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Examining Follower Perceptions of the Relationships Between Public Sector Leadership Behavior and Personality Traits

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EXAMINING FOLLOWER PERCEPTIONS OF THE RELATIONSHIPS BETWEEN PUBLIC SECTOR LEADERSHIP BEHAVIOR AND PERSONALITY TRAITS

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Research Focus. To fill a gap of leadership research in the public sector, conducted in a municipal government department, in a southwestern United States city of over 1,000,000 residents, this quantitative survey research examined the relationships between 66 observer ratings (response rate of 46% from a sample of 143 participants) of a department director's level of the Big Five personality traits, measured by the NEO Five-Factor Inventory-3 (NEO-FFI-3), and transformational leadership as measured by the Multifactor Leadership Questionnaire 5X (MLQ 5X). Demographic data was collected to examine potential relationships between the NEO-FFI-3 and MLQ 5x ratings. To compare the self-other ratings, the department director also completed the NEO-FFI-3, the MLQ 5X, and the demographic questionnaire. The research found moderate self-other agreement between the department director's self and observer ratings of the NEO-FFI-3 and the MLQ 5X. While no significant correlations were found between the observer ratings of the NEO-FFI-3 and the MLQ 5X, significant correlations were found between a number of observer demographics and their observer ratings of the NEO-FFI-3 and some of the observer demographic variables predicted some of their ratings of the NEO-FFI-3 constructs. Measured by Cronbach's alpha coefficients, the NEO-FFI-3 and the MLQ 5X both proved to be reliable instruments within this study.

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Chapter I: Leadership and Personality Traits

Context of the Study

In today's turbulent organizational (Cameron, 2003; Edwards, 2009) and economic (Donaldson, 2012) climate, leadership's decisions can be the determining factor between organizational success and organizational disarray (Hayward, 2011). The notion has been suggested that a positive correlation exists between leadership and organizational performance (Meindl, Ehrlich, & Dukerich, 1985); simply stated, where a high level of leadership exists within an organization, the organization performs well. For purposes of this study, it is necessary to quickly discuss the difference between leadership and management. Leadership involves influencing followers through persuasive and effective communication in working towards an organization's mission and objectives (Winston & Patterson, 2006).

Unlike leadership, management seeks to complete organizational tasks through a more formal process, such as legitimate power, that allows managers to direct followers to complete given tasks (Dansereau, Graen, & Haga, 1975). Those who solely rely upon their power to move others are not leaders (Hogan, Gordon, & Hogan, 1994). Instead, Dansereau, Graen, and Haga (1975) postulated that leaders do not simply rely upon formal power but other methods involving relationships with their followers to influence the behavior of followers to complete tasks. In contrast to focusing on follower-leader relationships, reliance upon formal power to influence followers would be classified as transactional leadership while the absence of a leader or the presence of a non-leader would be labeled as laissez-faire leadership (Kirkbride, 2006).

As leaders seek to influence the behavior of their followers, concepts such as the leader-member exchange or LMX (Dansereau et al., 1975) and charismatic leadership (Jacobsen, 2001) have provided examples of leadership models that have evolved over the past several decades to

explain how leaders influence their followers. Leaders who have subscribed to the LMX model have relied upon their interaction with members within in-groups and out-groups to complete organizational objectives and reach organizational goals (Dansereau et al., 1975). Research on the LMX model has linked higher levels of LMX in organizations with better follower performance partly because of the higher levels of trust between the leader and the subordinate (Chen, Lam, & Zhong, 2007).

Similar to the interactive role of leaders who have applied the LMX model, charismatic leaders work closely with their followers in social settings to allow their followers to witness their charisma (Conger, Kanungo, & Menon, 2000). Studies of charismatic leadership have found a positive relationship between a leader's charisma and organizational performance (Waldman, Javidan, & Varella, 2004) partially based on a perceived concern of each follower by his or her leader (Conger et al., 2000). To gauge charisma of a leader, researchers have used tools such as the Conger-Kanungo model of charismatic leadership, which measures charismatic leadership, "…based on follower perception of their leader's behavior" (Conger et al., 2000, p. 748). Furthermore, leaders should understand the high likelihood of a correlation between employee perception of leader behavior and employee job performance (Bono, Hooper, & Yoon, 2012).

Transformational leadership. Rooted in charismatic leadership (Bottomley, Burgess, & Fox, 2014), transformational leadership, which was first derived by Burns (1978), a political scientist (Wright & Pandey, 2009), and later refined by Bass (1985), posited that transformational leaders, through the constructs of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, influence followers to reach levels of high achievement while sacrificing self-interest for the attainment of organizational goals.

Transformational leaders can successfully navigate turbulent organizational environments through a combination of articulating clear visions for their organizations and working closely with followers to strengthen employee commitment to the organization which in turn leads to effective implementation of organizational change (Kirkbride, 2006).

As previously mentioned, transformational leadership consists of the constructs of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, Avolio, Jung, & Berson, 2003). Leaders who demonstrate a high level of idealized influence would role model behaviors high in integrity and be seen as charismatic; inspirational motivation behaviors motivate followers to high levels of performance through defining and being optimistic for organizational visions or goals; intellectual stimulation entails a leader coaching and empowering followers to derive solutions on their own which leads to a heightened level of follower ability; and individualized consideration refers to a leader gaining an individual understanding of his or her followers' needs and abilities and then tailoring work assignments or coaching based upon those needs and abilities (Kirkbride, 2006).

Based on the four constructs of transformational leadership, the Multifactor Leadership Questionnaire (MLQ) was developed to provide a leader's measures on the constructs of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 2004). The MLQ 5X, which is the latest version of the 45-item assessment and takes approximately 15 minutes to complete, measures leadership as transformational, transactional, or laissez-faire (Bass & Avolio, 2004) based on a five-point Likert scale of 0 (not at all) to 4 (frequently, if not always) (Van Eeden, Cilliers, & Van Deventer, 2008). According to the MLQ 5X, leaders who obtain a rating of 3 (fairly often) are said to be effective transformational leaders, ratings between 1-2 indicate transactional leaders

who lead through follower reward or punishment, and ratings of 0-1 indicate laissez-faire leadership or the absence of leadership (Van Eeden et al., 2004).

Regardless of the leadership model one may utilize or how leadership is measured, one's perception is the basis of assessing organizational (Chang, Rosen, & Levy, 2009) and leader (Cho & Dansereau, 2010) behavior. In examining leader behavior in organizations, literature has suggested that, "…there is a body of theory focusing on the mental processes and characteristics of individuals that guide and govern their behavior" (Ehrenreich, 1997, p. 38). Just as there are tools to measure the effectiveness of leadership theories and the leaders applying those theories, what is traditionally recognized as personality theory focuses on individual differences that can be measured and searches for generalizable versus unique traits displayed by individuals (Ehrenreich, 1997).

Big Five personality traits. Under the broad umbrella of personality theory, research has suggested an existing debate on the exact number of identified personality constructs and their exact definitions (Barrick & Mount, 1991). However, over time, the list has been narrowed to five major personality traits known as the Big Five personality traits or model or the five-factor model (FFM) (Oh, Wang, & Mount, 2011) and include the traits of emotional stability (or neuroticism), extraversion, openness to experience, agreeableness, and conscientiousness (Barrick & Mount). Judge, Bono, Ilies, and Gerhardt (2002) defined the Big Five personality traits as follows:

> Neuroticism represents the tendency to exhibit poor emotional adjustment and experience negative affects, such as anxiety, insecurity, and hostility. Extraversion represents the tendency to be sociable, assertive, active, and to experience positive affects, such as energy and zeal. Openness to Experience is the disposition to be imaginative, nonconforming, unconventional, and autonomous. Agreeableness is the tendency to be trusting, compliant, caring, and gentle. Conscientiousness is comprised of two related facets: achievement and dependability. (p. 767)

Although the Big Five model did not come to the forefront of scholarly discussions as a factor for understanding organizational behavior until the 1980s, it can be argued that roots of the model date back to 1932, through discussions started by William McDougall (Digman, 1990). However, the formulation of the Big Five personality traits is credited to the work of Tupes and Christal in 1961 (Goldberg, 1992; Tupes & Christal, 1992).

Measuring the Big Five personality traits. With the Big Five personality traits identified and defined, one may begin to question how to measure those traits. There are a number of tests, including the 16 Personality Factor Inventory (16 PF) (Cattell, Cattell, & Cattell, 1993), the International Personality Item Pool (IPIP) (Goldberg, 1999), and the NEO-Personality Inventory (NEO-PI) (McCrae & Costa, 2007; McCrae, Costa, & Martin, 2005), that measure one's rankings of the Big Five personality traits. Results of personality assessments, such as the 16 PF and the NEO-PI, can be generalizable regardless of demographic variables such as age, gender, religion, and country of origin (McKenna, Shelton, & Darling, 2002). While personality assessments such as the 16 PF and the NEO-PI tests have been widely used, research has suggested that no personality test can truly measure every detail about a person's personality (Johnson, 1997).

As it may be important to capture as many details as possible about one's personality depending on the context for which the personality data is being captured, in today's fast-paced world, information is often needed, wanted, or even expected rather quickly. A researcher or analyst attempting to obtain personality trait data must note that robust trait assessments such as the 16 PF contains 185 multiple-choice questions (Cattell et al., 1993) and can take between 40-60 minutes to complete (Schuerger, 1992) and the Revised NEO-PI (NEO-PI-R) contains 240 questions and can take 35 minutes to administer (Costa & McCrae, 1992).

For those researchers or practitioners who may not necessarily need, want, or have the time (Credé, Harms, Niehorster, & Gaye-Valentine, 2012) to work with the lengthiness of personality tests such as the 16 PF or the NEO-PI-R, there do exist shorter inventories such as the NEO-FFI-3 (McCrae & Costa, 2007). The NEO-PI tools have proven their reliability over numerous decades and across multiple contexts and cultures but in 2005, McCrae and Costa developed the NEO-PI-3. Evolved from the 240-item NEO-PI-3, the NEO-FFI-3 is a 60-item, condensed version of the NEO-PI-3, which utilizes a five-point Likert scale to score the five personality domains of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 2007). While the NEO-FFI-3 was only intended to provide a concise snapshot of one's scores of the five personality domains, it takes approximately seven minutes to administer (Marjanovic, Holden, Struthers, Cribbie, & Greenglass, 2015) and has reported internal consistencies or Cronbach's alpha, scale item-level scores between the range of .72 to .88 on both Form S (self-reports) and Form R (observer ratings) for adolescents and adults (McCrae & Costa, 2007).

Self-reporting vs. observer ratings. Assuming that no assessment can ever completely depict a person's personality, there are methods to increase the reliability and validity of personality test results. Whether forecasting for leadership potential (Hogan et al., 1994) or for providing managerial feedback (Ostroff, Atwater, & Feinberg, 2004), the use of multiple raters (Oh et al., 2011; Viswesvaran, Ones, & Schmidt, 1996) to include both self-reports and observer ratings, is one method to increase the reliability and validity of personality assessments (Allik et al., 2010b). In the arena of personality assessment, a self-report is one in which a subject rates him or herself while an observer rating is one in which a peer rates the subject (Hewstone, Judd, & Sharp, 2011).

Utilized in many organizations, the 360-degree performance rating provides an example of observer ratings ascertained not only from one's supervisor but also from one's peers and subordinates (Oh & Berry, 2009). For rating methods such as the 360-degree performance rating, the key concept is that multiple raters can provide a more holistic picture of the subject being rated and if using quantitative tools for measurement such as the NEO-FFI-3, rating scores that can be averaged which may increase reliability and construct validity (Schmidt, Shaffer, & Oh, 2008). Ultimately, literature has suggested that self-reports and observer ratings should be used to "complement" (Hewstone et al., 2011, p. 600) each other.

Statement of the Problem

Given the complexities of measuring personality traits and despite the vast amount of research on the broad topics of leadership and personality traits, only a small portion of the research has been focused in the public sector (Van Wart, 2003). Therefore, the gap that this study intended to fill was to investigate follower perception of the relationship between public sector leadership personality traits and leadership behavior. Van Wart (2003) suggested that research in public sector leadership, which historically has had a smaller pool of researchers than possible topics, has not yielded literature focused solely on the environment and constraints specific to public sector leaders. It has been argued that the existence of external and political forces, which could severely influence or void a public sector leader's decision making (Cook, 1998), has resulted in some researchers seeing no value in researching leadership in the public sector and this has contributed to the limited leadership research in the public sector (Van Wart, 2003).

Purpose of the Study

To add to the leadership research in the public sector, this research was conducted in the setting of a large municipal government department, which recently underwent a major re-organization, in a major city in the southwestern United States. The primary purpose of this study was to investigate possible relationships between Big Five personality trait data and leadership behavior of a department director in a large municipality in Texas. The data examined in this study was acquired through subordinate, observer ratings of a public sector department director rated based upon the NEO-FFI-3 and the MLQ 5X. Additionally, the researcher obtained a self-report of the NEO-FFI-3 and the MLQ 5X from the department director to discuss and compare to the subordinate-submitted observer reports.

In addition to the examination of relationships between the NEO-FFI-3 and the MLQ 5X, the secondary purpose of this study was to examine the relationships between demographic variables, to include education level, gender, years worked for the director, and position within the organization and the observer ratings of the department director. The findings of this study were intended to contribute to academic literature regarding personality traits and leadership, provide follower insight on the perceptions of leadership's personality traits and leadership behavior, and add to the limited research of public sector leadership.

Research Questions

The following research questions guided this study:

1. What are the relationships between a department director's observer-reported assessment of Big Five personality traits measured by the NEO-FFI-3 and transformational leadership measured by the MLQ 5X?

2. What are the relationships between demographic variables and the self and observer reports of the NEO-FFI-3 and MLQ 5X?
3. Were demographic variables of the raters predictors of their NEO-FFI-3 and MLQ 5X observer ratings of the department director?

The following hypotheses were used for this study:

Ha1: The respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization will provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Ha2: Positive correlations will be found between transformational leadership and the Big Five personality traits.

Overview of Methodology

Utilizing the NEO-FFI-3, the MLQ 5X, and a researcher-designed demographic questionnaire, this quantitative survey research examined the possible correlations between observer reports, assessing a public sector leader, on the Big Five personality traits compared to the ratings on the MLQ 5X. The researcher-designed demographic questionnaire was used to collect quantitative data to examine the potential relationships between demographics and the findings of the observer reports of the Big Five personality traits measured by the NEO-FFI-3 traits and the transformational leadership constructs measured by the MLQ 5X.

To either accept or reject the hypotheses guiding this research, a quantitative survey methodology was used within this study. While the researcher had an intrinsic interest in the topic, a cross-sectional survey design (Creswell, 2008) approach was taken so that by understanding perceptions of leadership personality traits and leadership behavior, we can understand the bigger picture of leadership perception from the follower perspective.

Using a survey design for this study, the researcher administered a paper copy of the NEO-FFI-3 assessment, the MLQ 5X, and the demographic questionnaire to a population of approximately 143 subordinates who either directly or indirectly report to the director of a large, public sector department, consisting of over 800 employees. Through convenience sampling, the researcher collected 66 observer reports that rated the department director on the measures of the NEO-FFI-3 and MLQ 5X. At the time of administration of the NEO-FFI-3 and MLQ 5X to the department director's subordinates, the researcher also gathered the demographic data previously discussed.

Concurrent with the collection of the observer data, the researcher administered paper copies of the NEO-FFI-3, MLQ 5X, and demographic questionnaire to the department director to collect self-reported data. As previously discussed, the self-reported data was not used for statistically significant data analysis but instead for comparison to subordinate or observer reports and for purposes of discussion.

Significance of the Study

Results from this quantitative research study will add to the existing literature of personality traits as well as to leadership in the public sector. While there is a significant amount of literature focused on personality traits, research has indicated that there is minimal public sector leadership literature and even less research on personality traits in public sector leadership.

While adding to existing research in the fields of personality traits and public sector leadership, it is anticipated those who would specifically benefit from this research would include:

1. Leaders in the public, private, and non-profit sectors;
2. Followers in the public, private, and non-profit sectors;

3. Leadership/managerial consultants.

The researcher anticipated the populations above to benefit from this research as there is minimal leadership research specifically pertaining to public sector leadership and even fewer studies on the perception of leadership traits in the public sector. Public sector leaders will be provided insight into the psyche of public sector followers and might become better leaders because of this insight. Additionally, while this study was conducted in a public sector setting, the literature has already revealed that there are similarities in leadership across the public, private, and non-profit sectors; as such, this research could also be applied in each of the other sectors.

Although this research was follower-focused, public sector leaders could also benefit from this research by having a better understanding of how public sector leaders may or may not be pre-judged based upon a preconceived notion of what makes a good leader. Lastly, while the notion of investigating self versus observer ratings is not a new concept, this research could provide a basis for leadership or managerial consultants working on organizational development or behavior initiatives in the public sector if they were to be working on projects involving leader-follower disconnect issues.

Theoretical Framework

In adding to the existing literature of leadership in the public sector, trait theory and transformational leadership served as the theoretical frameworks for this study. Trait theory, which is credited to the early work of Mischel (1968) and Peterson (1968), has suggested that individuals consistently exhibit measurable personality traits, such as shyness or aggressiveness, across various situations and that one's personality traits are a major determinant in how "…an individual reacts to and interacts with others" (Robbins & Judge, 2009, p. 105). Trait theory,

which has been a dominant concept in personality literature in the last several decades (Caprara, Vecchione, Barbaranelli, & Alessandri, 2013), has also supported the notion that personality traits are not only constant in various situations but also over time (Mischel & Shoda, 1995).

Similar to trait theory, transformational leadership is a concept that has evolved over time. As previously mentioned, transformational leadership (Bass, 1985; Burns, 1978) evolved from studies of charismatic leadership (Bottomley et al., 2014) and today, posits that transformational leaders elicit in their followers a sense of organizational pride, a belief in performance beyond expectations, and a desire to strive for the success of the organization in-lieu of personal success. Transformation leaders motivate and are measured through the constructs of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985).

Limitations of Research

Limitations of this research include:

1. As this study was conducted in a specific site, the findings may not be generalizable to the larger population;
2. The population studied was from a council-manager form of government; results may have been different in another form of government;
3. The research was conducted in a southwest city in the United States; results may have been different in another part of the United States or in another country;
4. Due to the time and context of this quantitative study, results may have been different depending factors such as when in the budget cycle the study was completed or if the organization was prosperous or under a stressful economic conditions.

Delimitations of Research

This study was conducted under the following delimitations:

1. The survey data came only from one department in a large organization; results could have been different if the study was conducted in a smaller department within the same municipality;
2. Results were based only on public sector leaders; results might be different in the private or non-profit sectors;
3. Use of the NEO-FFI-3 and the MLQ 5X; results might vary if the researcher employed another personality or leadership assessment.

Chapter II: Literature Review

As presented in Chapter I, the primary purpose of this study was to investigate possible relationships from observer reports of a public sector department director's ratings of the Big Five personality traits compared to ratings of the transformational leadership constructs measured by the MLQ 5X. The secondary purpose of this study was to examine the relationships between demographic variables, to include education level, gender, years worked for the director, and position within the organization, and observer ratings of the department director. As the setting for this research was within a municipal government entity, it was the researcher's intent that this study would add to the minimal amount of literature focused on leadership in the public sector (Currie, Lockett, & Suhomlinova, 2009).

Given the purposes and intent of this research, this review of literature focused on the topics of leadership and public sector leadership, transformational leadership, the Multifactor Leadership Questionnaire, the Big Five personality traits, evolution of the NEO-FFI-3, self-report versus observer ratings of personality traits, the effects of demographics in the assessment of Big Five personality traits, and transformational leadership and Big Five personality traits. To complete this literature review, the researcher utilized online, peer-reviewed articles provided by the University of the Incarnate Word's J. E. & L. E. Mabee Library's PRIMOSearch. Keywords and terms used to search for literature relevant to this study included "Big Five Personality Traits," "Personality Traits and Leadership," "NEO-FFI-3," "Transformational Leadership," "Multifactor Leadership Questionnaire," and "Observer Versus Self-Ratings."

