciding how I do my work	1	2	3	4	5
16	I am unable to take sufficient breaks	5	4	3	2	1
17	I understand how my work fits into the overall aim of the organisation	1	2	3	4	5
18	I am pressured to work long hours	5	4	3	2	1
19	I have a choice in deciding what I do at work	1	2	3	4	5

		Never	Seldom	Sometimes	Often	Always
20	I have to work very fast	☐5	☐4	☐3	☐2	☐1
21	I am subject to bullying at work	☐5	☐4	☐3	☐2	☐1
22	I have unrealistic time pressures	☐5	☐4	☐3	☐2	☐1
23	I can rely on my line manager to help me out with a work problem	☐1	☐2	☐3	☐4	☐5

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
24	I get help and support I need from colleagues	☐1	☐2	☐3	☐4	☐5
25	I have some say over the way I work	☐1	☐2	☐3	☐4	☐5
26	I have sufficient opportunities to question managers about change at work	☐1	☐2	☐3	☐4	☐5
27	I receive the respect at work I deserve from my colleagues	☐1	☐2	☐3	☐4	☐5
28	Staff are always consulted about change at work	☐1	☐2	☐3	☐4	☐5
29	I can talk to my line manager about something that has upset or annoyed me about work	☐1	☐2	☐3	☐4	☐5
30	My working time can be flexible	☐1	☐2	☐3	☐4	☐5
31	My colleagues are willing to listen to my work-related problems	☐1	☐2	☐3	☐4	☐5
32	When changes are made at work, I am clear how they will work out in practice	☐1	☐2	☐3	☐4	☐5
33	I am supported through emotionally demanding work	☐1	☐2	☐3	☐4	☐5
34	Relationships at work are strained	☐5	☐4	☐3	☐2	☐1
35	My line manager encourages me at work	☐1	☐2	☐3	☐4	☐5

Copy of the Multifactor Leadership Questionnaire (MLQ-5X): Manual & Review

Note. Per the copyright permission the sample questions of the MLQ can only be included in the proposal for the IRB if needed, the final dissertation document may not include a sample. Unblocked sample copies are available if required for the IRB.

Multifactor Leadership Questionnaire™

Manual
& Review Copy
Third Edition

Bruce J. Avolio and Bernard M. Bass

Contributions by:
Dr. Fred Walumbwa and Weichun Zhu

mind garden
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www.mindgarden.com

OPTIONS FOR ADMINISTERING THIS INSTRUMENT

*Most Mind Garden manuals contain a copy of the instrument marked "Sample" to communicate that it should not be reproduced or used. It is for review only. When you are ready to actually begin using the instrument in your research, you will need to purchase a **License to Reproduce/Administer**. This allows you to make use of the instrument either via paper & pencil (Reproduce) or electronically (Administer).*

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There are several options for administering this instrument:

Option 1 Use our Transform Online Survey + Scoring system

Let Mind Garden do the survey creation, data collection + scoring for you. Our Transform system* allows you to enter the names and email adresses of your participants – up to the purchased number – and we will administer the instrument and provide you with a csv file including raw scores (by scale). We can add demographics and other survey instruments on a fee basis.

Option 2 Conduct a paper and pencil survey. You will receive one copy along with a license to reproduce the instrument.

Order a PDF, electronic delivery (no additional shipping costs). Shortly after ordering, you will receive login and retrieval instructions.

Paper by mail (FedEx delivery costs apply)

Option 3 Use an outside online survey company. You will receive one copy along with a license to administer the instrument.

Order a PDF, re-type and format your own survey, then calculate your own scores
Visit this link for Mind Garden requirements for use of outside online survey website:
http://www.mindgarden.com/how.htm#instrumentweb

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www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her research:

Instrument: *Multifactor Leadership Questionnaire*

Authors: *Bruce Avolio and Bernard Bass*

Copyright: *1995 by Bruce Avolio and Bernard Bass*

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

<u>Appendix C:</u>
<u>Leader Form, Rater Form, and Scoring Key (Partial)</u>

MLQ

Multifactor Leadership Questionnaire

Leader Form, Rater Form, and Scoring Key (Partial)
for the MLQ (Form 5x-Short)

---

by Bernard Bass and Bruce Avolio

Note to Masters and Doctoral Students:
You may insert the following SAMPLE copy of the instrument
in your IRB proposal if necessary.
You may NOT insert a complete copy of the instrument
in your Thesis or Dissertation!!!
See Mind Garden Sample item letter for details.