Leadership and Public Sector Leadership

Discussed in Chapter I, follower perceptions of public sector leadership personality traits and leader behavior served as the focal point of this research. Dissecting the focus of this

research, one may ask, “Why is leadership important?” Organizations consistently set performance goals, develop visions or mission statements, and at times, strive to change organizational culture and it is dependent upon strong leaders who lead by example to implement or move organizations towards those identified goals, missions, and changes (Sandelands, 1994). Leaders typically excel in a particular industry but as they move up in organizations, they have to rely upon the skills and abilities of others to be successful and failure awaits those who cannot build an effective team or persuade a group to put the group’s goals ahead of individual goals (Hogan et al., 1994). To be successful, it has been argued that leaders “…need to have the “right stuff” and this stuff is not equally present in all people” (Kirkpatrick & Locke, 1991, p. 60).

Public sector leadership. Although great interest exists in the general study of leadership, the study of leadership in the public sector has not had the same luster (Vandenabeele, Anderson, & Leisink, 2014). While public sector leadership has continued to become a defined topic of research, it still has not received the attention given to private sector leadership but its growing importance is evident through the development of public sector training programs that have been unsuccessful due to a failure to specifically tailor those programs to public sector environments (Orazi, Turrini, & Valotti, 2013). Through the review of existing literature in public sector leadership, a number of themes have emerged to include the bureaucratic environments in which public sector leaders work and the differences in leadership between the public and private sectors.

Public sector environment. The political context in which public sector leaders find themselves is arguably the most distinct difference between the public sector and the private sector (Cook, 1998). Due to the political nature of the public sector, unlike private sector leaders, public sector leaders must consistently balance both what should be done as well as how to get it

done (Cook, 1998) while attempting to satisfy multiple, competing demands (Dunoon, 2002) due to a higher level of accountability to a greater number of stakeholders (Orazi et al., 2013), to include elected officials, the general public, and interest groups (Altman & Petkus, 1994).

Aside from the politics involved with public sector leadership, public sector leaders operate in a bureaucratic environment (Green & Roberts, 2012) which can inhibit individual initiative to address organizational challenges (Wright & Pandey, 2009). In recent times, the bureaucratic environment has been viewed negatively and as an environment in which employees have to work under strict rules, work for the same salary regardless of performance, and due to strict adherence to job descriptions, fewer opportunities to fully utilize employee talents (Green & Roberts, 2012). Literature has supported the notion that public sector leaders operate in bureaucratic environments with greater amounts of red tape (Pandey & Kingsley, 2000) or a greater number of administrative hurdles (Orazi et al., 2013) with which leaders must contend. Public sector leaders have also found challenges in the sheer size and complexity of governmental organizations and sudden shifts of governmental priorities (Dunoon, 2002).

Differences in public sector leadership. As a result of the different environment found in public and private sector leadership, the practices of public sector leaders need to be different than those of their private sector counterparts (Anderson, 2010). Within the public sector environment, many problems are loosely defined with no readily available answer and it is incumbent upon public sector leaders to harness the talents of a diverse workgroup to move towards a more proactive versus reactive decision making (Dunoon, 2002). Traditionally, public sector environments have fostered transactional leadership, which focuses on maintaining the status quo (Green & Roberts, 2012). Working under administrative rules that fight to maintain the status quo (Dunoon, 2002), public sector, transactional leaders have led employees who have

had to do more with less due to government downsizing (Ingraham, Selden, & Moynihan, 2000) and reduced staffing levels; while employees may earn overtime salaries, employees find themselves unsatisfied because they do not have a lot of time outside of work and feel that the organization truly does not care for the employee (Green & Roberts, 2012).

To successfully navigate the transactional leadership environment found in public sector organizations, there exists a need for transformational leaders who seek to motivate employees to work for the organization's success rather individual success and who focus on long-term versus short-term goals (Green & Roberts, 2012). While a study with a sample of 372 county government executives (chief executive officers) in the United States found that those executives did demonstrate transformational leadership behaviors (Hemsworth, Muterera, & Baregheh, 2013), unfortunately, the leadership skills pool is becoming scarce due to competition with the private sector to attract talent and dwindling resources to develop public sector employees (Ingraham et al., 2000). Much like the lack of luster associated with the study of public sector leadership, along with rigid job classifications and the red tape associated with hiring processes, a major public sector recruitment barrier is that there was once a prestige associated with public sector service that no longer exists (Green & Roberts, 2012). Public sector organizations are likely to experience a number of internal and external organizational changes and public sector leaders must be willing to take risks to change embedded bureaucratic routines and to adjust to changing organizational challenges (Dull, 2010).

Transformational Leadership

Whether applied in the private or public sector, transformational leaders have exhibited behaviors focused on motivating followers through putting organizational goals ahead of their own and achieving high performance (Bass, 1985). Transformational leaders have shown interest

in all employees so as to avoid the potential for an ignored employee to become a poor performer but instead, positively affect the overall team performance (Wang & Howell, 2010). Transformational leaders are described as role models (Cavazotte, Moreno, & Hickmann, 2012) who both challenge and lead others to challenge organizational norms while concurrently developing and instilling employee confidence and organizational pride (Wright & Pandey, 2009).

Each of the transformational leader behaviors previously mentioned can be categorized through the constructs of idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation (Bass, 1985). Individually used, each of the transformational leadership constructs can result in positive organizational effects but the cumulative implementation of the constructs have been shown to provide positive results far beyond existing organizational expectations (Kendrick, 2011).

Idealized influence. Transformational leaders who have measured high in the construct of idealized influence are said to be highly ethical and fostering of subordinate loyalty (Bono & Judge, 2004). Under idealized influence, trust is established as the foundation of the relationship between the follower and leader (Kendrick, 2011). Leader-follower trust is developed as leaders scoring high in idealized influence role model behaviors demonstrating a high level of personal achievement, acknowledging of follower success, and personally leading initiatives to address significant organizational issues (Kirkbride, 2006).

Inspirational motivation. Strongly correlated to the construct of idealized influence (Bass, 1998), inspirational motivation has referred to a leader's idealistic and value-based vision for the future (Bono & Judge, 2004). Through inspirational motivation, leaders have developed shared goals with followers which have provided a clear path to meeting those established goals

(Kendrick, 2011). The inspirationally motivating leader has the ability to break down multi-faceted issues into more manageable tasks and articulates the prioritization of those tasks in an exciting and motivating manner (Kirkbride, 2006).

Intellectual stimulation. While inspirationally motivating leaders have focused on the future state of organizations or subordinates, intellectual stimulation has referred to leader behavior focused on challenging existing organizational norms (Bono & Judge, 2004). Intellectual stimulating behavior has allowed followers to question the notion of "this is how it has always been done" through the development of innovative solutions to organizational challenges (Kendrick, 2011). The intellectually stimulating leader leads followers to the understanding of how the small components of an entity contribute to the larger organizational success (Kendrick, 2011) and creates an organizational atmosphere open to change by being open to even the most "foolish ideas" (Kirkbride, 2006, p. 26).

Individual consideration. As intellectual stimulation has highlighted leader behaviors of challenging organizational norms, individual consideration has centered around leader behavior centered on the individual needs of a leader's followers (Bono & Judge, 2004). The leader who scores high in the construct of individual consideration would be highly communicative, able to identify individual follower interests, and supportive of follower development (Kirkbride, 2006). The individually considerate leader tailor-makes development opportunities for their followers and it is through this individualized consideration that followers often surpass the goals previously established between the leader and follower (Kendrick, 2011).

Understanding transformational leadership and its constructs is important but how it is applied and studied in an organizational context is equally important. Why is the presence of transformational leadership within an organization important? Reflecting back on the context of

this study, which calls for effective leadership being a determining factor of organizational failure or success, leadership is a key to successful organizational adaptation to an ever-changing environment (Taylor, Cornelius, & Colvin, 2014). Specific to transformational leadership, results from a study in public sector hospitals in the United Arab Emirates found that the presence of transformational leadership enhances organizational performance (Al-Abrrow, 2014). Furthermore, transformational leaders can reduce employee resistance to organizational change (Oreg & Berson, 2011) and can affect group cohesion (Arthur & Hardy, 2014).

Multifactor Leadership Questionnaire

As the constructs and behaviors of transformational leadership have been discussed, this review of literature will continue with how one may go about measuring transformational leadership and its constructs. As previously noted, there are a number of assessments and versions of those assessments, such as the IPIP (Goldberg, 1999) or the Transformational Leadership Questionnaire (Alimo-Metcalfe & Alban-Metcalfe, 2001), that can be utilized to measure transformational leadership. While multiple assessments for transformational leadership exist, this study will utilize and this review of literature will focus on the Multifactor Leadership Questionnaire as a transformational leadership assessment tool.

The Multifactor Leadership Questionnaire or the MLQ 5X is comprised of 78 items with subscales of 8 items for idealized influence, 10 items for idealized influence behavior, 10 items for inspirational motivation, 10 items for intellectual stimulation, nine items for individualized consideration, and the remainder of the items measure transactional leadership and laissez-faire leadership (Kanste, Miettunen, & Kyngäs, 2007). Responses to the MLQ, which can be completed as self-reports or observer reports (Broome, 2013), measure the frequency of each leadership behavior (Yukl, 1999) at the individual level but it has been noted that the context in

which responses are provided could produce varied or inaccurate study results (Wang & Howell, 2010). However, while the mood of a subordinate assessing his or her leader does not affect leadership ratings utilizing the MLQ, there is a correlation between whether a subordinate likes the leader and the leader rating of the MLQ (Brown & Keeping, 2005).

Along the lines of inaccurate study results, the psychometric properties of the MLQ have received favorable and unfavorable reviews (Kanste et al., 2007). As the validity of the MLQ has been questioned and an acceptable Cronbach's alpha is .70 (Nunnally, 1978), it should be noted that the MLQ-5X has been administered to culturally diverse samples of Finnish nurses (Kanste et al., 2007) and county government executives in the United States (Hemsworth et al., 2013) and have reported Cronbach's alphas at the construct level of:

- Idealized influence attributes: .82 (Kanste et al., 2007), .77 (Hemsworth et al., 2013);
- Idealized influence behavior: .82 (Kanste et al., 2007), .78 (Hemsworth et al., 2013);
- Inspirational motivation: .77 (Kanste et al., 2007), .70 (Hemsworth et al., 2013);
- Intellectual stimulation: .82 (Kanste et al., 2007), .74 (Hemsworth et al., 2013);
- Individualized consideration: .82 (Kanste et al., 2007), .80 (Hemsworth et al., 2013).

Furthermore, in various studies, overall Cronbach's alphas for transformational leadership have been reported at .94 for county executives in the United States (Hemsworth et al., 2013), .91 for Norwegian public and private sector executives (Føllesdal & Hagtvet, 2013), .90 for managers in the National Capital Region of Delhi, India (Popli & Rizvi, 2016), and .90 for managers in two organizations in Shanghai, China (Lam & O'Higgins, 2012).

Big Five Personality Traits

As the framework of transformational leadership and how its constructs can be measured has been discussed, this review of literature will continue with an examination of personality traits and how they can also be measured. Specifically, whereas personality traits are exhibited as consistent behaviors across various contexts (Roberts, 2009) and there is general agreement of

the existence of five distinct personality traits which allow researchers to compare quantifiable measures (Kalshoven, Den Hartog, & De Hoogh, 2011), this section of the literature review will focus on the Big Five personality traits, perception of leadership's possession of those traits, and the measurement of those traits. Recall that the Big Five personality traits have been identified as neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness and a brief description of each trait (Judge, Bono, Ilies, & Gerhardt, 2002) was provided in Chapter I.

Neuroticism. The trait of neuroticism measures one's level of anxiety, impulsiveness, and self-conscientiousness, or self-esteem (Costa & McCrae, 1992). Leaders who score low in neuroticism would be seen as being able to remain steady under pressure, to confidently resolve conflicts, and to handle the receipt of negative feedback (Hogan et al., 1994) or experience failure (Judge, Piccolo, & Kosalka, 2009). Those who score high in neuroticism tend to be negative, would probably not exhibit positive leader behaviors, and would probably not be those who could positively motivate a group towards organizational goals (Bono & Judge, 2004).

Extraversion. Unlike leaders who score high on neuroticism, leaders who score high on the extraversion scale are seen as positive, assertive, and enthusiastic in general (Costa & McCrae, 1992) and specifically enthusiastic for change (Kornør & Nordvik, 2004). Extraverted leaders will exhibit positive leader behaviors, maintain a positive outlook during times of change, and cultivate motivated and enthusiastic followers (Bono & Judge, 2004).

Openness to experience. Like leaders who score high on extraversion, leaders who score high in openness to experience are enthusiastic for change (Kornør & Nordvik, 2004). The trait of openness to experience measures one's levels of the development of ideas, being creative, and being action-oriented (Costa & McCrae, 1992). Leaders who score high in openness to experience can be expected to develop creative and innovative business solutions (Dragoni, Oh,

Vankatwyk, Tesluk, 2011). Highly open leaders generally inspire followers as they can usually develop and articulate a positive organizational vision (Bono & Judge, 2004).

Conscientiousness. While openness to experience measures a leader's creativity, conscientiousness measures one's competence, level of self-discipline, and level of striving for achievement (Costa & McCrae, 1992). Highly conscientious leaders are considered to be transparent, followers of rules, role models of appropriate behavior, and achievement-oriented (Kalshoven et al., 2011). While setting high goals (De Hoogh, Den Hartog, & Koopman, 2005), leaders who score high on conscientiousness put emphasis on production (Kornør & Nordvik, 2004) and are seen as trustworthy, planers, and highly organized (Hogan et al., 1994). However, conscientious leaders may be risk-averse and unwilling to bend established rules (De Hoogh et al., 2005).

Agreeableness. As highly conscientious leaders may be seen as trustworthy (Hogan et al., 1994), leaders who score high in agreeableness tend to focus on communication, trust, and employee morale (Hogan et al., 1994). Agreeableness measures one's levels of altruism, compliance, and modesty (Costa & McCrae, 1992). Highly agreeable leaders are seen as warm and sensitive to others (Colbert, Judge, Choi, & Wang, 2012), fair, respectful, sensitive to the needs of subordinates, trustworthy, and often share power with subordinates (Kalshoven et al., 2011). Not only are highly agreeable leaders concerned with the needs of subordinates but also they tend to genuinely care about employees (Kornør & Nordvik, 2004) and their interests (De Hoogh et al., 2005). However, highly agreeable leaders may be overly compliant and in trying to accommodate multiple interests, may seem less effective in making decisions to move towards organizational goals (De Hoogh et al., 2005).

Evolution of the NEO-FFI-3

Given the examination of the Big Five personality traits and the perception of leadership's possession of those traits, this literature review will continue with a discussion on the evolution of the NEO-FFI-3 and how the Big Five personality traits are measured. Although the NEO-FFI-3 is McCrae and Costa's latest iteration of a short item personality assessment, it was not McCrae and Costa's first attempt to measure the Big Five personality traits. The journey of the NEO-FFI-3 began in the mid-1980s with the creation of a three factor model focusing on the traits of neuroticism, extraversion, and openness to experience but it was not until 1985 that Costa and McCrae incorporated the domains of agreeableness and conscientiousness into the NEO to create the NEO-PI (Draycott & Kline, 1995). The NEO-PI measured a total of 181 items to include 48 items each for neuroticism, extraversion, and openness to experience, 18 items each for agreeableness and conscientiousness, and a validation question (Costa & McCrae, 1985). From the 180 personality items of the NEO-PI, came the development of the 60-item NEO-FFI that measured 12 items each for neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1989).

NEO-PI-R. In an effort to provide a more highly-detailed and robust personality assessment than that provided by the NEO-PI, the NEO-PI-R was published (Costa & McCrae, 1992). Designed to measure Big Five personality trait tendencies across general contexts (Kornør & Nordvik, 2004), the NEO-PI-R was designed with 240 total items, 48 items per scale item or domain that expounded the scale items of agreeableness and openness to experience and were broken down into 30 facets as shown in Table 1 (Costa & McCrae, 1992).

Table 1

Domains and Facets Measured by the Revised NEO Personality Inventory

Domains	Facets
Neuroticism	Anxiety, hostility, depression, self-conscientiousness, impulsiveness, vulnerability
Extraversion	Warmth, gregariousness, assertiveness, activity, excitement-seeking, positive emotions
Openness to experience	Fantasy, aesthetics, feelings, actions, ideas, values
Agreeableness	Trust, straightforwardness, altruism, compliance, modesty, tendermindedness
Conscientiousness	Competence, order, dutifulness, achievement-striving, self-discipline, deliberation

In review of the Cronbach's alpha scores associated with the use of the NEO-PI-R to measure the Big Five domains, it was found that "the internal consistencies of these five domains are good and vary between .87 and .91" and also noted that "test-retest reliability is satisfying and varies between .63 and .83" (Rossier, Wenger, & Berthoud, 2001 as cited in Rossier, Stadelhofen, & Berthoud, 2004, p. 28). Other studies have reported the Cronbach's alpha of the Big Five personality traits, using the NEO-PI-R, ranging from .71 to .97 (Tiliopoulos, Pallier, & Coxon, 2010) and .88 to .93 (Soto & John, 2009).

NEO-FFI-R. As previously mentioned, the NEO-FFI was created to provide a brief personality assessment across each of the Big Five personality traits (Costa & McCrae, 1989). While the NEO-FFI had internal consistency scores between .68 and .86, due to item-level criticism, the NEO-FFI was revised and published as the NEO-FFI-R (McCrae & Costa, 2004). Mirroring the format of the NEO-FFI, the NEO-FFI-R was revised with 60 items, 12 items per scale of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 2004). To address the weaker items and as a result of factor analysis, 14 of the items replaced in the NEO-FFI-R came from items within the NEO-PI-R (Aluja & Blanch,

2011). Replacing items used in the NEO-FFI-R was done with the intent to reduce acquiescent responses, to utilize items with high correlations with items in the NEO-PI-R, and to equally distribute items to represent all facet items (McCrae & Costa, 2004).

The NEO-FFI-R was not only published to provide a quick personality portrait, it was touted as being able to be used across cultures and varying age groups (McCrae & Costa, 2004). When published, the NEO-FFI-R had reported Cronbach's alpha scores that ranged from .75 to .82 indicating a strong level of internal consistency (McCrae & Costa, 2004). The samples used in the NEO-FFI-R studies were derived from American populations and included a sample of 1,959 high school students, ages 14-18, who were enrolled in psychology courses and a longitudinal sample from between the years of 1991-2002, consisting of 1,492 subjects, ages 19-93 (McCrae & Costa, 2004). Internationally, the NEO-FFI-R has reported Cronbach's alpha scores between .71 and .82 in a Spanish sample and between .70 and .83 in a Swiss sample (Aluja, Garcia, Rossier, & Garcia, 2005). In a study of aggression in a sample of 150 gymnasium patrons (70 men and 80 women) in the United Kingdom, Cronbach's alpha scores of the NEO-FFI-R ranged between .69 and .81; the sample included professionals to manual laborers with an age range of 18-65 with a mean age of 35.47 (Egan & Lewis, 2011).