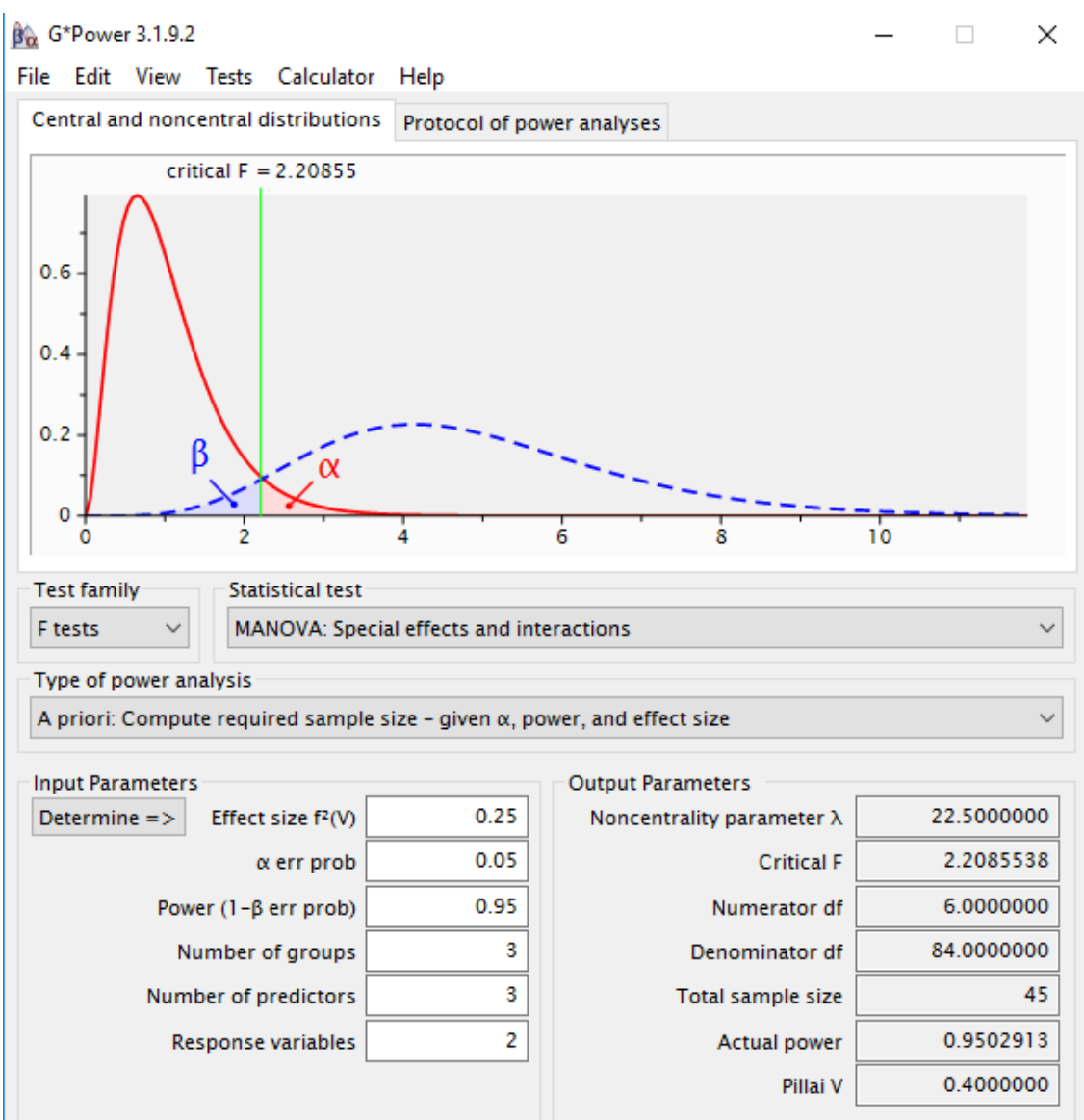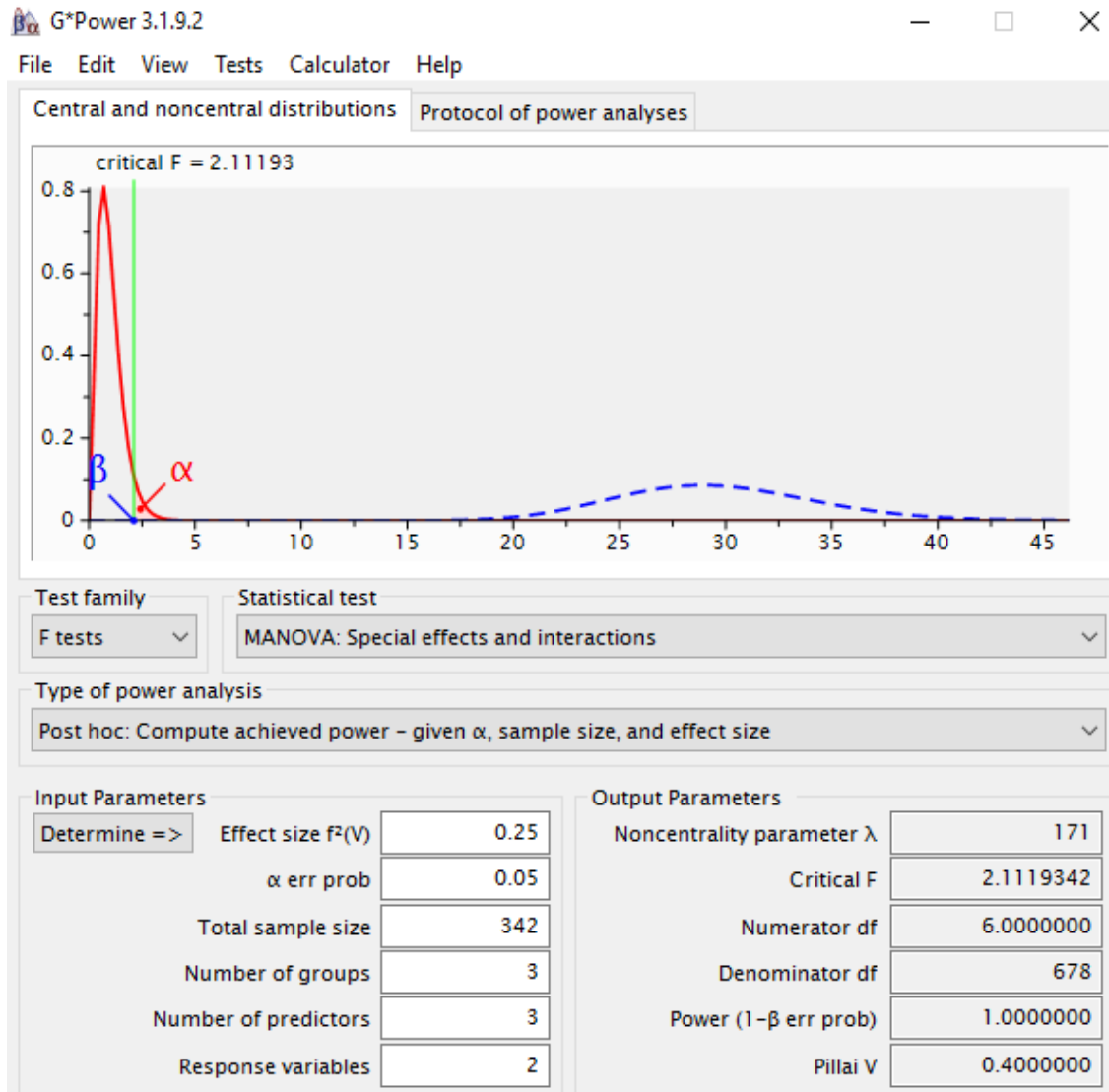Published by **Mind Garden**
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Appendix D

Site Permission Letter

On file with Grand Canyon University Institutional Review Board.

Appendix E

G*Power Priori/Post Hoc

Appendix F

Sample Size, Means and Standard Deviation Arranged by Group

Table F1

Sample Size, Means and Standard Deviation Arranged by Groups

	IV (1) Collocation	IV (2) Engagement	IV (3) Leadership Style	Mean	Std. Deviation	*N*
DV (1) Psy Needs	Yes	Low	More Transformational	2.88	0.197	10
			More Transactional	2.70	0.300	9
			More Passive-Avoidant	2.91	0.098	8
			Total	2.83	0.229	27
		High	More Transformational	3.83	0.381	195
			More Transactional	3.64	0.261	32
			More Passive-Avoidant	3.56	0.362	14
			Total	3.79	0.374	241
		Total	More Transformational	3.78	0.425	205
			More Transactional	3.43	0.474	41
			More Passive-Avoidant	3.32	0.433	22
			Total	3.69	0.463	268
	No	Low	More Transformational	2.85	0.289	2
			Total	2.85	0.289	2
		High	More Transformational	3.90	0.347	52
			More Transactional	3.52	0.341	8
			More Passive-Avoidant	3.65	0.47	3

				Mean	Std. Deviation	N
			Total	3.84	0.370	63
		Total	More Transformational	3.86	0.396	54
			More Transactional	3.52	0.341	8
			More Passive-Avoidant	3.65	0.47	3
			Total	3.81	0.404	65
	Total	Low	More Transformational	2.88	0.199	12
			More Transactional	2.70	0.300	9
			More Passive-Avoidant	2.91	0.098	8
			Total	2.83	0.227	29
		High	More Transformational	3.84	0.374	247
			More Transactional	3.61	0.278	40
			More Passive-Avoidant	3.57	0.368	17
			Total	3.80	0.374	304
		Total	More Transformational	3.80	0.420	259
			More Transactional	3.45	0.453	49
			More Passive-Avoidant	3.36	0.440	25
			Total	3.71	0.454	333

	IV (1) Collocation	IV (2) Engagement	IV (3) Leadership Style	Mean	Std. Deviation	N
DV (2) Social Support	Yes	Low	More Transformational	3.48	0.315	10
			More Transactional	2.71	0.749	9
			More Passive-Avoidant	1.87	0.604	8
			Total	2.74	0.863	27

High		More Transformational	4.12	0.501	195
		More Transactional	3.7	0.592	32
		More Passive-Avoidant	2.8	0.661	14
		Total	3.98	0.616	241
	Total	More Transformational	4.08	0.512	205
		More Transactional	3.48	0.745	41
		More Passive-Avoidant	2.46	0.774	22
		Total	3.86	0.744	268
No	Low	More Transformational	3.7	0.989	2
		Total	3.7	0.989	2
	High	More Transformational	4.08	0.529	52
		More Transactional	3.32	0.762	8
		More Passive-Avoidant	2.66	1.101	3
		Total	3.92	0.693	63
	Total	More Transformational	4.07	0.541	54
		More Transactional	3.32	0.762	8
		More Passive-Avoidant	2.66	1.101	3
		Total	3.91	0.694	65
Total	Low	More Transformational	3.51	0.421	12
		More Transactional	2.71	0.749	9
		More Passive-Avoidant	1.87	0.604	8
		Total	2.81	0.887	29

High	More Transformational	4.11	0.506	247
	More Transactional	3.62	0.637	40
	More Passive-Avoidant	2.77	0.713	17
	Total	3.97	0.632	304
Total	More Transformational	4.08	0.517	259
	More Transactional	3.45	0.742	49
	More Passive-Avoidant	2.48	0.793	25
	Total	3.87	0.734	333