NEO-PI-3 and NEO-FFI-3. In the pursuit of continuing to improve the readability and applicability of the NEO-PI-R and the NEO-FFI-R, the NEO-PI-3 and the NEO-FFI-3 were developed (McCrae et al., 2005). The latest version of the NEO-PI-3 still consist of 240 items in which 37 items were replaced from the NEO-PI-R and the NEO-FFI-3 continues to be comprised of 60 items, 59 of which are from the NEO-FFI-R and one item is new (McCrae & Costa, 2007). The NEO-PI-3 and the NEO-FFI-3 utilize a 5-point Likert scale with responses from *strongly disagree* to *strongly agree*, a Form S for self assessments with questions in the first person and, a

Form R for observer reports with questions in the third person (McCrae & Costa, 2007). Besides the differences in the number of items between the NEO-PI-3 and the NEO-FFI-3, the NEO-PI-3 measures 30 traits within the Big Five domains but the NEO-FFI-3 only measures the domains of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 2007). The NEO-FFI-3 has reported Cronbach's alpha scores between .72 and .88 (McCrae & Costa, 2007) and the NEO-PI-3 has reported Cronbach's alpha scores of .84 and .93 (McCrae et al., 2005).

Criticism of Shortened Personality Scale Inventories

As NEO-PI tools have evolved and have been strengthened, researchers have attempted to create shorter personality assessment tools which have come under some criticism. Already mentioned, the NEO-PI-R is a tool to measure the Big Five personality traits using 240 items, 48 items per scale item and takes approximately 35 minutes to administer (Costa & McCrae, 1992). In today's organizational setting, it is quite probable that not many managers would appreciate a researcher taking 35 minutes to administer a survey to their staff(s) and affect productivity (Credé et al., 2012). While short personality inventory tools such as the NEO-FFI can be administered in as little as 15 minutes (McCrae & Costa, 2004) and can seemingly be a great solution for obtaining personality data in a time crunch, researchers have warned that short personality scales can be susceptible to random measurement errors and type 1 or type 2 errors (Credé et al., 2012).

Aside from type 1 or type 2 errors, it can be argued that short item assessments such as the 15-item BFI-S do not measure personality to the detail of longer assessments such as the 240-item NEO-PI-R and thus can affect the reliability of an assessment's statistical results (Hahn, Gottschling, & Spinath, 2012). Results from a German sample comparing the reliability of the

15-item BFI-S to the 240-item NEO-PI-R showed Cronbach's alpha scores for the Big Five domains of neuroticism: .66 BFI-S/.92 NEO-PI-R; extraversion: .76 BFI-S/.87 NEO-PI-R; openness to experience: .58 BFI-S/.87 NEO-PI-R; agreeableness: .44 BFI-S/.86 NEO-PI-R; and conscientiousness: .60 BFI-S/.89 NEO-PI-R (Hahn et al., 2012). The findings of Hahn, Gottschling, and Spinath (2012) supported the notion that there exists a direct relationship between the length of the scale used and the reliability of the scale (Credé et al., 2012). Given the time burden that can be placed on a researcher to quickly conduct a survey, it is understandable why short inventories such as the NEO-FFI-R would be appealing to both organizational researchers and organizational managers (Credé et al., 2012). However, when working with personality assessments, researchers and practitioners must take into consideration that there exists a balance between saving time and the reliability of their findings.

Self-Report Versus Observer Ratings of Leadership Personality Traits

While the NEO-FFI-3 has had quite an evolutionary journey over the past several decades, it has demonstrated its applicability and consistency across cultures and various samples but literature has also revealed that personality assessment findings can vary depending on the source of the rating. In the Introduction of this research, it was explained that a self-report in a personality assessment is one in which the subject rates him or herself and an observer rating is one in which someone rates the subject (Hewstone et al., 2011). Pertinent to this study is an understanding of the notion of self-report and observer ratings used in the evaluation of personality traits. As this study examined possible correlations between self-reports and observer ratings of leadership personality traits, this portion of the literature review will evaluate the definitions of self-reports and observer ratings and discuss implicit leadership theory and other factors that should be taken into consideration when these ratings are being completed.

Self-Reports. Self-reports, or self-ratings, report on one's identity (Oh et al., 2011) and give insight into one's perception of him or herself (Kornør & Nordvik, 2004). It has been argued that self-reports are beneficial because no one else can be a better judge of one's behaviors because only the self understands under what context behavioral decisions were made (Paunonen & O'Neill, 2010). Self-reports have historically been used in personality assessments because of their convenience (Oh et al., 2011) and as personality assessments are concerned with behavioral tendencies across a broad spectrum of situations, they are beneficial because the self-rater is most likely the only person who is there to monitor his or her behavior across all situations and contexts (Kornør & Nordvik, 2004).

Contexts of self-reports. When using self-reports in personality assessments, the contexts of the self-reporting should be taken into account. Whether one is measuring leadership in the public or private sector, it has been argued that one's environment can develop his or her personality traits (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006; Van Wart, 2003). Through the context of a cultural perspective, the utilization of self-reports in a Big Five personality trait study of civil servants in the Basque Country, which is often stereotyped as risk averse, reported low scores in the domain of openness to experience (Gorostiaga, Balluerka, Alonso-Arbiol, & Haranburu, 2011). Similarly, in a study of personality traits in Chinese local government organizations, which are traditionally marked as having high power distance, a negative correlation was found between task performance and the domain of agreeableness; a correlation that would probably be positive in a western culture (Jiang, Wang, & Zhou, 2009). A cultural perspective is not the only context which should be taken into consideration when evaluating self-reports of personality assessments. Self-reports can be made under a distorted memory or with an agenda, such as in a high stakes job context (Oh et al., 2011) to make one's appearance

better than the truth (Paunonen & O'Neill, 2010) or seem more "socially desirable" (Lee & Ashton, 2013, p. 674). A major pitfall of self-ratings is that no one will ever know if the rater is being deceptive, especially if their intent is to hide something (Paunonen & O'Neill, 2010).

Observer ratings. On the other side of self-reports are observer ratings. Observer ratings are ratings of a subject submitted by those who have knowledge of the subject's behaviors (Paunonen & O'Neill, 2010). In recent years, researchers in the field of personality traits and behavioral tendencies have used observer ratings as a common method to validate self-reports of personality assessments (Oh et al., 2011; Paunonen & O'Neill, 2010). In real-world settings, self and observer ratings can be used to provide a holistic rating, assessment, or feedback of a leader's performance or behavior based upon the perceptions of that leader's subordinates, peers, managers, and clients/customers (Ostroff et al., 2004). Unfortunately, observers could exaggerate or minimize good or bad traits and if asked, might provide negative observer ratings of a subject based on situational factors outside the subject's control (Oh et al., 2011). Fortunately, in quantitative research, a major advantage to the use of multiple ratings is that truer ratings can be achieved through averaging the ratings, which should account for any extreme ratings or outliers (Paunonen & O'Neill, 2010).

Considerations of observer ratings. While benefits to the use of observer ratings in personality trait assessments have been identified, it must be understood that there are a number of factors that can affect observer ratings. Before continuing this discussion, it should be noted that simply because a person, particularly a leader, receives favorable observer personality scores, it does not necessarily indicate that they are successful leaders (Judge et al., 2009). However, where follower perception serves a vital role in the views of a leader's personality (Chua & Iyengar, 2011), higher correlations between self and other ratings could indicate a

higher level of self-awareness in the target being rated (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010). This review of literature will continue with factors that can affect observer ratings of leadership's personality traits to include the amount of time the rater spends with the subject, visibility of the trait or behavior being measured, preconceived notions of the behaviors that leaders should exhibit, and assumed similarities between the subject and the observer.

Time spent with subject. With regards to the amount of time a rater spends with a subject to be rated, unlike a self-report, the observer is not always present to observe the subject's behavior in all situations (Allik et al., 2010a). As observers are not normally with the subject to observe the subject's behavior across all situations, an observer cannot provide an entirely accurate aggregate rating (Kornør & Nordvik, 2004) but instead, observers report more on a person's reputation and past behavioral performance (Oh et al., 2011).

Visibility of trait. Aside from the amount of time an observer spends with a subject, the visibility of the personality traits in or the behavior of the subject can also affect observer ratings. Literature has supported the notion that some behaviors or personality traits are more observable than others (Paunonen & O'Neill, 2010). Personality traits such as extraversion, which speaks to a person's social skills and assertiveness, have high visibility compared to one's level of neuroticism, which rates facets such as self-esteem, which has a low visibility (Allik et al., 2010b). Ultimately, the higher the visibility of the behavior or trait, the higher the agreement that exists between self and observer reports of the behavior or trait (Szarota, Zawadzki, & Strelau, 2002).

Preconceived notions of leadership. While the visibility of traits being assessed is important, an observer's ideas of a leader can also affect an observer's ratings of a leader's personality traits. Where leadership perception is based upon stereotypes held by followers, it

has been posited that implicit leadership theory serves as the "benchmark" (Epitropaki & Martin, 2004, p. 660) against which followers rate or measure their leaders (Lord, 1977). In reference to this research, which proposes to use a questionnaire to obtain the data to be studied, implicit leadership theory may play a role in the overall findings as questionnaires have been suggested to only be partially indicative of leader behavior but more so report on "leadership prototypes" (Bryman, 1987, p. 132). According to Shondrick, Dinh, and Lord (2010), "…perceivers' cognitive and emotional processes play an important role in perception of and memory for leadership" (p. 966) and when rating leadership, followers may simply rate leaders based on their perception or memory of previous leaders rather than the behaviors or decision making of the current leader.

Assumed similarity. Aside from an observer's beliefs of what behaviors a leader should exhibit, assumed similarity of the observer to the subject can affect observer personality ratings. When rating a subject on a trait or behavior that is difficult to see, the observer could default to rating the target based on the rater's personality (Allik et al., 2010b). The notion behind assumed similarity is that one, as a rater of others, perceives others as having the same personality traits as the rater (Human & Biesanz, 2012).

Demographics and Assessments of Big Five Personality Traits

An understanding of the differences between self and observer reports in personality assessment is important but the understanding of how demographic variables can affect self and observer ratings is equally important. This section of the literature review will evaluate demographics to include age, gender, education, position level within an organization, and number of years worked with the subject, that may affect self and observer Big Five personality ratings.

Age. An evaluation of the U.S. workforce has revealed that a large part of it is comprised of three large generations identified as baby boomers (born between 1945 and 1964), Generation X (born between 1965 and 1979), and millennials (born in 1980 or later) (Becton, Walker, & Jones-Farmer, 2014). Additionally, the matures, born between 1927 and 1945, is a fourth generation that has been identified to be part of the workforce (Green & Roberts, 2012).

Generational cohort theory has grouped the American workforce by generational cohort, whether the matures, baby boomers, Generation Xers, or millennials, based upon the events that shaped the times in which they lived and therefore, each group has similar behaviors and values (Becton et al., 2014). In general, the two older generations (the matures and baby boomers) have been stereotyped as more work-focused compared to their younger generational counterparts (Generation X and millennials) while the younger generations are more culturally sensitive and adaptive to change (Green & Roberts, 2012).

In addition to the generational grouping of the work force, specific to age and personality traits, there has been found a negative correlation between age and neuroticism (Gorostiaga et al., 2011). While it has been found that there are lower neuroticism scores in woman as age went up, there was no significant difference in men and there was no effect of age on openness (Gorostiaga et al., 2011). In general, older managers, due to usually having greater experience, are more likely to report higher self-ratings and are more subject to inflated self-ratings (Vecchio & Anderson, 2009).

Gender. As one's age may have an effect on self and observer ratings of personality ratings, one's gender can also influence self and observer ratings of personality traits. In self-reports, women tend to score higher than men in the traits of extraversion (Feingold, 1994), neuroticism, and agreeableness with no significant differences in openness to experience or

conscientiousness (Weisberg, DeYoung, & Hirsh, 2011). In general, research has also suggested that women tend to be higher in agreement between self and other ratings compared to men (Szarota et al., 2002). Literature has suggested that women are more self-disclosing compared to men but there is more self-disclosure between female to female and male to male (same-sex) (Dindia & Allen, 1992).

While not always replicated in research (Fletcher & Baldry, 2000), in general, women tend to have higher rating agreement or congruence due to a higher level of self-awareness (Fleenor et al., 2010). Men tend to have higher self-reports as compared to women and tend to consider themselves more socially dominant as compared to women who report to be more socially sensitive (Vecchio & Anderson, 2009).

Education. As literature has suggested that gender may affect Big Five personality assessments, education may have some bearing on Big Five findings. Research has shown that those who have been identified as high achievers correlate to high conscientiousness and would lead to higher self-other agreement in personality assessments (Paunonen & O'Neill, 2010).

Position level within the organization. While the variable of education can lead to higher self-other agreement, one's position level within the organization may have the same effect. One's position within an organization may provide more access to and time with the subject and the higher the position the observer holds, the more time he or she spends with the director, which should increase self-observer agreement (Paunonen & O'Neill, 2010). Agreement between self and other reports may increase because at higher positions, raters may be privy to observing subject in contexts not available to all raters (Oh et al., 2011; Paunonen & O'Neill, 2010).

Number of years worked with the subject. Similar to the relationship of a rater's position to the amount of time spent with a subject, as peers or raters spend more time with a target or the subject being rated, the greater the likelihood of agreement between self and observer ratings (Paunonen & O'Neill, 2010).

Transformational Leadership and Big Five Personality Traits

To this point, this review of literature has discussed the overall concepts and primary methods of measurement of transformational leadership and the Big Five personality traits. As this study examined potential relationships between transformational leadership and the Big Five personality traits in the public sector and then evaluate how demographic data may affect those potential relationships, this literature review will conclude with a discussion of previous studies which have evaluated the correlations between transformational leadership and the Big Five.

There are a number of studies evaluating transformational leadership and the Big Five personality traits but a meta-analysis of 26 articles studying correlations between personality and transformational and transactional leadership found positive correlations between transformational leadership and extraversion (.24), conscientiousness (.13), openness (.15) and agreeableness (.14), and a negative correlation for neuroticism (-.17) (Bono & Judge, 2004). While reporting overall loose correlations, it was determined that extraversion was the Big Five personality trait that had the greatest correlation with transformational leadership (Bono & Judge).

Similar to the findings of Bono and Judge's meta-analysis (2004), a study evaluating the correlations between emotional intelligence, transformational leadership and the Big Five personality traits found that transformational leadership was significantly related to extraversion (r = .23, p = .023) and openness (r = .35, p = .001) (Føllesdal & Hagtvet, 2013). The study,

which utilized Norwegian translations of the assessments, included a sample of 104 Norwegian public and private sector executives who completed self-reports of the 240-item NEO-PI-R (Costa & McCrae, 1992) and 459 of their subordinates who completed observer reports of the MLQ 5X (Bass & Avolio, 2004), also found weak, positive correlations of transformational leadership to agreeableness (r = .21) and conscientiousness (r = .07) and a weak, negative correlation to neuroticism (r = -.13) (Føllesdal & Hagtvet, 2013). In addition to obtaining transformational leadership and Big Five personality data, age and sex of the respondents were also captured and although leader sex was removed from the analysis due to estimation errors, it was found that there was no correlation between leader age and transformational leadership but there were significant correlations between leader age and the Big Five personality traits of agreeableness (r = .44, p = < .01) and extraversion (r = -.25, p = < .01) (Føllesdal & Hagtvet, 2013).

Mirroring the Norwegian executive study (Føllesdal & Hagtvet, 2013), research was conducted in a large Brazilian energy company to study correlations between leader intelligence, personality, emotional intelligence, transformational leadership, and managerial performance (Cavazotte et al., 2012). The Brazilian energy company study, which included self reports from a sample of 134 mid-level managers and observer reports from 325 of the managers' subordinates, measured transformational leadership through a Portuguese translation of the MLQ and the Big Five using Goldberg's 120-item International Personality Item Pool (1999), which similar to other studies, reported Cronbach's alpha scores of extraversion (.75), conscientiousness (.70), agreeableness (.70), openness to new experiences (.64), and neuroticism (.65) (Cavazotte et al., 2012). Comparing the individual Big Five personality traits to the overall transformational leadership construct, only conscientiousness had a significant correlation to

transformational leadership (y = .59, p < .001) and while not statistically significant, neuroticism was reported as being negatively correlated to transformational leadership (y = -.60) (Cavazotte et al., 2012).

Like the Brazilian energy company study (Cavazotte et al., 2012), research was conducted in Cyprus, with a sample of 131 hotel managers, to investigate correlations between their leadership styles, including transformational leadership, and their personality traits (Zopiatis & Constanti, 2012). Findings of the study of hotel managers in Cypress, which utilized self reports of the MLQ 5X-Short and the 60-item NEO-FFI, suggested that transformational leadership correlates positively with extraversion, openness, agreeableness, and conscientiousness and negatively with neuroticism and that conscientiousness best predicted a particular leadership style (Zopiatis & Constanti, 2012).

As the findings of the Cypress hotel manager study (Zopiatis & Constanti, 2012) were consistent with the findings of other research (Bono & Judge, 2004; Cavazotte et al., 2012; Føllesdal & Hagtvet , 2013), a study conducted within the Singapore Armed Forces (SAF) not only found a negative relationship between transformational leadership and neuroticism but also a negative relationship between transformational leadership and agreeableness (Lim & Ployhart, 2004). While the SAF study (Lim & Ployhart, 2004) yielded the negative correlation between transformational leadership and the neuroticism and agreeableness, it is important to note that the study utilized the IPIP (Goldberg, 1999) and the MLQ 5X (Avolio, Bass, & Jung, 1999), a sample of 276 men between the ages of 18-23 years old who were mostly Chinese, and the transformational leadership and IPIP ratings were collected at the 10-week mark of a military training (Lim & Ployhart, 2004). The researchers cited the context of the study as a possible explanation for the negative relationship between transformational leadership and agreeableness

as being agreeable during life or death situations, as would be expected in a military context compared to a business context, would not be perceived as effective leadership (Lim & Ployhart, 2004).

Conclusion

Given the purposes and intent of this research, this review of literature focused on the topics of leadership and public sector leadership, transformational leadership, the Multifactor Leadership Questionnaire, the Big Five personality traits, evolution of the NEO-FFI-3, self-report versus observer ratings of personality traits, and the effects of demographics in the assessment of Big Five personality traits, and transformational leadership and Big Five personality traits. Overall, the literature revealed that regardless of the sector in which one is working or conducting research, it is important to recognize that an organizational leader's personality traits can affect their job and organizational performance (Oh et al., 2011), that personality traits correlate with leadership perceptions (Lord, de Vader, & Alliger, 1986), and that factors of leadership are based on the perception of the observer (Eden & Leviatan, 1975).

The literature revealed that there are differences between leadership in the public and private sectors and therefore, leaders in the public sector must act differently compared to their private sector counterparts. Transformational leadership behaviors, whether measured in the private or public sector through observer or self-reports, can be measured by the Multifactor Leadership Questionnaire and scores of the Big Five personality traits can be measured through the NEO-FFI-3. Studies have revealed that there are significant correlations between transformational leadership, conscientiousness, extraversion, and openness to experience and while not significant, all studies cited in this review of literature indicated a negative correlation between transformational leadership and neuroticism. Unlike most findings, one study included

in this review found a negative correlation between transformational leadership and agreeableness and the researchers offered up the military context of the study which produced the uncommon correlation.

Furthermore, a leader's scores of the Big Five personality traits can affect how he or she is viewed by his or her subordinates and that the scores can vary depending on which personality assessment is used to obtain those scores. Not only can Big Five personality scores vary based upon the assessment tool but scores can vary based upon whether or not the scores obtained through self or observer reports and those ratings can be affected by demographic variables such as age, gender, or the years of acquaintance between a subject and his or her rater. Although a leader may achieve a positive personality assessment, it does not mean that he or she is an effective leader but conversely, high levels of transformational leadership usually equate to effective leadership and there are a number of personality traits with relationships to transformational leadership.

Chapter III: Methodology

Research Design

Discussed in earlier sections of this research, the primary purpose of this study was to investigate possible relationships between Big Five personality traits and leadership behavior data acquired through observer ratings of a public sector department director's scores of the NEO-FFI-3 and the MLQ 5X. For comparison and discussion purposes, the department director also completed a self-report of both the NEO-FFI-3 and the MLQ 5X. In addition to the use of the NEO-FFI-3 and the MLQ 5X, to complete this study, the researcher also utilized a researcher-designed demographic questionnaire to collect quantitative data to determine if any of the demographic data affected the findings of the subordinate-submitted observer ratings of the Big Five personality constructs and the transformational leadership constructs measured by the MLQ 5X.

Population and Sample

To carry out this quantitative survey research, the researcher completed this study within a local municipality in a large city of Texas with a population of over 1,000,000 residents. The population of this study consisted of 143 executives, managers, and supervisors within one department within the selected municipal government organization. As the researcher had direct access to the population within this study, utilizing convenience sampling, the researcher collected completed assessments from the department director and 66 of his subordinates. The following procedures were used for data collection:

1. Department director completed a self-evaluation using the NEO-FFI-3 Form S, the MLQ 5X, and the demographic questionnaire;

2. The researcher also administered the NEO-FFI-3 Form R, the MLQ 5X, and the demographic questionnaire to a population of 143 participants to obtain the observer reports.

The 143 participants consisted of 39 executive team members and managers which included five assistant directors, one assistant to the director, and 33 managers. The second group of observer ratings of the director came from a population of 110 assistant division managers or supervisors who fall under the supervision of one of the members of the first observer group. As previously mentioned, 66 completed observer reports were completed.

Research Instruments

For each of the participants, the researcher provided a copy of the demographic questionnaire, the MLQ 5X, and either the NEO-FFI-3 Form S to the department director or the NEO-FFI-R Form R to the participants providing the observer ratings of the department director. The NEO-FFI-3 is a 60-item, five-point Likert scale, questionnaire specifically designed to measure the Big Five personality traits. Responses to the NEO-FFI-3, which range from strongly disagree to strongly agree, measure each of the Big Five personality traits (McCrae et al., 2005) or the domains of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 2007). While the NEO-FFI-3 is the latest iteration of the 60-item NEO-FFI tool and only had only one item revised from its predecessor, the NEO-FFI-3 has reported Cronbach's alpha scores between .72 and .88 (McCrae & Costa, 2007).

NEO-FFI-3. Although only one item of the NEO-FFI-R was modified to devise the NEO-FFI-3 (McCrae & Costa, 2007), note that high NEO-FFI-3 scores in the domain of neuroticism would indicate one's inclination to negative emotions such as anxiety or anger; high scores in extraversion indicate a high level of sociability and assertiveness; high scores in

openness suggest a person has a high level of intellect and creativity; high scores in agreeableness points to a high level of cooperation and kindness; and high scores in conscientiousness speaks to a high level of organization and self-discipline (Weisberg et al., 2011).

To determine the personality scores within the NEO-FFI-3, the 60 questions within the NEO-FFI-3 are grouped by the following constructs: neuroticism, questions 1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, and 56; extraversion, questions 2, 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, and 57; openness to experience, questions 3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53, and 58; agreeableness, questions 4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54, and 59; and conscientiousness, questions 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, and 60 (McCrae & Costa, 2007).

MLQ 5X. In addition to the NEO-FFI-3 assessments, the researcher utilized the MLQ 5X to measure leadership through observer reports of and a self-report from the department director. Prior to the development of the Multifactor Leadership Questionnaire, Burns (1978) posited that by tapping into the personal values of followers, transformational leaders could elevate a group's conscientious level to aspire to reach a collective goal rather than focus on individual achievements.

Building on the work of Burns (1978), to measure transformational leadership, Bass developed the Multifactor Leadership Questionnaire in 1985. The latest iteration of the questionnaire, the MLQ 5X, is comprised of 45 items to measure idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Kanste et al., 2007). Responses to the MLQ can be obtained through self or observer reports (Broome, 2013) and the tool's reliability has been validated within culturally diverse samples (Hemsworth et al., 2013; Kanste et al., 2007).

Whether obtaining leadership data through observer or self reports, the MLQ 5X presents transformational leadership results based on the following the following attributes and groupings of questions within the assessment: idealized influence, questions 10, 18, 21, 25, 6, 14, 23, and 34; inspirational motivation, 9, 13, 26, and 36; intellectual stimulation, questions 2, 8, 30, and 32; and individual consideration, questions 15, 19, 29, and 31 (Bass and Avolio, 2004). For purposes of this research, analysis was only conducted on the questions that make up the transformational leadership constructs and questions identified by each construct.

Researcher-created demographic questionnaire. Aside from responses on the MLQ 5X, the researcher requested demographic data from the department director and the director's subordinates. The demographic data were used to determine the effects of demographic variables, if any, on the possible relationships between the observer reports of the NEO-FFI-3 and MLQ 5X. The demographic questionnaire, which was given to a panel of experts to ensure credibility and reliability, was designed based upon the existing literature found in Chapter II and can found under Appendix A.

Specifically, the demographic questionnaire evaluated responses based upon age grouped by the generational cohorts of the matures, baby boomers, Generation X, and millennials. The demographic questionnaire also gathered data on gender, education level, position within the organization, and the time that the respondent has worked with the department director.

As part of the statistical analysis completed in this research, each response for the demographic variables was assigned or coded as a numerical value. In this study, for age, the numerical values assigned ranged from "1" for matures to "4" for millennials; gender was coded as "1" for women and "2" for men; responses for education level were assigned from "1" for high school or general education diploma (GED) up to "5" for a PhD or post-graduate degree;

position within the organization was assigned as “1” for an assistant director or division manager and “2” for assistant manager and below; and those who began working for the department director before 2014 were coded as “1” and those who began working for the department director after January 2014 were coded as “2.”

Protection of Human Subjects

Given the use of the NEO-FFI-3, the MLQ 5X, and the researcher-devised Demographic Questionnaire, pursuant to federal regulation PL 93-348, which requires that the Institutional Review Board (IRB) of the University of the Incarnate Word assure the protection of human subjects involved in all research conducted by faculty, others employed at the university, and students, the researcher did not begin this research until IRB approval was obtained. Based upon the potential for more than minimal risk to a number of the participants in this research, this study was subject to a Full Board review. Required for approval, with the IRB application, the researcher provided:

1. Consent documents;
2. Instruments used for data collection;
3. Certificate of Human Research Training.

As informed consent was an IRB requirement that was necessary prior to the collection of any data, the researcher provided the study’s participants an explanation of the study as well as the voluntary nature of participation within the study. For those participants who provided information regarding their immediate supervisor, the study’s explanation included an indication that there may be some risk of retribution in providing the requested information. However, before collecting the data, the researcher established communication with the executive being rated to ensure that there is no backlash from the findings of the study.

To further mitigate any risk to any of the study's participants, the researcher ensured complete anonymity during completion of the research as only the researcher had access to the individual responses, which did not include any names, and when reporting the results, only means of the observer ratings are to be reported.

Data Collection Procedures

Understanding the emphasis placed on the protection of the human subjects who participated in the study is important as a majority of the data used in this research came from the department director's observer ratings, submitted by his subordinates, of the NEO-FFI-3 and the MLQ 5X and the demographic information submitted by each study participant. For discussion purposes, the department director was also asked to complete a self-rating of the NEO-FFI-3, the MLQ 5X, and the demographic questionnaire. The observer reports provided the statistical measurements of the Big Five personality traits (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience) and transformational leader behavior. The observer-reported data on the NEO-FFI-3 and the MLQ 5X was used for the correlation analysis while the demographic data was used to determine which, if any, of the variables affect the possible correlations. The self-reported data from the department director served for comparison to the observer reports and for purposes of discussion.

To collect the data for this study, the researcher administered paper copies of the NEO-FFI-3 assessment, the MLQ 5X, and the demographic data questionnaire. As the researcher obtained permission to complete this study within the selected municipal organization, to maximize the participation rate, the researcher will utilized a quarterly meeting of the executives, division managers, and assistant managers and supervisors to administer the NEO-FFI-3, the

MLQ 5X, and the demographic data questionnaire. Responses to the assessments and the demographic data questionnaire took approximately 20 minutes to complete.

Data Analysis

Once the data from the NEO-FFI-3, the MLQ 5X, and the demographic questionnaire was obtained, as part of the data cleansing process, the researcher evaluated each response to ensure completeness. As no names were collected on the responses, the researcher was not able to follow-up with respondents to provide the missing data. Therefore, if all questions were not complete on each assessment, the researcher did not include the responses in the data analysis.

Once the data was cleaned, the researcher used IBM SPSS Statistics 25 to run the appropriate descriptive and inferential statistical analysis. Cronbach's alpha is also reported in Chapter IV to measure the reliability of the data.

Chapter IV: Results

Discussed in previous chapters of this study, the primary purpose of this study was to investigate possible relationships between observer reports of a public sector department director's ratings of the Big Five personality traits measured by the NEO-FFI-3 compared to ratings of transformational leadership measured by the MLQ 5X. The secondary purpose of this study was to examine the relationships between demographic variables, to include education level, gender, years worked for the director, and position within the organization, and observer ratings of the department director. As the setting for this research was within a municipal government entity, it was the researcher's intent that this study would add to the minimal amount of literature focused on leadership in the public sector (Currie et al., 2009).

As mentioned in Chapter III, in addition to the data collected from the Department Director, the researcher received 66 completed observer reports, rating the Department Director, of the NEO-FFI-3, the MLQ 5X, and the demographic questionnaire. Based on the population size of 143 participants, the response rate of this study was 46%. Each of the descriptive and inferential statistical functions performed, to include Pearson correlation coefficient, Spearman *rho*, and multiple linear regressions were calculated using the 66 completed survey assessments.

Reliability of Survey Instruments

Understanding the return rate of surveys and the various statistical analysis functions performed to complete this study, this research will evaluate the reliability of the survey instruments used in this study. Table 2 shows the Cronbach's alpha coefficients for the MLQ 5X as .63 to .92 and the NEO-FFI-3 as .80 to .87 and given that coefficients close to 1.00 indicate high internal consistency (Cronk, 2008), both instruments displayed reliable Cronbach's alpha coefficients.

Table 2

Cronbach's Alpha Coefficients by Survey Instrument Construct

Instrument	Construct	Coefficient
MLQ 5X	Idealized influence	.92
	Inspirational motivation	.90
	Intellectual stimulation	.63
	Individual consideration	.63
NEO-FFI-3	Neuroticism	.80
	Extraversion	.81
	Openness to experience	.65
	Agreeableness	.84
	Conscientiousness	.87

Demographic Information of Respondents

As the reliability of the instruments used in this research has been established, this study will continue with the descriptive statistics that resulted from the instruments used in this research. Taken from the responses provided on the demographic questionnaire, Table 3 below shows the age cohorts of the 66 respondents who completed the study's assessments. As shown in Table 3, of the 66 responses, 20 (30%) of the responses came from those born between 1946-1964 or were baby boomers, 31 (47%) of the respondents indicated that they were born between 1965-1979 or that they were Generation Xers, and 15 (23%) of the respondents identified as being born in 1980 or later and would be categorized as millennials.

Table 3

Age of Respondents

Year of Birth	*n*	%
1946-1964 (Baby boomers)	20	30
1965-1979 (Generation Xers)	31	47
1980 or later (Millennials)	15	23

Note. $n = 66$.

In addition to collecting data on the ages of the respondents in this study, Table 4 below shows the gender breakdown of the respondents. Table 4 reveals that 22 (33%) of the study's respondents were female and 44 (67%) of the respondents were male.

Table 4

Gender of Respondents

Gender	*n*	%
Female	22	33
Male	44	67

Note. $n = 66$.

Following the gender of the 66 respondents, data was collected on the highest level of education achieved by the respondents. Shown in Table 5, 18 (27%) of the respondents indicated possession of a high school diploma or GED, 10 (15%) respondents had an associate's degree, there were 28 (43%) respondents who indicated that they had a bachelor's degree, and 10 (15%) respondents had achieved a master's degree.

Table 5

Education Level of Respondents

Education Level	*n*	%
High school or GED	18	27
Associate's degree	10	15
Bachelor's degree	28	43
Master's degree	10	15

Note. $n = 66$.

Along with the collection of educational data from the study's respondents, Table 6 shows the data that was collected on the respondents' positions within the organization. The results of the respondents' positions within the organization indicate that 13 (20%) of the respondents were assistant directors or division managers and 53 (80%) of respondents were assistant managers, supervisors, or other.

Table 6

Organizational Position of Respondents

Position	*n*	%
Assistant director/division manager	13	20
Assistant manager/supervisor/other	53	80

Note. $n = 66$.

After collection of the respondents' position within the organization, the demographic questionnaire completed with the collection of amount of time that the respondents worked with the department director. As shown in Table 7, there was an even split of 33 (50%) respondents who had worked with the director before January 2014 and 33 (50%) of respondents who began working with the director after January 2014.

Table 7

When Respondent Started Working with Director

When Started Working with Director	*n*	%
Before January 2014	33	50
After January 2014	33	50

Note. $n = 66$.

In addition to the demographic data collected from the respondents who rated the department director, the researcher collected the same demographic data from the department director. As shown in Table 8, the department director is a male, Generation Xer, who holds a bachelor's degree.

Table 8

Demographic Data of Director

Demographic Variable	Response
Age	1965-1979 (Generation X)
Gender	Male
Education level	Bachelor's degree
Organizational position	Director

NEO-FFI-3 Responses

Observer reports – NEO-FFI-3. With an understanding of the demographic makeup of those who participated in this study, the research will now focus on the findings of responses to the NEO-FFI-3. As detailed in Table 9, which provides the mean raw scores, standard deviations, and mean *t* scores of the 66 respondents who assessed the department director, the mean raw scores by personality construct were 1.45 for neuroticism, 2.81 for extraversion, 2.33 for openness to experience, 2.67 for agreeableness, and 3.02 for conscientiousness. Standard

deviations of the NEO-FFI-3 constructs ranged between 0.39 and 0.60, which indicated a moderate level of deviation from the construct means.

Using the mean *t* scores in Table 9 and the NEO-FFI-3 scoring scale (McCrae & Costa, 2007), the 66 respondents rated the department director within the 45-55 scoring range of average in the personality constructs of neuroticism, openness to experience, agreeableness, and conscientiousness. The department director was rated at a score of 60 for extraversion, which falls within the range of high for the extraversion construct.

Table 9

Observer Means, Standard Deviations, and Mean T Scores of NEO-FFI-3 Personality Constructs

Construct	*M*	*SD*	*t*
Neuroticism	1.45	0.60	17.41
Extraversion	2.81	0.54	33.77
Openness to experience	2.33	0.39	27.97
Agreeableness	2.67	0.59	32.00
Conscientiousness	3.02	0.59	36.29

Note. n = 66; Scale ranged from 0 to 4.

NEO-FFI-3 means and standard deviations by demographic variables. Table 10 provides further evaluation of the mean raw scores of the department director's level of the NEO-FFI-3, submitted by the 66 raters, to include means and standard deviations based upon demographic variables of the raters. Broken down by the demographic variables, examining the standard deviations of the mean scores of the department director's observer ratings of the constructs of NEO-FFI-3 and recalling that the NEO-FFI-3 scale ranged from 0 to 4, the range of standard deviations between 0.32 and 0.73 indicated an average level of deviations within rater responses.

Table 10

Means and Standard Deviations of the NEO-FFI-3 by Demographic Variable

Demographic Variable	*n*	N *M (SD)*	E *M (SD)*	O *M (SD)*	A *M (SD)*	C *M (SD)*
Age						
Baby boomers	20	1.56 (0.59)	2.80 (0.60)	2.28 (0.37)	2.65 (0.55)	3.07 (0.46)
Generation X	31	1.39 (0.59)	2.73 (0.51)	2.35 (0.39)	2.64 (0.58)	2.97 (0.65)
Millennial	15	1.44 (0.60)	3.01 (0.54)	2.36 (0.44)	2.74 (0.71)	3.08 (0.63)
Gender						
Female	22	1.22 (0.69)	3.02 (0.54)	2.44 (0.49)	2.88 (0.66)	3.25 (0.57)
Male	44	1.57 (0.52)	2.71 (0.52)	2.28 (0.32)	2.56 (0.53)	2.91 (0.57)
Education						
High school/GED	18	1.82 (0.62)	2.42 (0.49)	2.30 (0.33)	2.30 (0.73)	2.60 (0.58)
Associate's degree	10	1.51 (0.46)	2.67 (0.36)	2.36 (0.35)	2.78 (0.45)	2.88 (0.33)
Bachelor's degree	28	1.28 (0.54)	3.04 (0.51)	2.35 (0.38)	2.79 (0.49)	3.30 (0.55)
Master's degree	10	1.21 (0.61)	3.05 (0.50)	2.33 (0.59)	2.88 (0.47)	3.18 (0.50)
Organizational position						
Assistant director or division manager	13	1.21 (0.54)	3.15 (0.57)	2.44 (0.49)	2.83 (0.52)	3.27 (0.56)
Assistant division manager, supervisor, or other	53	1.51 (0.60)	2.73 (0.51)	2.31 (0.36)	2.63 (0.61)	2.96 (0.58)
Worked with the director						
Before January 2014	33	1.35 (0.63)	2.84 (0.60)	2.39 (0.39)	2.71 (0.60)	3.14 (0.58)
After January 2014	33	1.55 (0.56)	2.80 (0.50)	2.27 (0.39)	2.62 (0.60)	2.91 (0.58)

Note. N = neuroticism; E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness.

Director self-report – NEO-FFI-3. Noting the discussion of the results of the 66 NEO-FFI-3 observer reports, this research will continue with an examination of the director's self-

report of the NEO-FFI-3 as shown below in Table 11. Based on the NEO-FFI-3 scoring by constructs, the department director had a raw mean score of 1.50 in the construct of neuroticism, 2.80 in extraversion, 2.30 in openness to experience, 2.70 in agreeableness, and 3.00 in conscientiousness.

Referencing the *t* scores in Table 11 and the NEO-FFI-3 scoring guide (McCrae & Costa, 2007), the department director's score of 8.00 in neuroticism indicates a low level of neuroticism; the scores of 36.00 in extraversion and 37.00 in agreeableness indicate high levels of extraversion and agreeableness; and the scores of 23.00 in openness to experience and 33.00 in conscientiousness indicate average levels of openness to experience and conscientiousness.

Table 11

Director Means and T Scores of NEO-FFI-3 Personality Constructs

Construct	*M*	*t*
Neuroticism	1.50	8.00
Extraversion	2.80	36.00
Openness to experience	2.30	23.00
Agreeableness	2.70	37.00
Conscientiousness	3.00	33.00

Note. $n = 1$; Scale ranged from 0 to 4.

Comparison of NEO-FFI-3 Means Based on Demographic Category

With an understanding of the high-level results of both the self and observer reports of the constructs within the NEO-FFI-3, this research will continue with a comparison of the NEO-FFI-3 results based upon demographic category. Table 12, which is sorted by demographic variable, shows the NEO-FFI-3 mean scores of both the department director and the 66 respondents as well as the variances of the means by construct and demographic variables. The purpose of Table 12 is to discuss variances of NEO-FFI-3 responses between the department

director and the 66 respondents. Referencing Table 12, the department director's mean score of neuroticism was 1.50, extraversion was 2.80, openness to experience was 2.30, agreeableness was 2.70, and conscientiousness was 3.00. Variances in the means were calculated as net variances to determine the actual distance between the department director and observer scores.

Age and NEO-FFI-3 responses. Recalling that the department director reported his age cohort as Generation X and evaluating the mean scores of neuroticism, baby boomer and millennial respondents scored the department director within 0.06 of the department director's mean score of neuroticism while Generation X respondents provided ratings that had the largest variance of 0.11 compared to the department director's mean score of neuroticism. On the extraversion scale, the baby boomers cohort of raters had the smallest variance (0.00) to the department director's mean score of 2.80. On the scale of openness to experience, the baby boomers again had the least variance (0.02) of mean scores between the rater cohorts and the department director's self score of 2.30. Evaluating the agreeableness scale, millennials was the cohort with the smallest variance (0.04) between the raters' scores and the department director's score of 2.70. Within the conscientiousness construct results, Generation Xers had the smallest variance (0.03) compared to the department director's mean score of 3.00. Overall, the baby boomers cohort had the smallest variance (0.20) to the department director's self-reported results of the Big Five personality constructs within the NEO-FFI-3.

Gender and NEO-FFI-3 responses. As this study has identified that the rater cohort of baby boomers had the overall smallest variance (0.20) to the department director's mean scores of the NEO-FFI-3 constructs, this research will continue with an analysis of the variances of the department director's self-reported and the observer rating mean scores of the NEO-FFI-3 personality constructs. Where the department director is male, male raters had the smallest

variances on each construct of the NEO-FFI-3 to include neuroticism (0.07), extraversion (0.09), openness to experience (0.02), agreeableness (0.14), and conscientiousness (0.09). Overall, compared to the department director's self-reports, the overall variances (0.41) in male raters' scores of the department director on the constructs of the NEO-FFI-3 were smaller than the overall variances (1.07) submitted by female raters.

Education level and NEO-FFI-3 responses. While this research has shown that male raters were closer to the department director's mean scores of the constructs with the NEO-FFI-3, this study will continue with an examination of the mean scores of the NEO-FFI-3 constructs based upon rater education level. Focusing on the construct of neuroticism and noting that the department director reported an education level of bachelor's degree, raters with an associate's degree had the smallest variance (0.01) in mean scores compared to the department director's self-reported mean score (1.50). Evaluating extraversion, again, raters with an associate's degree had the smallest variance (0.13) compared to the self-reported mean score (2.80) submitted by the department director. Examining openness to experience, raters with a high school diploma or general equivalency diploma had the smallest variance (0.00) in mean scores compared to the department director's self-reported mean score (2.30). On the agreeableness scale, the smallest variance (0.08) was found between the mean score of the department director's self-report (2.70) and the raters who reported having an associate's degree. Regarding the conscientiousness scale, observers with an associate's degree had the lowest variance (0.12) in their ratings of the department director compared to the department director's self-reported mean score of 3.00. Overall, raters with an associate's degree had the smallest variance (0.40) of mean scores compared to the department director's mean scores of the NEO-FFI-3.

Position within the organization and NEO-FFI-3 responses. Where observers with an associate's degree had the greatest self-other agreement with the department director's self-ratings, this research will now discuss the NEO-FFI-3 observer ratings based upon the observers' positions within the organization. Noting the department director's NEO-FFI-3 mean scores by construct, examining responses on the neuroticism scale, raters who indicated that they were assistant division managers or lower, had the smallest mean-variance (0.01) of ratings compared to the director's mean self-rating of 1.50. Similarly, on the scale of extraversion, raters who indicated their position within the organization was assistant manager, supervisor, or other, had the smallest mean-variance (0.07) to the director's self-rating of 2.80. The smallest mean variance of 0.01 was found between the group ratings of assistant managers, supervisors, and other and the department director's mean score of 2.30 on the scale of openness to experience. Evaluating the scale of agreeableness, raters who were assistant managers, supervisors, or other, had the smallest mean-variance (0.07) compared to the director's self-report of 2.70. On the conscientiousness scale, the smallest mean variance (0.04) was found between the ratings of the assistant managers, supervisors, and others and the department director's self-report of 3.00. Evaluating mean variances by rater position within the organization, those raters who indicated a position within the organization of assistant manager, supervisor, or other, had the overall smallest mean-variance of 0.20 compared to the department director's score on the constructs of the NEO-FFI-3.

Time worked with the department director and NEO-FFI-3 responses. Understanding that this study's respondents, who indicated that their position within the organization was assistant manager or lower, had the smallest variance of mean scores compared to the department director's self-reports of the constructs of the NEO-FFI-3, this research will

next focus on the mean scores of the observer reports based upon how long the observer worked with the department director. When comparing the mean differences between the department director's self-reports and the ratings of those observers who worked with the department director before January 2014 and those who started working with the department director after January 2014, the ratings of the group who started working with the director after January 2014 yielded the smallest mean variance (0.05) compared to the director's self-rating of 1.50 on the scale of neuroticism. On the extraversion scale, the smallest variance of mean scores (0.00) was found between the raters who started working with the department director after January 2014 and the director's self-rating of 2.80. Similarly, the department director and the observers, regardless of when they started working with the department director, produced a mean score of 2.8 on the extraversion scale. On the scale of openness to experience, observers who began working with the department director after January 2014 had the smallest mean-variance (0.03) compared to the department director's mean score of 2.30 and observers who started working with the department director before January 2014 had the smallest mean-variance (0.01) compared to the department director's score of 2.70 on the agreeableness scale. Evaluating the conscientiousness scale, again, raters who began started working with the director after January 2014 reported scores with the smallest variance (0.09) to the department director's mean score of 3.00. Overall, across all items within the NEO-FFI-3, those who started working with the department director after January 2014 had the smallest variance (0.16) of ratings compared to the self-reports of the department director.

Table 12

Means of the NEO-FFI-3 by Demographic Variable

Demographic Variable	*n*	N *M*	E *M*	O *M*	A *M*	C *M*	Net Mean Variance to Director Responses
Age							
Director							
Generation X	1	1.50	2.80	2.30	2.70	3.00	
Respondents							
Baby boomers	20	1.56	2.80	2.28	2.65	3.07	0.20
Generation X	31	1.39	2.73	2.35	2.64	2.97	0.32
Millennial	15	1.44	3.01	2.36	2.74	3.08	0.45
Gender							
Director							
Male	1	1.50	2.80	2.30	2.70	3.00	
Respondents							
Female	22	1.22	3.02	2.44	2.88	3.25	1.07
Male	44	1.57	2.71	2.28	2.56	2.91	0.41
Education							
Director							
Bachelor's degree	1	1.50	2.80	2.30	2.70	3.00	
Respondents							
High school/GED	18	1.82	2.42	2.30	2.30	2.60	1.50
Associate's degree	10	1.51	2.67	2.36	2.78	2.88	0.40
Bachelor's degree	28	1.28	3.04	2.35	2.79	3.30	0.90
Master's degree	10	1.21	3.05	2.33	2.88	3.18	0.93
Organizational position							
Director responses	1	1.50	2.80	2.30	2.70	3.00	
Assistant director or division manager	13	1.21	3.15	2.44	2.83	3.27	1.18
Assistant division manager, supervisor, or other	53	1.51	2.73	2.31	2.63	2.96	0.20
Worked with the director							
Director responses	1	1.50	2.80	2.30	2.70	3.00	
Before January 2014	33	1.35	2.84	2.39	2.71	3.14	0.29
After January 2014	33	1.55	2.80	2.27	2.62	2.91	0.16

Note. N = neuroticism; E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness.

MLQ 5X Responses

Observer reports – MLQ 5X. As the findings of the results of the NEO-FFI-3 have been discussed, this research will continue with a focus on the outcomes of the MLQ 5X assessments. Shown in Table 13, the mean MLQ 5X construct scores, provided by the 66 respondents who rated the department director, were 2.93 for idealized influence, 3.10 for inspirational motivation, 2.36 for intellectual stimulation, and 2.34 for individual consideration. Understanding that the scale within the MLQ 5X ranged from 0 to 4 at the construct level, standard deviations ranging from 0.73 to 0.89 indicated a high level of deviation from the mean construct scores.

Table 13

Observer Means, SD, and Percentiles of MLQ 5X Transformational Leadership Constructs

Construct	*M*	*SD*	Percentile
Idealized influence	2.93	0.89	50th
Inspirational motivation	3.10	0.91	50th
Intellectual stimulation	2.36	0.73	30th
Individual consideration	2.34	0.80	30th

Note. $n = 66$; Scale ranged from 0 to 4.

Based on the MLQ 5X scoring guide, which provided population percentiles for the MLQ 5X constructs (Bass and Avolio, 2004), the respondent ratings indicated that the department director's score of 2.93 for idealized influence was at the 50th percentile, meaning that 50% of the population scored lower and 50% of the population scored higher than 2.93 on idealized influence. Subsequently, following the MLQ 5X scoring guide (Bass & Avolio, 2004), the department director's score of 3.10 on inspirational motivation was also in the 15th percentile,

the score of 2.36 in intellectual stimulation was in the 30th percentile, and the 2.34 score in individual consideration was also in the 30th percentile.

MLQ 5X Means and Standard Deviations by Demographic Variables. Understanding the high-level, MLQ 5X observer ratings of the department director, this research will continue with further analysis of the mean scores of the department director's ratings of the MLQ 5X, as rated by the 66 respondents. Table 14 provides a breakdown, by demographic variable, of the standard deviations of the mean scores of the department director's observer ratings on the constructs of the MLQ 5X. The details in Table 14 show a range of standards deviations, from 0.48 (Generation X raters rating the department director on intellectual stimulation) to 1.13 (millennial raters rating the department director on the idealized influence scale) is observed. Taking into account that scale of the MLQ 5X ranged from 0 to 4 and that the average standard deviations of each variable ranges from 0.72 to 0.99, the average standard deviation of each variable reveals a high level of deviation within rater responses.

Table 14

Means and Standard Deviations of the MLQ 5X by Demographic Variable

Demographic Variable	*n*	II *M (SD)*	IM *M (SD)*	IS *M (SD)*	IC *M (SD)*
Age					
Baby boomers	20	2.84 (0.82)	3.00 (0.88)	2.23 (0.90)	2.45 (0.89)
Generation X	31	3.03 (0.81)	3.19 (0.87)	2.48 (0.48)	2.36 (0.72)
Millennial	15	2.87 (1.13)	3.05 (1.07)	2.28 (0.93)	2.15 (0.85)
Gender					
Female	22	2.91 (1.10)	3.13 (1.08)	2.15 (0.88)	2.09 (0.84)
Male	44	2.94 (0.77)	3.09 (0.82)	2.46 (0.64)	2.47 (0.76)
Education					
High school/GED	18	2.83 (0.79)	2.92 (0.93)	2.26 (0.67)	2.29 (0.86)
Associate's Degree	10	2.51 (0.85)	2.70 (1.03)	2.45 (0.61)	2.35 (0.88)
Bachelor's degree	28	3.16 (0.95)	3.36 (0.81)	2.40 (0.84)	2.48 (0.79)
Master's degree	10	2.91 (0.84)	3.10 (0.92)	2.30 (0.72)	2.03 (0.64)
Organizational position					
Assistant director or division manager	13	2.79 (0.98)	3.08 (0.99)	2.13 (0.98)	2.12 (0.83)
Assistant division manager, supervisor, or other	53	2.97 (0.87)	3.10 (0.90)	2.41 (0.66)	2.40 (0.79)
Worked with the director					
Before January 2014	33	3.00 (0.85)	3.14 (0.89)	2.42 (0.78)	2.38 (0.83)
After January 2014	33	2.87 (0.93)	3.05 (0.93)	2.29 (0.69)	2.30 (0.78)

Note. II = idealized influence; IM = inspirational motivation; IS = intellectual stimulation; IC = individual consideration.

Director self-report – MLQ 5X. Understanding the MLQ 5X observer reports of the department director, Table 15 presents the MLQ 5X self-assessment completed by the

department director. As described in Chapter III of this study, the department director completed an MLQ 5X self-assessment to compare to the observer ratings for discussion purposes. Table 15 shows the department director's mean, self-ratings of 2.90 for idealized influence, 3.50 for inspirational motivation, 2.80 for intellectual stimulation, and 3.00 for individual consideration.

Table 15

Director Means and Percentiles of MLQ 5X Transformational Leadership Constructs

Constructs	*M*	Percentile
Idealized influence	2.90	50th
Inspirational motivation	3.50	70th
Intellectual stimulation	2.80	40th
Individual consideration	3.00	30th

Note. $n = 1$; Scale ranged from 0 to 4.

Following the MLQ 5X scoring guide (Bass and Avolio, 2004), the director's self and observer ratings for idealized influence identically rated the director at the 50th percentile. The director's self-assessment percentile score for idealized influence indicated that 50% of the population scored lower and 50% of the population scored higher. The department director's self-assessment score of 3.50 in inspirational motivation was in the 70th percentile compared to the 3.10 observer rating which was in the 50th percentile. Variation was also observed between the director's self-assessment score of 2.80 in intellectual stimulation, which was in the 40th percentile compared to the observer ratings of 2.36, which was in the 30th percentile. Lastly, the director's score of 3.00 for individual consideration was in the 30th percentile compared to the 2.34 observer score which was also in the 30th percentile.

Comparison of MLQ 5X Means Based on Demographic Category

Given that this study has provided an understanding of the mean scores of the MLQ 5X from the director's self-report and the 66 observer ratings, this research will continue with an evaluation of the mean scores of the constructs of the MLQ 5X, based upon demographic variables, to determine variances in mean scores between the department director's self-rating compared to the mean scores of the 66 raters. Where Table 16 displays the mean scores of responses of the department director and the 66 respondents and the department director's mean score of idealized influence was 2.90, inspirational motivation was 3.50, intellectual stimulation was 2.80, and individual consideration was 3.00, variances in the means were calculated as net variances to determine the actual distance between the department director and observer scores.

Age and MLQ 5X responses. As Table 16 indicates that the department director self-identified as a Generation Xer, evaluating the MLQ 5X construct of idealized influence, the smallest variance (0.03) in the mean score of the department director (2.90) was found with the mean scores (2.87) submitted by millennial raters. Examining inspirational motivation, Generation Xer means scores had the smallest variance (0.31) compared to the mean score of the department director's self-rating (3.50). Similarly, Generations Xer mean scores of the department director's level of intellectual stimulation had the smallest variance (0.32) compared to the department director's mean score (2.80) on the scale of intellectual stimulation. When analyzing individual consideration, baby boomer raters yielded the smallest variance (0.55) in mean scores of individual consideration compared to the department director's self-ratings (3.00). Overall, compared to the self-ratings of the department director, Generation Xer raters had the smallest variance (1.40) in the mean scores of the constructs of the MLQ 5X.

Gender and MLQ 5X responses. Where this study has identified that Generation X raters had the closest overall mean scores compared to the department director, the analysis will continue with a comparison of mean scores of the MLQ 5X constructs based on gender. Evaluating the responses of the idealized influence construct, female respondents had the smallest variance (0.01) compared to the mean score of the director (2.90). On the inspirational motivation scale, female raters had the smallest variance (0.38) to the male director's mean score (3.50). Examining intellectual stimulation mean scores by gender, mean scores provided by male raters had the smallest variance (0.34) compared to the mean score (2.80) submitted by the department director. Analyzing the mean score of the department director on the scale of individual consideration, the smallest variance of mean scores (0.53) was found between male raters and the department director. Overall, comparing the MLQ 5X observer ratings versus the self-report ratings of the department director, the smallest variance of mean scores (1.32) was found in the ratings submitted by male raters.

Education level and MLQ 5X responses. Understanding that the variances of mean MLQ 5X scores submitted by male raters were more closely aligned with the self-rating of the department director, this research will continue with an analysis of the mean scores, as rated by both observer and self-report ratings of the department director, of the constructs of the MLQ 5X compared to raters' and department director's education levels. In the examination of the construct of idealized influence in Table 16, where the department director indicated that his highest level of education was a bachelor's degree, the raters with a master's degree had the smallest variance (0.01) with the mean score of the director's self-rating of 2.90 on the construct of idealized influence. Analyzing the construct of inspirational motivation, the smallest variance (0.14) was found between the mean scores of the department director's self-report (3.50) and

those observer raters who indicated that they possessed a bachelor's degree (3.36). Where 2.80 was the mean score of the department director's level of intellectual stimulation, the smallest variance (0.35) was found with the mean scores of the raters who held an associate's degree. In the examination of the individual consideration construct, the smallest variance of mean scores (0.52) was found with those raters who indicated that they possessed a bachelor's degree. Overall, while noting that that the department director possessed a bachelor's degree, at the construct level of the MLQ 5X, the smallest variance of mean scores (1.32) was found between the mean scores from the self-report of the department director and the mean scores of those observer raters with a bachelor's degree.

Position within the organization and MLQ 5X Responses. Where those observers with a bachelor's degree provided the most-similar responses to the department director's self-reports on the constructs of the MLQ 5X, this section of the research will focus on the observer ratings of the MLQ 5X based upon the raters' positions within the organization. Recalling that the demographic variable for position within the organization grouped raters as either an assistant director or division manager in one group and assistant division manager, supervisor, or other as another group, assistant managers, supervisors, and others' ratings resulted in the smallest variance of means (0.07) compared to the department director's mean score of 2.90 on the MLQ 5X scale of idealized influence. The smallest mean variance (0.40) was found between the assistant manager, supervisors, and others group ratings and the department director's self-reported mean score of 3.50 in inspirational motivation. Evaluating intellectual stimulation, the group of assistant managers, supervisors, and others provided ratings of the department director with the smallest mean variance (0.39) to the department director's self-report of 2.80. Likewise, the ratings of the observer group of assistant managers, supervisors, and others resulted in the

smallest mean-variance (0.60) compared to the department director's self-reported mean score of 3.00 on the scale of individual consideration. Overall, the mean scores of the observer group of assistant managers, supervisors, and others produced the smallest variance (1.46) of ratings compared to the department director's self-reported mean scores on the scales of the MLQ 5X.

Time worked with the department director and MLQ 5X responses. Noting that this research has resulted in the director having greater self-other agreement with the MLQ 5X observer ratings of assistant managers, supervisors, and others, this research will continue with a discussion of the MLQ 5X ratings based upon how long observers have worked with the department director. For purposes of this research, observers indicated when they started working with the director as either before January 2014 or after January 2014. Evaluating results of idealized influence, raters who began working with the director after January 2014 produced scores with the smallest variance of mean scores (0.03) compared to the department director's self-reported score of 2.90. The raters who started working with the director before January 2014 produced ratings with the lowest mean variance of 0.36 compared to the department director's self-reported score of 3.50 of inspirational motivation. The department director provided a self-reported mean score of 2.80 on the scale of intellectual stimulation and those raters who started working with the department director before January 2014 provided ratings with the smallest variance of means (0.38) compared to the director's self-ratings. Those observers who started working with the department director before January 2014 provided ratings with the smallest mean-variance (0.62) to the department director's self-rating of 3.00 on the individual consideration scale. Overall, observers who began working with the department director before January 2014 provided ratings with the smallest variance (1.46) to the department director's self-reports.

Table 16

Means of MLQ 5X by Demographic Category

Demographic Variable	*n*	II *M*	IM *M*	IS *M*	IC *M*	Net Mean Variance to Director Responses
Age						
Director						
Generation X	1	2.90	3.50	2.80	3.00	
Respondents						
Baby boomers	20	2.84	3.00	2.23	2.45	1.69
Generation X	31	3.03	3.19	2.48	2.36	1.40
Millennial	15	2.87	3.05	2.28	2.15	1.85
Gender						
Director						
Male	1	2.90	3.50	2.80	3.00	
Respondents						
Female	22	2.91	3.13	2.15	2.09	1.95
Male	44	2.94	3.09	2.46	2.47	1.32
Education						
Director						
Bachelor's degree	1	2.90	3.50	2.80	3.00	
Respondents						
High school/GED	18	2.83	2.92	2.26	2.29	1.89
Associate's degree	10	2.51	2.70	2.45	2.35	2.19
Bachelor's degree	28	3.16	3.36	2.40	2.48	1.32
Master's degree	10	2.91	3.10	2.30	2.03	1.88
Organizational position						
Director responses	1	2.90	3.50	2.80	3.00	
Assistant director or division manager	13	2.79	3.08	2.13	2.12	2.08
Assistant division manager, supervisor, or other	53	2.97	3.10	2.41	2.40	1.46
Worked with the director						
Director responses	1	2.90	3.50	2.80	3.00	
Before January 2014	33	3.00	3.14	2.42	2.38	1.46
After January 2014	33	2.87	3.05	2.29	2.30	1.69

Note. II = idealized influence; IM = inspirational motivation; IS = intellectual stimulation; IC = individual consideration.

Pearson Correlation Coefficient Analysis – MLQ 5X and NEO-FFI-3

As the descriptive statistics of the MLQ 5X, the NEO-FFI-3, and the demographics of this study's participants have been discussed, the focus of this research will now shift to the findings of correlation analysis of the data collected for this study. As shown in Table 17, at the construct level, Pearson correlation coefficients were calculated to examine the relationship between the 66 observer reports of the MLQ 5X and the NEO-FFI-3.

Table 17

Correlation Coefficients between the NEO-FFI-3 and the MLQ 5X

Construct	N	E	O	A	C
II					
Pearson correlation	-.08	.02	.00	.02	.03
Significance (two-tailed)	.53	.86	.99	.90	.80
IM					
Pearson correlation	-.11	.07	-.03	.05	.07
Significance (two-tailed)	.37	.60	.79	.70	.60
IS					
Pearson correlation	.00	-.07	-.18	-.12	.03
Significance (two-tailed)	.10	.61	.16	.90	.83
IC					
Pearson correlation	.02	.01	-.16	-.01	-.01
Significance (two-tailed)	.86	.95	.19	.91	.94

Note. n = 66; **Correlation is significant at the .01 level (two-tailed); II = idealized influence; IM = inspirational motivation; IS = intellectual stimulation; IC = individual consideration; N = neuroticism; E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness.

Neuroticism and transformational leadership. Evaluating the results of the Pearson correlation coefficient, as shown in Table 17, there were no significant correlations between the constructs of the MLQ 5X and the NEO-FFI-3. However, when calculating a Pearson correlation

between neuroticism and the constructs of transformational leadership, a weak and negative correlation, that was not significant, was found with idealized influence (r (2) = -.08, p > .01) and inspirational motivation (r (2) = -.11, p > .01). The calculated Pearson correlation between neuroticism and intellectual stimulation (r (2) = .00, p > .01) showed no relationship between the two variables and while not significant, a weak correlation (r (2) = .02, p > .01) was found between neuroticism and individual consideration.

Extraversion and transformational leadership. Like the insignificant results found between neuroticism and the constructs of transformational leadership, the Pearson correlation coefficients between extraversion and the transformational leadership constructs resulted in weak, positive and negative correlations that were not significant. Pearson correlation coefficients were calculated between extraversion and intellectual stimulation and a weak, negative relationship, that was not significant, was found (r (2) = -.07, p > .01). Pearson correlation coefficients also revealed, that while not significant, positive correlations between extraversion and idealized influence (r (2) = .02, p > .01), extraversion and inspirational motivation (r (2) = .07, p > .01), and extraversion and individual consideration (r (2) = .01, p > .01).

Openness to experience and transformational leadership. Similar to the correlation findings between extraversion and the MLQ 5X transformational leadership constructs, that were not significant, the calculated Pearson correlation coefficients showed that there were no significant correlations between the NEO-FFI-3, openness to experience construct and the transformational leadership constructs within the MLQ 5X. The Pearson correlation coefficient (r (2) = .00, p > .01) calculated between openness to experience and idealized influence showed no relationship between the two variables. Furthermore, Pearson correlation coefficients revealed

weak and negative relationships, that were not significant, between openness to experience and inspirational motivation (r (2) = -.03, p > .01), openness to experience and intellectual stimulation (r (2) = -.18, p > .01), and openness to experience and individual consideration (r (2) = -.16, p > .01).

Agreeableness and transformational leadership. Consistent with the weak relationships, which were not significant, between openness to experience and the constructs of the transformational leadership, Pearson correlation coefficients between agreeableness and the transformational leadership constructs resulted in a mix of positive and negative correlations that were not significant. The calculated Pearson correlation coefficients showed a weak, positive correlation, that was not significant, between agreeableness and the MLQ 5X construct of idealized influence (r (2) = .02, p > .01) and agreeableness and the MLQ 5X construct of inspirational motivation (r (2) = .05, p > .01). Pearson correlation coefficients showed weak, negative relationships, which were not significant, between agreeableness and intellectual stimulation (r (2) = -.18, p > .01) and agreeableness and individual consideration (r (2) = -.16, p > .01).

Conscientiousness and transformational leadership. As found with the weak relationships, that were not significant, between agreeableness and transformational leadership, Pearson coefficient correlations between conscientiousness and the MLQ 5X transformational leadership constructs resulted in weak correlations, both positive and negative, that were not significant. Pearson coefficient correlations revealed positive relationships, that were not significant, between conscientiousness and the MLQ 5X construct of idealized influence (r (2) = .03, p > .01), conscientiousness and inspirational motivation (r (2) = .07, p > .01), and conscientiousness and intellectual stimulation (r (2) = .03, p > .01). A Pearson correlation

coefficient also showed a negative relationship, that was not significant, between conscientiousness and the MLQ 5X construct of individual consideration (r (2) = -.01, p > .01).

Spearman *Rho* Correlation Coefficient Analysis – MLQ 5X, NEO-FFI-3, and Demographic Variables

Understanding that the collected data did not yield any significant Pearson correlation coefficients between the constructs within the MLQ 5X and the NEO-FFI-3, this section of the study will discuss the findings in the correlations between the demographic data of the 66 respondents and the results of their MLQ 5X and NEO-FFI-3 ratings of the department director. Table 18 provides the calculated Spearman *rho* correlation coefficients between the demographics of the 66 respondents and their MLQ 5X and NEO-FFI-3 ratings of the department director.

Rater gender. Drilling down into the results of the analysis between respondents' gender and their ratings of the department director's NEO-FFI-3 level of neuroticism, a Spearman *rho* correlation coefficient was calculated and a weak positive correlation (r (2) = 0.29, p > .05) was found between the two variables (gender & neuroticism). As the gender variable in this study was coded "1" for women and "2" for men, the Spearman *rho* correlation coefficient suggested that men rated the department director higher on the personality scale of neuroticism and that women rated the department director lower in neuroticism.

Table 18

Correlation Coefficients Between the NEO-FFI-3, the MLQ 5X, and Demographic Variables

Construct	Age	Gender	Education	Position	Worked with Director
Idealized influence					
Spearman *rho*	.08	-.04	.15	.07	-.06
Significance (two-tailed)	.52	.74	.24	.57	.62
Inspirational motivation					
Spearman *rho*	.05	-.10	.20	-.02	-.04
Significance (two-tailed)	.69	.45	.11	.90	.74
Intellectual stimulation					
Spearman *rho*	.07	.16	.05	.07	-.11
Significance (two-tailed)	.60	.21	.70	.58	.39
Individual consideration					
Spearman *rho*	-.10	.24	-.07	.15	-.05
Significance (two-tailed)	.43	.05	.55	.24	.67
Neuroticism					
Spearman *rho*	-.12	.29*	-.38**	.23	.15
Significance (two-tailed)	.36	.02	.00	.07	.23
Extraversion					
Spearman *rho*	.13	-.25*	.47**	-.30*	-.04
Significance (two-tailed)	.29	.04	.00	.01	.75
Openness to experience					
Spearman *rho*	.07	-.13	-.05	-.11	.17
Significance (two-tailed)	.56	.30	.71	.36	.16
Agreeableness					
Spearman *rho*	.10	-.30*	.33**	-.15	-.02
Significance (two-tailed)	.40	.01	.01	.23	.84
Conscientiousness					
Spearman *rho*	.02	-.31*	.44**	-.19	-.18
Significance (two-tailed)	.87	.01	.00	.12	.15

Note. $n = 66$; ** Correlation is significant at the .01 level (two-tailed); * Correlation is significant at the .05 level (two-tailed).

Similar to the Spearman *rho* correlation coefficient calculated between gender and neuroticism, a significant relationship, although negative, was found between gender and the NEO-FFI-3 construct of extraversion (r (2) = -0.25, $p > .05$). Considering gender and extraversion, the weak, negative Spearman *rho* correlation coefficient indicated that men rated the department director lower on the extraversion personality construct and that woman rated the department director higher on extraversion.

Like the negative relationship between gender and extraversion, a negative relationship was found between gender and agreeableness. A Spearman *rho* correlation coefficient was calculated between the rater's gender and their rating of the department director's score of agreeableness and a moderate, negative correlation that was significant was found (r (2) = -0.30, $p > .05$). The moderate, negative Spearman *rho* correlation coefficient between gender and agreeableness suggested that men rated the department director lower on the NEO-FFI-3 agreeableness scale and that women rated the department director higher in agreeableness.

As found between gender and agreeableness, a moderate and negative correlation, that was significant, was found between a rater's gender and his or her rating of the department director's score on the NEO-FFI-3 construct of conscientiousness. A Spearman *rho* correlation coefficient was calculated between a rater's gender and their rating of the department director's score of conscientiousness, which resulted in the finding of a moderate, negative correlation (r (2) = -0.31, $p > .05$). The moderate, negative Spearman *rho* correlation coefficient revealed that men rated the department director lower on conscientiousness while women rated the department director higher in conscientiousness.

Rater education level. Similar to the significant relationships between raters' gender and the NEO-FFI-3 constructs of neuroticism, extraversion, agreeableness, and conscientiousness,

Spearman *rho* correlation coefficients also resulted in significant relationships between raters' education levels and neuroticism, extraversion, agreeableness, and conscientiousness. As part of this study, the education level variable was coded from high to low, where those with a high school education were coded as "0" up to those with a PhD or post-graduate degree being coded as "5." Noting the coding of the education level variable, the correlation coefficients revealed a negative relationship only between a respondent's education level and how he or she rated the department director on the neuroticism scale while positive relationships were found between a rater's education level and how he or she rated the department director in extraversion, agreeableness, and conscientiousness.

As previously noted, a Spearman *rho* correlation coefficient was calculated for the relationship between a rater's education level and his or her rating of the department director on the NEO-FFI-3 construct of neuroticism and a moderate, negative correlation that was significant was found (r (2) = -0.38, p > .01). The negative Spearman *rho* correlation coefficient between rater education level and how he or she rated the department director's level of neuroticism suggested that the higher the education level of the rater, the lower he or she rated the department director's score of neuroticism; the lower the education level of the rater, the higher he or she rated the department director's level of neuroticism.

Counter to the negative relationship between a rater's education level and how he or she rated the department director's level of neuroticism, a positive relationship was found between a rater's education level and how he or she rated the department director on the NEO-FFI-3 construct of extraversion. A Spearman *rho* correlation coefficient was calculated for the relationship between a rater's education level and how he or she rated the department director's level of extraversion and a moderate correlation that was significant was found (r (2) = 0.47, p >

.01). The Spearman *rho* correlation coefficient calculated between raters' education level and their score of the department director's extraversion, which resulted in the strongest significant correlation in the study, revealed that the higher the rater's level of education, the higher he or she rated the department director's level of extraversion.

Similar to the positive findings between a rater's education level and his or her rating of the department director's level of extraversion, a positive, significant relationship was found between a rater's education level and his or her rating of the department director's score of agreeableness. A Spearman *rho* correlation coefficient found a positive, moderate relationship, that was significant (r (2) = 0.33, $p > .01$) between raters' education level and how they rated the department director's level of agreeableness. The positive correlation suggested that the higher the rater's education level, the higher he or she rated the department director on the construct of agreeableness.

While a positive and significant relationship was found between a rater's education level and how he or she rated the department director on the agreeableness scale, a positive and significant relationship was also found between a rater's education level and how he or she rated the department director on the NEO-FFI-3 construct of conscientiousness. The calculated Spearman *rho* correlation coefficient (r (2) = 0.44, $p > .01$) indicated a moderate and positive relationship between rater education level and their rating of the department director's level of conscientiousness. The Spearman *rho* correlation coefficient calculated between rater education level and their rating of the department director's level of conscientiousness, which is the second strongest significant correlation between the demographic variables and the NEO-FFI-3 personality constructs, indicated that the higher the rater's education level, the higher he or she rated the department director's level of conscientiousness.

Rater position within the organization. Like the significant relationships between a rater's education level and a number of the NEO-FFI-3 personality constructs, a significant, negative relationship was found between a rater's position within the organization and his or her rating of the department director's level of extraversion. Aside from the construct of extraversion, rater position within the organization did not have significant correlations to any other personality constructs.

To evaluate the relationship between the demographic variable of rater position within the organization and how the department director was rated on the scale of extraversion, a Spearman *rho* correlation coefficient was calculated and a moderate, negative relationship, that was significant, was found (r (2) = -0.30, $p > .05$). Recall that the coding of the demographic variable of position within the organization was "1" for an assistant director or division manager and "2" was assistant manager, supervisor, or other. Given the coding of the variable of position within the organization and the negative relationship to NEO-FFI-3 personality construct of extraversion, the Spearman *rho* correlation coefficient suggested that the assistant directors and managers (rated as "1"), who were closer to the department director on the organizational chart, rated the department director higher on the extraversion scale. Conversely, those assistant division managers, supervisors, or other (rated as a "2"), who were further away from the department director on the organizational chart, rated the department director lower on the extraversion construct.

Multiple Linear Regression Analysis

As this research has discussed significant Spearman *rho* correlation coefficients between several of the demographic variables of the 66 respondents and how they rated the department director on four of five of the NEO-FFI-3 personality constructs and none of the MLQ 5X

transformational leadership constructs, this study will now examine the results of multiple linear regression analysis of the demographics of the 66 respondents and how they rated the department director on both the NEO-FFI-3 personality constructs and the MLQ 5X transformational leadership constructs.

The purpose of the multiple linear regression analysis, which included analysis of the one-way analysis of variance (ANOVA) at a significance level of .05, was to determine if any of the demographic variables of the 66 respondents would predict how the respondents rated the department director on the NEO-FFI-3 and MLQ 5X constructs. Holding the 66 respondent ratings of the department director on the NEO-FFI-3 and MLQ 5X constructs as dependent variables and the demographics of the 66 respondents as independent variables, no significant linear regressions were found between the demographic variables and the ratings of the MLQ 5X constructs. However, significant linear regressions were found between the demographic variables of the 66 respondents and their ratings of the department director on the NEO-FFI-3 personality constructs.

Idealized influence ratings and rater demographic variables. As previously alluded and shown in Table 19 and Table 20, a multiple linear regression was calculated to predict how the 66 respondents, based upon their demographic variables including when they started working with the director, their position within the organization, their gender, their age, and their education level, would rate the department director on the MLQ 5X construct of idealized influence. The regression equation was not significant ($F(5, 60) = 0.71$, $p > .05$) with an R^2 of .06. As the regression equation was not significant, the demographic variables of the respondents were not significant predictors of how they rated the department director's level of idealized influence.

Table 19

Model Summary – Idealized Influence and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.24[a]	.06	-.02	0.90

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 20

ANOVA[a] – Idealized Influence and Demographic Variables

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	2.86	5.00	0.57	0.71	.62[b]
Residual	48.12	60.00	0.80		
Total	50.97	65.00			

Note. $n = 66$.
[a]Dependent variable: Idealized influence. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Inspirational motivation ratings and rater demographic variables. Similar to the linear regression analysis between rater demographics and how they rated the department director's level of idealized influence, a multiple linear regression was calculated to predict how the 66 respondents, based upon their demographic variables, would rate the department director's level upon the MLQ 5X construct of inspirational motivation. As shown in Table 21 and Table 22, the regression equation was not significant ($F(5, 60) = 0.62$, $p > .05$) with an R^2 of .05. As the regression equation was not significant, the demographic variables of the respondents were not significant predictors of how they rated the department director's level of inspirational motivation.

Table 21

Model Summary – Inspirational Motivation and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.22[a]	.05	-.03	0.92

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 22

ANOVA[a] – Inspirational Motivation and Demographic Variables

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	2.63	5.00	0.53	0.62	.69[b]
Residual	51.11	60.00	0.85		
Total	53.74	65.00			

Note. $n = 66$.
[a]Dependent variable: Inspirational motivation. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Intellectual stimulation ratings and rater demographic variables. Like the analysis between the demographics of the 66 respondents and the ratings of the department director's level of the MLQ 5X construct of inspirational motivation, a multiple linear regression was calculated to determine if respondent demographics would predict how they would rate the department director on the MLQ 5X construct of intellectual stimulation. The regression equation, as shown in Tables 23 and 24, was not significant ($F(5, 60) = 1.55$, $p > .05$) with an R^2 of .11. As the regression equation was not significant, the demographic variables of the respondents were not significant predictors of how they rated the department director's level of intellectual stimulation.

Table 23

Model Summary – Intellectual Stimulation and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.34[a]	.11	.04	0.72

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 24

ANOVA[a] – Intellectual Stimulation and Demographic Variables

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	4.01	5.00	0.80	1.55	.19[b]
Residual	31.00	60.00	0.52		
Total	35.01	65.00			

Note. $n = 66$.
[a]Dependent variable: Intellectual stimulation. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Individual consideration ratings and rater demographic variables. Consistent with the examination of the regression analysis of rater demographics and their ratings of the department director's level of the MLQ 5X construct of intellectual stimulation, a multiple linear regression was calculated to predict how raters, based upon their demographics, would rate the department director on the MLQ 5X construct of individual consideration. Based upon Tables 25 and 26, the regression equation was not significant ($F(5, 60) = 0.10$, $p > .05$) with an R^2 of .10.

Table 25

Model Summary – Individual Consideration and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.31[a]	.10	.02	0.79

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 26

ANOVA[a] – Individual Consideration and Demographic Variables

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	3.94	5.00	0.79	1.26	.30[b]
Residual	37.64	60.00	0.63		
Total	41.58	65.00			

Note. $n = 66$.
[a]Dependent variable: Individual consideration. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Neuroticism and rater demographic variables. Finding no significant predictors between rater demographic variables and rater scoring of the department director on the MLQ 5X transformation leadership constructs, the research will now focus on the linear regression analysis between the demographic variables of the 66 raters and their scoring of the department director on the NEO-FFI-3 personality constructs.

Utilizing the demographic variables of the 66 raters as independent variables, a multiple linear regression was calculated to predict rater scoring of the department director on the NEO-FFI-3 construct of neuroticism and as shown in Tables 27 and 28, a significant regression equation was found ($F(5, 60) = 4.40$, $p < .05$), with an R^2 of .27. The R^2 of .27 also indicates that

27% of the variation in the department director's observer rating of neuroticism can be explained by the demographic variables of the raters.

Shown in Table 29, based on the demographic variables of the 66 raters, a significance level of < .05 in the regression was found with rater education level (p = 0.004) and when the rater started working with the department director (p = 0.011). Table 29 also indicates that the predicted respondent rating of the department director's level of neuroticism was equal to 1.07 – 0.22 (Education Level) + 0.37 (When Rater Started Working with the Director). Given that rater education was coded as a range from "1" (GED or high school) to "5" (PhD or Post Graduate), as rater education level increased by one level, their neuroticism rating of the department director decreased by 0.22. Where the variable of when the rater began working with the director was coded as "1" (before January 2014) and "2" (after January 2014), those raters who worked with the department director for less time rated the department director higher on the neuroticism scale by 0.37. Rater education level and when the rater began working with the department director were significant predictors of how the rater scored the department director on the NEO-FFI-3 construct of neuroticism.

Table 27

Model Summary – Neuroticism and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.52[a]	.27	.21	0.53

Note. n = 66.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 28

ANOVA[a] *– Neuroticism and Demographic Variables*

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	6.28	5.00	1.26	4.40	.002[b]
Residual	17.14	60.00	0.29		
Total	23.42	65.00			

Note. $n = 66$.
[a]Dependent variable: Neuroticism. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 29

Coefficients[a] *– Neuroticism and Demographic Variables*

	Unstandardized		Standardized		
Model	*B*	Standard Error	Beta	*t*	Significance
(Constant)	1.07	0.58		1.84	.071
Gender	0.19	0.15	0.15	1.23	.222
Education level	-0.22	0.08	-0.39	-2.97	.004
Age	-0.04	0.10	-0.05	-0.46	.646
Position in organization	0.10	0.18	0.07	0.58	.561
Started with director	0.37	0.14	0.31	2.62	.011

Note. $n = 66$.
[a]Dependent variable: Neuroticism.

Extraversion and rater demographic variables. Understanding that rater education and when the rater started working with the department director were significant predictors of how raters scored the department director on the NEO-FFI-3 construct of neuroticism, this research will now discuss the results of a multiple linear regression analysis to determine if rater demographics predicted how those raters scored the department director on the NEO-FFI-3 construct of extraversion. Where the demographic variables of the 66 raters were identified as independent variables, a multiple linear regression was calculated to predict rater scoring of the

department director on the NEO-FFI-3 construct of extraversion and as shown in Tables 30 and 31, a significant regression equation was found ($F(5, 60) = 5.17$, $p < .05$), with an R^2 of .30. The R^2 of .30 indicates that 30% of the variances in the observer ratings of the department director can be explained by the demographic variables of the raters.

Additionally, Table 32 shows that based on the demographic variables of the 66 raters, a significance level of < .005 in the regression was found with rater education level ($p = 0.002$). As Table 32 indicates, the predicted respondent rating of the department director's score of extraversion was equal to 3.02+ 0.22 (Education Level). Due to rater education being coded as a range from "1" (GED or High School) to "5" (PhD or Post Graduate), as rater education level increased by one level, their rating of the department director's score of extraversion increased by 0.22. Rater education was a significant predictor of how the rater scored the department director on the extraversion scale.

Table 30

Model Summary – Extraversion and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.55[a]	.30	.24	0.47

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 31

ANOVA[a] *– Extraversion and Demographic Variables*

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	5.82	5.00	1.17	5.17	.0001[b]
Residual	13.52	60.00	0.23		
Total	19.34	65.00			

Note. $n = 66$.
[a]Dependent variable: Extraversion. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 32

Coefficients[a] *– Extraversion and Demographic Variables*

	Unstandardized		Standardized		
Model	*B*	Standard Error	Beta	*t*	Significance
(Constant)	3.02	0.52		5.83	.000
Gender	-0.11	0.14	-0.10	-0.84	.406
Education level	0.22	0.07	0.43	3.33	.002
Age	0.05	0.09	0.07	0.61	.541
Position in organization	-0.23	0.16	-0.17	-1.44	.154
Started with director	-0.21	0.13	-0.19	-1.63	.108

Note. $n = 66$.
[a]Dependent variable: Extraversion.

Openness to experience and rater demographic variables. As the analysis showed that rater education level was a significant predictor of how raters scored the department director on the extraversion scale, this research will now examine if the 66 respondents' demographic variables were significant predictors of how the raters scored the department director on the NEO-FFI-3 scale of openness to experience. Assuming rater demographics as independent variables, as shown in Tables 33 and 34, a multiple linear regression was calculated to predict raters' scores of the department director on the NEO-FFI-3 construct of openness to experience.

Due to the regression equation not being significant ($F(5, 60) = 1.24$, $p > .05$) with an R^2 of .09, rater demographics were not a significant predictor of raters' scores of the department director on the NEO-FFI-3 construct of openness to experience.

Table 33

Model Summary – Openness to Experience and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.31[a]	.09	.02	0.39

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 34

ANOVA[a] – Openness to Experience and Demographic Variables

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	0.93	5.00	0.19	1.24	.304[b]
Residual	8.99	60.00	0.15		
Total	9.92	65.00			

Note. $n = 66$.
[a]Dependent variable: Openness to experience. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Agreeableness and rater demographic variables. While the analysis has shown that rater demographics were not significant predictors of how raters scored the department director on the NEO-FFI-3 construct of openness to experience, this study will continue with an examination to determine if rater demographics are significant predictors of the observer ratings of the department director's level of the NEO-FFI-3 construct of agreeableness. Based upon rater demographic variables, a multiple linear regression was calculated to predict rater scores of the

department director's level of agreeableness and as shown in Tables 35 and 36, a significant regression was found ($F(5, 60) = 2.45$, $p < .05$), with an R^2 of .17. The R^2 of .17 indicates that 17% of the variation in the observer ratings of department director's level of agreeableness is attributed to the demographics of the raters. Table 37 also reveals that based upon the demographic variables of the 66 raters, a significance level of < .05 in the regression was found with rater education level ($p = 0.020$). Further indicated in Table 37, the predicted respondent rating of the department director's score of agreeableness was equal to 2.07+ 0.19 (Education Level). Due to rater education being coded as a range from "1" (GED or High School) to "5" (PhD or Post Graduate), as rater education level increased by one level, their rating of the department director's score of agreeableness increased by 0.19. Rater education was found to be a significant predictor of how the rater scored the department director on the NEO-FFI-3 scale of agreeableness.

Table 35

Model Summary – Agreeableness and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.41[a]	.17	.10	0.56

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 36

ANOVA[a] *– Agreeableness and Demographic Variables*

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	3.89	5.00	0.78	2.45	.043[b]
Residual	19.04	60.00	0.32		
Total	22.93	65.00			

Note. $n = 66$.
[a]Dependent variable: Agreeableness. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 37

Coefficients[a] *– Agreeableness and Demographic Variables*

	Unstandardized		Standardized		
Model	*B*	Standard Error	Beta	*t*	Significance
(Constant)	2.87	0.61		4.67	.000
Gender	-0.17	0.16	-0.14	-1.06	.295
Education level	0.19	0.08	0.34	2.39	.020
Age	0.01	0.10	0.01	0.08	.940
Position in organization	-0.04	0.19	-0.03	-0.21	.837
Started with director	-0.22	0.15	-0.19	-1.50	.140

Note. $n = 66$.
[a]Dependent variable: Agreeableness.

Conscientiousness and rater demographic variables. Given the determination that raters' levels of education was a significant predictor of how raters scored the department director on the NEO-FFI-3 scale of agreeableness, this research will continue with the analysis to determine if any of the raters' demographic variables were significant predictors of observer ratings of the department director on the NEO-FFI-3 scale of conscientiousness. To complete the analysis, a multiple linear regression was calculated to predict observer ratings of the department director on the conscientiousness scale and as shown in Tables 38 and 39, a significant

regression equation was found ($F(5, 60) = 6.02$, $p < .001$), with an R^2 of .33. The R^2 of .33 reveals that 33% of the variation in the observer ratings of the department director, on the conscientiousness scale, can be explained by the demographic variables of the observing raters.

Table 40 also shows that based upon the demographic variables of the 66 raters, a significance level of < .001 in the regression was found with rater education level ($p = 0.000$) and a significance level of < .005 in the regression was found with when the rater started working with the department director ($p = 0.003$). Table 40 shows the predicted respondent rating of the department director's score of conscientiousness was equal to 2.07 + 0.28 (Education Level) – 0.41 (When Rater Started Working with the Director). Where rater education level was coded as a range from "1" (GED or High School) to "5" (PhD or Post Graduate), as rater education level increased by one level, their rating of the department director's score of conscientiousness increased by 0.28. However, as the variable of when the rater began working with the director was coded as "1" (before January 2014) and "2" (after January 2014), those raters who worked with the department director for less time rated the department director lower on the conscientiousness scale by 0.41. Rater education and when the rater began working with the department director were found to be significant predictors of how rater scored the department director on the NEO-FFI-3 scale of conscientiousness.

Table 38

Model Summary – Conscientiousness and Demographic Variables

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
Total	.58[a]	.33	.28	0.50

Note. $n = 66$.
[a]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 39

ANOVA[a] *– Conscientiousness and Demographic Variables*

Model	Sum of Squares	*df*	Mean Square	*F*	Significance
Regression	7.54	5.00	1.51	6.02	.000[b]
Residual	15.03	60.00	0.25		
Total	22.57	65.00			

Note. $n = 66$.
[a]Dependent variable: Conscientiousness. [b]Predictors: (Constant), when started working with director, position in organization, gender, age, education level.

Table 40

Coefficients[a] *– Conscientiousness and Demographic Variables*

	Unstandardized		Standardized		
Model	*B*	Standard Error	Beta	*t*	Significance
(Constant)	3.40	0.55		1.84	.000
Gender	-0.15	0.14	-0.12	1.23	.307
Education level	0.28	0.07	0.50	-2.97	.000
Age	-0.03	0.09	-0.04	-0.46	.709
Position in organization	-0.06	0.16	-0.04	0.58	.713
Started with director	-0.41	0.13	-0.35	2.62	.003

Note. $n = 66$.
[a]Dependent variable: Conscientiousness.

Testing of Research Hypotheses

Given the statistical analysis that has been completed to this point, to include calculating the mean scores of the NEO-FFI-3 and the MLQ 5X and examining the correlations between those means, this research will continue with the use of the statistical analysis to complete testing of this research's hypotheses, which include:

Ha1: The respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization will provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Ha2: Positive correlations will be found between transformational leadership and the Big Five personality traits.

Testing of null hypothesis one. Referencing hypothesis one, the null hypothesis would state that the respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization would not provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X. Based upon the department director's levels of the NEO-FFI-3 shown in Table 10, which reported the raw scores and standard deviations of the 66 observer ratings and was further broken down by the scores based on the demographic variables of the raters, the average standard deviation of each variable ranged between 0.32 and 0.73, which indicated a moderate level of deviations within rater responses based upon the 0 to 4 rating scale of the NEO-FFI-3.

Compared to the moderate level of deviations within the NEO-FFI-3, greater deviation ranges were found within the MLQ 5X when analyzing rater responses based upon demographic category. Recalling that the MLQ 5X also had a rating scale of 0 to 4, Table 14 provided a breakdown, by demographic variable, of the standard deviations of the mean scores of the department director's observer ratings on the constructs of the MLQ 5X. The details in Table 14 showed that the average standard deviations of each variable ranged from 0.61 to 1.13 and revealed a high level of deviation within the 66 rater responses when evaluated by demographic variables of the raters. Given the moderate to high variations of the observer ratings, based on the

demographic variables of the raters, of the department director's scores on the NEO-FFI-3 and MLQ 5X, the null hypothesis was accepted.

Testing of Null Hypothesis Two. As this research has accepted null hypothesis one, this study will now focus on null hypothesis two, which states that no positive correlations will be found between transformational leadership and the Big Five personality traits. Based upon the findings of Table 17, which provided Pearson correlation coefficients at the construct level for the 66 observer reports, no significant correlations were found between the MLQ 5X and the NEO-FFI-3. As this research resulted in no significant relationships between the constructs of the MLQ 5X and the NEO-FFI-3, null hypothesis two was accepted.

Conclusion

As the findings of this research have been discussed, a high-level recap of the findings will be provided in this conclusion of Chapter IV. For purposes of this section of the chapter, it must be recalled that the primary purpose of this study was to investigate possible relationships from observer reports of a public sector department director's ratings of the Big Five personality traits measured by the NEO-FFI-3 compared to ratings of transformational leadership measured by the MLQ 5X. Additionally, the secondary purpose of this study was to determine how demographic variables, to include education level, gender, years worked for the director, and position within the organization, may have affected observer ratings of the department director. To support the primary and secondary purposes of this research the following hypotheses were tested:

> Ha1: The respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization will provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Ha2: Positive correlations will be found between transformational leadership and the Big Five personality traits.

Understanding the primary and secondary purposes and the hypotheses of the research, the study employed both self and observer responses of the NEO-FFI-3, MLQ 5X, and a demographic questionnaire. Utilizing the 66 observer responses (a 46% response rate), the 1 response from the department director who was rated, and IBM SPSS Statistics 25, a number of descriptive statistics, correlation coefficients, regression models, and reliability tests were performed. As Cronbach's alpha tests showed that the NEO-FFI-3 and the MLQ 5X were reliable assessments, the descriptive statistics and Pearson correlation coefficients resulted in acceptance of the null hypotheses in this study. Acceptance of the null hypotheses of this study indicated that the 66 respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization did not provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X and that there were no significant correlations between transformational leadership and the Big Five personality traits.

Chapter V: Discussion

As the results of this study have been provided, this section of the research will provide a summary of the study, address the hypotheses, answer the research questions, compare results to and draw conclusions from the findings of the literature review, and make recommendations for future research.

Summary

Understanding that leadership has been identified as a key factor of an organization's success (Hayward, 2011) and that several leadership models exist, this quantitative survey methodology study focused on transformational leadership, which consists of the constructs of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration and posits transformational leaders can influence followers to strive for high achievement and high levels of selflessness in pursuit of organizational goals (Bass, 1985). Transformational leaders are said to possess the abilities to articulate clear organizational vision and work with followers to strengthen employee commitment to the organization (Kirkbride, 2006).

As a co-focus to transformational leadership, this research also examined the Big Five personality traits (Tupes & Christal, 1992). Where trait theory is the underlying premise of the Big Five personality traits, which include neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Tupes & Christal, 1992), it has suggested that individuals display personality traits in interactions with others (Robbins & Judge, 2009) and that personality traits are consistent over time and in multiple situations (Mischel & Shoda, 1995).

Utilizing the concepts of transformational leadership, measured by the MLQ 5X, and the Big Five personality traits, measured by the NEO-FFI-3, this research examined possible

correlations between transformational leadership and the Big Five personality traits. The research was furthered by examining demographic variables of the participants, measured by a demographic questionnaire, to understand how participant demographics may have affected those correlations between transformational leadership and the Big Five personality traits.

Purposes of study. Understanding the mechanics of how this study was conducted, to add to the limited research of leadership in the public sector (Van Wart, 2003), this study was conducted within a municipality in the southwestern United States with a population of over 1,000,000 residents. While addressing the gap of leadership studies in the public sector, the primary purpose of this study was to investigate possible relationships from observer reports of a public sector department director's ratings of the Big Five personality traits measured by the NEO-FFI-3 compared to ratings of transformational leadership measured by the MLQ 5X. Additionally, the secondary purpose of this study was to determine how demographic variables, to include education level, gender, years worked for the director, and position within the organization, may have affected observer ratings of the department director.

Research questions and hypotheses. To support the primary and secondary purposes of this research, the following research questions guided the study:

1. What are the relationships between a department director's observer-reported assessment of Big Five personality traits measured by the NEO-FFI-3 and transformational leadership measured by the MLQ 5X?
2. What are the relationships between demographic variables and the self and observer reports of the NEO-FFI-3 and MLQ 5X?
3. Were demographic variables of the raters predictors of their NEO-FFI-3 and MLQ 5X observer ratings of the department director?

The following hypotheses were used for this study:

Ha1: The respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization will provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Ha2: Positive correlations will be found between transformational leadership and the Big Five personality traits.

Results

Understanding the components of this study, this section of the research will discuss the overall ratings, discuss the study's hypotheses, and conclude by answering the research questions. Based on the population size of 143 participants, as 66 participants fully completed the MLQ 5X, NEO-FFI-3, and the demographic questionnaire, the response rate of this study was 46%. Additionally, the department director completed all three surveys and this data was used for overall comparisons of how the department director rating himself compared to the ratings submitted by his followers.

Overall Ratings. When comparing the scores of the observer and self-reports of the NEO-FFI-3, as shown in Table 41, consistency was found in the results of high ratings of extraversion and the average ratings of openness to experience and conscientiousness. However, variance was found in neuroticism where the observer reports indicated an average rating of the department director's score of neuroticism compared to the director's low self-rating and where the observers rated the department director as average in agreeableness, the department director's self-rating indicated a high level of agreeableness.

Table 41

Observer and Director Scores of NEO-FFI-3 Personality Constructs

Construct	Observers*	Director**
Neuroticism	Average	Low
Extraversion	High	High
Openness to experience	Average	Average
Agreeableness	Average	High
Conscientiousness	Average	Average

Note. $n = 66$*; $n = 1$**.

Similar to the findings in the comparisons of the NEO-FFI-3, variances were found when comparing the findings of the department director's MLQ 5X self-reports compared to the observer reports. As shown in Table 42, the greatest variation of observer to the director's ratings (70th percentile compared to the 50th percentile) was found in inspirational motivation where the department director's self-assessment was higher than the observer reports. The second greatest variation (40th percentile compared to the 30th percentile) was found in intellectual stimulation as the department director's self rating was higher than the observer ratings. No variation was found between the self ratings and the observer reports for idealized influence (50th percentile) and individual consideration (30th percentile).

Table 42

Observer and Director Scores of MLQ 5X Transformational Leadership Constructs

Construct	Observers*	Director**
Idealized influence	50th percentile	50th percentile
Inspirational motivation	50th percentile	70th percentile
Intellectual stimulation	30th percentile	40th percentile
Individual consideration	30th percentile	30th percentile

Note. $n = 66$*; $n = 1$**.

Discussion of Hypotheses. Taking into account the high-level findings of the study's assessments, this research will continue with a discussion of the findings in relation to the following research hypotheses:

Ha1: The respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization will provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Ha2: Positive correlations will be found between transformational leadership and the Big Five personality traits.

Hypothesis one. Where hypothesis one stated that the respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization would provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X, the findings of this study did not support the hypothesis. Recalling that the scales of the NEO-FFI-3 and the MLQ 5X ranged from 0-4, when comparing observer results of the two assessments, based upon demographic variables of the 66 respondents, the standard deviations of the NEO-FFI-3 scores were moderate as they ranged between 0.32 and 0.73. When evaluating the observer reports of the MLQ 5X, the standard deviations were even higher (0.61 to 1.13) when comparing results based upon the demographic variables of the respondents. As holding the demographics of the 66 observers as independent variables resulted in moderate to high standard deviations in the observer ratings of the NEO-FFI-3 and the MLQ 5X, the researcher accepted null hypothesis one. Acceptance of null hypothesis one conceded that respondents in the sample with similar age, gender, education level, time worked with the director, and position within the organization did not provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X.

Hypothesis two. Understanding that respondents with similar demographic characteristics did not provide similar observer reports of the department director on the NEO-FFI-3 and the MLQ 5X, this research will continue with a discussion of hypothesis two, which predicted that positive correlations would be found between transformational leadership and the Big Five personality traits. To test null hypothesis two, this research analyzed Pearson correlation coefficients which resulted in no significant correlations between the constructs of the NEO-FFI-3 and the MLQ 5X. As no significant correlations were found between the NEO-FFI-3 and the MLQ 5X, the researcher accepted the null hypothesis and concluded that within this study, there were no positive correlations found between transformational leadership and the Big Five personality traits.

Research question one. While understanding that both null hypotheses in this study were accepted, this study will continue with a discussion of the research questions. Recall that research question one asked: What are the relationships between a department director's observer-reported assessment of Big Five personality traits measured by the NEO-FFI-3 and transformational leadership measured by the MLQ 5X? Although hypothesis two was rejected due to no significant correlations between the constructs measuring the Big Five personality traits and transformational leadership, the research did provide some insight through the directions (positive/negative) of the relationships that were not statistically significant. Understanding again that there were no significant relationships between the constructs of the NEO-FFI-3 and the MLQ 5X, shown in Table 17, the results of Pearson correlation coefficients did show negative relationships between neuroticism and idealized influence and inspirational motivation, a positive correlation with individual consideration, and no correlation with intellectual stimulation. Extraversion was positively correlated with each of the transformational

leadership constructs with the exception of intellectual stimulation. Openness to experience was negatively correlated with all transformational leadership constructs except with idealized influence where there was no correlation. Agreeableness was positively correlated with idealized influence and inspirational motivation but negatively correlated with intellectual stimulation and individual consideration. Lastly, conscientiousness was positively correlated with all of the constructs of transformational leadership with the exception of individual consideration which resulted in a negative correlation.

Table 43

Direction of Correlation Coefficients Between the NEO-FFI and the MLQ 5X

Construct	Coefficient	N	E	O	A	C
II	Pearson correlation	Negative	Positive	Neutral	Positive	Positive
IM	Pearson correlation	Negative	Positive	Negative	Positive	Positive
IS	Pearson correlation	Neutral	Negative	Negative	Negative	Positive
IC	Pearson correlation	Positive	Positive	Negative	Negative	Negative

Note. II = idealized influence; IM = inspirational motivation; IS = intellectual stimulation; IC = individual consideration; N = neuroticism; E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness.

Research question two. In researching question one, it was found that there were no significant correlations between the department director's observer-reports of the Big Five personality traits and transformational leadership but research question two provided additional insight into the responses provided by the respondents in the study. For purposes of this discussion, recall that research question two asked: What were the relationships between demographic variables and the self and observer reports of the NEO-FFI-3 and MLQ 5X? Discussed more in-depth below, this research found that the demographic variables of the observers resulted in variances of mean scores between observer and self-reports of the NEO-

FFI-3 and the MLQ 5X and that there were significant correlations between some demographic variables of the observers and some NEO-FFI-3 personality constructs.

At a very high level, Table 12 and Table 16 show the total mean-variance of mean scores of the observer ratings of the NEO-FFI-3 and MLQ 5X, broken down by variables. Although the department director identified as a Generation Xer, Table 12, which displays the mean scores of the NEO-FFI-3 by demographic variables of the observers, shows that baby boomers provided responses closest to the department director's self-ratings. Table 12 also revealed that male observers provided NEO-FFI-3 responses closest to the self-ratings of the male director but that observers with an associate's degree provided responses closest to the self-reports of the department director who indicated a bachelor's degree as his highest level of education obtained.

Compared to the NEO-FFI-3 responses by demographic cohort, Table 16 revealed that those observers who shared demographic similarities with the department director, provided MLQ 5X responses closest to the self-reports of the department director. Looking back on the overall mean variances shown in Table 16, observers who identified as Generation Xers had the smallest variance of scores compared to the department director who also identified as a Generation Xer. Table 16 also showed the lowest variance in MLQ 5X responses between observers who were male compared to the department director who was also male and likewise with observers who had a bachelor's degree compared to the department director who had a bachelor's degree.

Spearman *rho* findings. While the research has shown that there was some variation in the NEO-FFI-3 and MLQ 5X observer reports based upon demographic variables, this discussion will continue with a summary of the correlations between the observer responses of the NEO-FFI-3 and MLQ 5X and the demographic variables of the observers. Unlike the correlation

findings between the NEO-FFI-3 and the MLQ 5X, significant relationships were found between the demographic variables of the observers and their responses to a number of the constructs of the NEO-FFI-3. Table 18 revealed that four of the Big Five personality traits, neuroticism, extraversion, agreeableness, and conscientiousness, had significant relationships with 2-3 demographic variables but none of the transformational leadership constructs had significant relationships with the collected demographic variables.

Significant Spearman *rho* correlation coefficients in Table 18 suggested that men, compared to women, rated the department director higher on the personality scale of neuroticism, lower in extraversion, lower in agreeableness, and lower in conscientiousness. Significant Spearman *rho* correlation coefficients also revealed that those observers with lower levels of education rated the department director higher on the neuroticism scale but as education levels of the observers increased, observers provided higher ratings of the department director on the personality scales of extraversion, agreeableness, and conscientiousness. Lastly, a Spearman *rho* correlation coefficient revealed that observers who were higher in the organization submitted higher ratings of the department director's level of extraversion.

Research question three. As researching question two found a number of demographic variables of the observers being significantly correlated with most of the Big Five personality traits but not with any constructs of transformational leadership and that there were mixed results of self-other agreement based upon demographic variables of the observers and the department director, research question three examined if demographic variables of the observers could predict how they would rate the department director on the NEO-FFI-3 and MLQ 5X scales. Through multiple linear regression analysis, this research found a number of demographic

variables of the observers that were significant predictors of four of the Big Five personality traits.

Multiple linear regression findings. Where the research has shown that a number of demographic variables were significantly correlated with all of the Big Five personality traits with the exception of openness to experience, multiple linear regression analysis was used to determine if any of the demographic variables of the 66 respondents would predict their ratings of the department director on the NEO-FFI-3 and MLQ 5X constructs. Evaluating the 66 NEO-FFI-3 and MLQ 5X responses as dependent variables and holding the demographic variables of the 66 respondents as independent variables, no significant linear regressions were found between the demographic variables and the ratings of the MLQ 5X constructs but with the exception of openness to experience, significant linear regressions were found between the demographic variables of the 66 respondents and their ratings of the department director on the NEO-FFI-3 personality constructs. Referencing Tables 19-40, results of the multiple linear regressions led to the following conclusions:

1. Neuroticism - Rater education level and when the rater began working with the department director were significant predictors of how raters scored the department director on the neuroticism scale.
2. Extraversion - Rater education was a significant predictor of how raters scored the department director on the extraversion scale.
3. Agreeableness - Rater education was a significant predictor of how raters scored the department director on the agreeableness scale.

4. Conscientiousness - Rater education and when the rater began working with the department director were significant predictors of how raters scored the department director on the conscientiousness scale.

Conclusions

Given the summary of this study, to include discussion of the hypotheses and answering the research questions, this section of Chapter V will compare results of this study to and draw conclusions from the findings of the literature review. Specifically, this section of the study will compare existing literature to the reliability of the survey instruments used in this research, discuss findings of this research in relation to the demographic variables used in this study and their relationships to the themes found in the existing literature, highlight the correlation findings between the NEO-FFI-3, the MLQ 5X, and demographic variables of the observers, and examine how demographic variables predicted NEO-FFI-3 ratings.

Reliability of survey instruments. Before moving to the findings of the assessments and demographics used in this study, this research will evaluate the reliability of the survey instruments used in this study compared to existing literature. Reliability is the accuracy or reliability of the measurements used in research (Cronbach, 1951). Used in this study, Cronbach's alpha is a measure of reliability for each item measuring one construct where reliability coefficients close to 1.00 are very good and results close to .00 indicate low internal consistency (Cronk, 2008).

Where multiple items are needed to measure internal consistency of a construct (Cronk, 2008) and coefficients of at least .60 are acceptable values (Van Griethuijsen et al., 2015), Table 2 showed the Cronbach's alpha coefficients for the MLQ 5X and the NEO-FFI-3 assessments used in this study. Based on acceptable Cronbach's alpha values of .60 (Van Griethuijsen et al.,

2015) and a range of reliability coefficients of .63 to 0.92 for the constructs of the MLQ 5X and .80 to .87 for the constructs of the NEO-FFI-3, both instruments displayed reliable Cronbach's alpha coefficients.

Age and gender. Where the NEO-FFI-3 and the MLQ 5X were found to be reliable instruments used in this study, this research will continue with findings of the assessment in relation to the demographics captured in this study. In evaluating findings of this study based upon generational cohort, recall that literature has concluded that generational groups generally display similar behavior and values (Becton et al., 2014) and that a negative correlation exists between age and neuroticism (Gorostiaga et al., 2011). As the department director identified himself as a Generation Xer, this study found that the ratings of the Generation X observers had the greatest self-other agreement with the department director's self-reports of the MLQ 5X but the ratings of the baby boomer observers had the greatest self-other agreement with the department director's self-reported scores of the NEO-FFI-3. Additionally, while the Spearman *rho* correlation coefficient in this study was not significant, a negative relationship was indicated between rater age and their rating of the department director's mean score of neuroticism (1.50) and this is seen in that baby boomers, coded as "2," reported higher mean scores (1.56) than the mean scores of 1.39 submitted by Generation Xers coded as "3" and the mean score of 144 provided by millennials who were coded as "4."

Adding to the findings of age and self-other agreement, taking gender into account, research has also concluded that older, male managers are more likely to report higher and inflated self-ratings (Vecchio & Anderson, 2009). Evaluating the findings of this research through the lens that older, male managers are more likely to report inflated self-ratings, the mean of the department director's self-ratings of the MLQ 5X constructs (3.05) were higher than

the means of ratings submitted by the baby boomers (2.63), Generation Xers (2.76), and millennials (2.59). Across the constructs of the NEO-FFI-3, the department director's self-reports resulted in a mean of 2.46 and was more in-line with observers' mean scores of the baby boomers (2.47), Generation Xers (2.42), and millennials (2.53).

Although greater self-other agreement was found between age and personality and not age and transformational leadership, specific to gender, literature has suggested a greater level of self-other agreement in women because of a higher level of self-awareness (Fleenor et al., 2010) and between sexes as women disclose more to other women and men disclose more to other men (Dindia & Allen, 1992). Evaluating the variances between the findings of the observer ratings compared to the department director's self-reports, based upon the gender of the raters, male observers had the greatest self-other agreement with the male department director on both the NEO-FFI-3 and the MLQ 5X although the observer mean scores were more in-line with the department director's mean scores of the Big Five personality traits compared to the scales of transformational leadership.

Education. Finding some consistency between this study and previous literature regarding age and gender, it must be noted that previous research has also shown that high achievers would display high levels of conscientiousness and would have higher self-other agreement in personality assessments (Paunonen & O'Neill, 2010). Understanding that there exists a positive correlation between high conscientiousness and high self-other agreement, this study found that the department director's self-report of conscientiousness resulted in an average score and in examining the self-other agreement for the constructs of the NEO-FFI-3, there was self-other agreement between the observer ratings and the department director's self ratings between extraversion, openness to experience, and conscientiousness and low self-other

agreement was found in neuroticism and agreeableness. Expanding on the notion that those with high levels of conscientiousness would have high levels of self-other agreement in personality assessments (Paunonen & O'Neill, 2010), when evaluating the observer ratings and the department director's self-ratings of the MLQ 5X, self-other agreement was found in the scores of idealized influence and individual consideration and low self-other agreement was found on the scales of inspirational motivation and intellectual stimulation.

Organizational position and length of time observers worked with the department director. As this research has shown mixed results when comparing existing literature of education, conscientiousness, and self-other agreement (Paunonen & O'Neill, 2010), this research will now focus on the relationship of the organizational position of the observers and how long the observers worked with the department director compared to the assessments used in this research. Referring back to previous research on self-other ratings, two similar themes in the literature was that there is a positive correlation between the time an observer spends with a subject and the agreement between self and observer ratings (Paunonen & O'Neill, 2010) and that traits with greater visibility, such extraversion (Allik et al., 2010b), lead to high levels of self-other agreement (Szarota et al., 2002). Based upon the literature regarding time spent with the subject, visibility of traits, and self-other agreement (Allik et al., 2010b; Paunonen & O'Neill, 2010; Szarota et al., 2002), the assumption for this section of the discussion is that this study should have found greater self-other agreement between observers who worked longer with the department director and those observers who were higher in the organization as they should have spent more time with the department director.

Inconsistent with the literature (Allik et al., 2010b; Paunonen & O'Neill, 2010; Szarota et al., 2002), when evaluating observer ratings based upon observers who began working with the

department director before January 2014 and those who began working with the department director after January 2014, this research found the smallest variance to the mean score of the department director's self-report of extraversion (2.80) was found in the observer ratings of those who starting working with the director after January 2014. Also inconsistent with previous literature (Allik et al., 2010b; Paunonen & O'Neill, 2010; Szarota et al., 2002), when evaluating the department director's self-rating of extraversion and the observer ratings based upon the observers' positions within the organization, the observers who indicated that they were assistant managers, supervisors, or others had greater self-other agreement with the department director's self-ratings as compared to those observers who indicated that they held an assistant director or division manager position within the organization.

Overall, across all items of the NEO-FFI-3, the smallest variance of means (0.26) compared to the department director was found in the observers ratings submitted by those who started working with the department director after January 2014. However, across all items of the NEO-FFI-3, where those observers who identified as assistant directors or division managers should have spent more time with the department director and therefore should have had greater self-other agreement with the department director's self-reports, observers who identified as assistant managers, supervisors, or others had the greatest self-other agreement with the department director's self-ratings.

Where similar variances were found between the department director's self-report of the NEO-FFI-3 and observer ratings based upon when the observers started working with the director and the greatest self-other agreement was found between the director's NEO-FFI-3 self-report and those ratings from observers who identified themselves as assistant managers, supervisors, or other, different outcomes were found in the MLQ 5X findings. This research

found that when evaluating MLQ 5X results based upon when the observer started working with the director, the greatest self-other agreement was found between the director and those observers who started working with the department director before January 2014. However, similar to the NEO-FFI-3 findings, when evaluating MLQ 5X results based upon the observers' positions within the organization, the greatest self-other agreement was found between the department director and the observers who indicated that they held a position of assistant manager, supervisor, or other.

Relationships between the NEO-FFI-3, the MLQ 5X and demographics. Given the high-level findings of the assessments and demographics used in this research, this study will continue by comparing the findings of this study with existing literature on the correlations between the NEO-FFI-3, the MLQ 5x, and demographics. While the Pearson correlation coefficients calculated in this research were not significant, they did show neuroticism being negatively correlated to transformational leadership, which was consistent with previous research (Bono & Judge, 2004; Cavazotte et al., 2012; Føllesdal & Hagtvet, 2013). Previous research has also indicated that extraversion has the greatest correlation to transformational leadership (Bono & Judge, 2004). Although consistent with a study completed in a Brazilian energy company (Cavazotte et al., 2012), while not significant, the Pearson correlation coefficients calculated for this study revealed that conscientiousness had the highest correlations with the constructs of transformational leadership.

While this study did not yield any significant correlations between transformational leadership and the Big Five personality traits, there were significant relationships found between the collected demographic variables of the observers and their ratings on a number of the department director's personality traits. Circling back to the study of the Norwegian public and

private sector executives, where data on the age and sex of the respondents was also collected although leader sex was removed from the analysis due to estimation errors, it was found that there was no correlation between leader age and transformational leadership but significant correlations were found between leader age and the Big Five personality traits of agreeableness (r = .44, p = < .01) and extraversion (r = -.25, p = < .01) (Føllesdal & Hagtvet, 2013). Similarly, this study, which considered observer variables including age, gender, education level, position within the organization, and the time that the observer worked with the department director, found no significant correlations between the demographic variables of the observers and transformational leadership but did find significant relationships between observers' demographics and their ratings of the department director's levels of the Big Five personality traits.

Where the Norwegian executive study found significant relationships between a leader's age and agreeableness and extraversion (Føllesdal & Hagtvet, 2013), from the observers' perspective, no significant relationships were found between observer age and their ratings of the department director's levels of the Big Five personality traits. However, building upon the Norwegian study (Føllesdal & Hagtvet, 2013), this research found significant correlations between observer gender and their department director ratings of neuroticism, extraversion, agreeableness, and conscientiousness. Significant correlations were also found between observer education level and observer ratings of the director on the personality scales of neuroticism, extraversion, agreeableness, and conscientiousness. Lastly, a significant correlation was found between a rater's position within the organization and extraversion.

Demographics as predictors of the NEO-FFI-3. Not only did this study result in a number of significant correlations between some of the demographic variables of the observers

and their ratings of the department director on the scales of the Big Five personality traits, building on previous research (Bono & Judge, 2004; Cavazotte et al., 2012; Føllesdal & Hagtvet, 2013), this study took previous research one step further and examined if demographic variables of the observers predicted the significant correlations with their ratings of the department director's scores on the NEO-FFI-3 personality scales. When examining significant predictors of NEO-FFI-3 ratings, this research found when the observers in this study began working with the department director was a significant predictor of how the observers rated the department director on neuroticism and conscientiousness. Education level of the observer was also a significant predictor of how the observers rated the department director on the scales of neuroticism, extraversion, agreeableness, and conscientiousness. An observer's position within the organization was also a significant predictor of how the observer rated the department director on the scale of extraversion.

While there were a number of significant correlations and predictors found in this study, gender was not a significant predictor of any of the Big Five personality traits, and where the Norwegian study found a significant correlation between a leader's age and agreeableness and extraversion (Føllesdal & Hagtvet, 2013), this study found no correlation between rater age and their ratings of the department director on the Big Five personality traits. Based on the multiple linear regression analysis completed in this study, rater age was also not found to be a significant predictor of their ratings of the department director on any of the scales of the Big Five personality traits.

Recommendations for Future Research

As this research has concluded that there was a moderate level of self-other agreement between the department director's self and observer ratings of the NEO-FFI-3 and the MLQ 5X,

that while there were no significant correlations between the observer ratings of the NEO-FFI-3 and the MLQ 5X but there were significant ratings between some of the observer ratings of the NEO-FFI-3 and a number of the observer demographics predicted some of the NEO-FFI-3 observer ratings, this research will conclude with recommendations for future research. The recommendations for future research, which will also address a number of the limitations of this study as outlined in Chapter I, are as follows:

1. The most important recommendation would be to conduct future research with a larger population. This research was conducted in one municipal government department. Increasing sample sizes through conducting the research in more departments should result in more meaningful statistical findings that can be applied to larger populations.
2. Conduct the research in municipalities of various sizes. This research was conducted in a municipality with a population of over 1,000,000 residents. Future research should consider conducting the study in a medium and small municipality to determine if size of the organization would result in different findings.
3. Where this research was conducted in a local government setting, it might be interesting to compare results of future research conducted in state or federal government settings.
4. Based upon the findings of future quantitative research, a qualitative component could be added to the scope of research, resulting in a mixed methodology study which might help researchers gain a greater understanding of the statistical findings of the study.

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Appendices

Appendix A
Demographic Questionnaire

Description: This data is requested to evaluate how demographics may affect the relationships of the assessments you are going to complete. Please provide your following information by checking the appropriate box.

Question 1: Age – please indicate your year of birth as follows:

☐ Born between 1927-1945

☐ Born between 1946-1964

☐ Born between 1965-1979

☐ Born in 1980 or later

Question 2: Gender – please indicate your gender as follows:

☐ Female

☐ Male

Question 3: Education level – please indicate your level of education as follows:

☐ High School or GED

☐ Associate's degree

☐ Bachelor's degree

☐ Master's Degree

☐ PhD or Post Graduate

Question 4: Position in the Organization – please indicate your level of position as follows:

☐ Director

☐ Assistant Director/Division Manager

☐ Assistant Manager/Supervisor/Other

Question 5: When did you begin working for the Director? – please indicate as follows:

☐ Before January 2014

☐ After January 2014

Appendix B
IRB Letter

UNIVERSITY OF THE INCARNATE WORD

November 2 2017

PI: Mr. Robert Perez

Protocol title: EXAMINING FOLLOWER PERCEPTION OF THE RELATIONSHIPS BETWEEN PUBLIC SECTOR LEADERSHIP BEHAVIOR AND PERSONALITY TRAITS

Robert:

Your request to conduct the study titled "EXAMINING FOLLOWER PERCEPTION OF THE RELATIONSHIPS BETWEEN PUBLIC SECTOR LEADERSHIP BEHAVIOR AND PERSONALITY TRAITS" was approved by Expedited review on 11/02/2017. Your IRB approval number is 17-11-004. Any written communication with potential subjects or subjects must be approved and include the IRB approval number.

Please keep in mind these additional IRB requirements:

- This approval will expire **one year** from 11/02/2017.
- Request for continuing review must be completed for projects extending past one year. Use the **IRB Continuing Review Request form**.
- Changes in protocol procedures must be approved by the IRB prior to implementation except when necessary to eliminate apparent immediate hazards to the subjects. Use the **IRB Amendment Request form**.
- Any unanticipated problems involving risks to subjects or others must be reported immediately.

Approved protocols are filed by their number. Please refer to this number when communicating about this protocol.

Approval may be suspended or terminated if there is evidence of a) noncompliance with federal regulations or university policy or b) any aberration from the current, approved protocol.

Congratulations and best wishes for successful completion of your research. If you need any assistance, please contact the UIW IRB representative for your college/school or the Office of Research Development.

Sincerely,

Ana Wandless-Hagendorf, PhD, CPRA

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