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Walden University

College of Social and Behavioral Sciences

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Jewel D. Adams

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Walden University
2015

Abstract

The Relationship of Managers' Power Motivations to Personality Pathology

by

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MS, Walden University, 2008

BA, Regents College, The University of the State of New York, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

August 2015

Abstract

Research has shown that managerial leaders have a higher motivational need for power than those in other positions. A leader's personality traits have been shown to affect organizational performance. Leaders who score high in dark traits (undesirable personality attributes shown to predict career derailment across organizations, levels, and positions) could also be more likely to use company resources for personal gain. There is a paucity of research examining the correlation between managerial dark traits and the need for power. The purpose of this study was to examine the relationship between managers' dark trait scores as measured by the Hogan Development Survey (HDS), and their motivational need for power as measured by the Hogan Motives, Values, and Preference Inventory (MVPI). The effect of Ambition as measured by the Hogan Personality Inventory (HPI) was used as a mediating variable upon dark traits scores and the need for power. The dependent variable in this study was the need for power, and the independent variables were the 11 personality traits measured by the HDS. Participants were managers and executives provided by Hogan Assessments database ($N = 500$). Multiple regression analysis revealed a significant correlation between the dark traits of those who move against others and their need for power. Ambition had a small effect in mediating the dark trait scores and the need for power. If selection committees could use the HDS and remove candidates with high scores in dark traits that move against others, they could remove many who could be likely to abuse the executive position through a strong need for power. Potentially destructive leaders could be avoided, leadership career derailment could be averted, and even corporate criminal activity might be prevented.

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Dedication

Thank you to Michelle C. for always being there for me. Knowing you were just an e-mail away kept me sane and grounded.

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Chapter 1: Introduction to the Study

Background

The selection of leaders is a process that affects everyone within an organization. All companies and organizations must select leaders, and employees must work for the leaders who are selected. In the worst cases, leaders who are selected from an interview process and appear to be charismatic and charming can be masking personality disorders that can lead to abuse of power and even criminal offenses within the organization (Hogan & Kaiser, 2005). Some high level leaders who possess dark personality traits can also be identified as successful psychopaths, defined as those who possess psychopathic traits but have managed to avoid the criminal justice system (Stevens, Deuling, & Armenakis, 2012). The definition of *psychopathy* for this study is “a clinical construct defined by a cluster of personality traits and behaviors, including grandiosity, egocentricity, deceptiveness, shallow emotions, lack of empathy or remorse, irresponsibility, impulsivity, and a tendency to ignore or violate social norms” (Mathieu, Hare, Jones, Babiak, & Neumann, 2013, p. 288).

Cleckley (1941), a clinical psychologist, was the first to describe the construct of psychopathy formally in *The Mask of Sanity*. Cleckley based his construct upon observations and experiences acquired through his work with patients in psychiatric hospitals (Stevens et al., 2012). Cleckley noted that some patients were not mentally ill, but exhibited manipulation and deceit through charm and intelligence, and were also lacking in remorse for their actions as well as concern for others. Cleckley also believed that “many of these people, legally judged as competent, are more dangerous to

themselves and to others than are some patients whose psychiatric disability will necessitate their spending their entire lives in the state hospital” (p. 3). Hogan and Hogan (2009) regard Cleckley’s description of the psychopath as indicative of an antisocial personality: “a person who is charming but deceitful, easily bored, risk-taking and careless about rules and conventions” (p. 22). Babiak et al. (2012) reported that of all the personality disorders, psychopathy is the most dangerous. Hogan and Hogan developed the Hogan Development Survey (HDS) to measure personality traits that can be traced to antisocial personality and psychopathy. Cleckley’s work also led to Hare’s (2003) work in constructing the Psychopath Checklist Revised (PCL-R), which has been validated and is widely regarded as the gold standard for measuring psychopathy.

Tools such as the HDS and the PCL-R can aid in the selection of good leaders (Hogan & Hogan, 2009; Stevens et al., 2012). Personality inventories can provide insight into leaders’ personality traits. Some of these tools can identify and measure the dark personality traits and can indicate when an individual has a psychopathic personality. There are also inventories that can provide insight into leaders’ motivations. Shannon and Keller (2007) found that leaders’ need for power can significantly predict their willingness to violate international norms. There has been a dearth in the literature in correlating leaders’ personality traits to their motivational need for power. With effective tools and training, leadership selection can be deliberate and based on the traits and motivational preferences of the candidates being considered, rather than the intuitive hunches or personal preferences of the selection committee.

Povah and Sobczak (2010) reported that the business climate has changed dramatically as a result of the recent economic downturn. In the aftermath of the corporate failures during the recent economic recession, Povah and Sobczak emphasized that it is now more important than ever that executives be able to perform nimbly in all situations, demonstrating the right skills and personal characteristics in decision making, and to perform ably in the face of diverse challenges. Higgs (2009) stated that the illegal and dramatic corporate implosions exemplified by companies such as Enron and Lehman Brothers have raised valid questions about leadership quality and the consequences of poor leadership. Companies are facing more financial pressure than ever before, and a poor selection decision in regard to leadership could be financially and legally disastrous.

Statement of the Problem

The personality of a leader creates the cultural climate and impacts organizational performance (Hogan & Kaiser, 2005). A dysfunctional leader with a strong need for power could derail the organization, or use corporate resources for personal gain (Higgs, 2009). Personality traits and motivational drivers can be measured. Therefore, the selection process of a leader should include personality and motivational assessments, to protect the organization from darker traits that can be masked by charm and manipulation (Mathieu et al., 2013). This study measured several personality traits of leaders against their need for power and examined the darker traits for stronger correlations to the need for power. The results of this study added to the literature correlating personality traits to the need for power, which can aid in predicting leadership success or failure.

Hogan and Kaiser (2005) observed that the personality of a leader has the most direct influence on the culture and dynamics of the top management team. Secondly, Hogan and Kaiser noted that the top management team affects and influences the entire organization, including the performance of the company. If the personality of the leader influences the performance of the organization, predictive personality tools could be used in conjunction with interviews and other selection methods to choose managers who will lead and perform successfully. Hogan and Kaiser reported that leadership style, which is determined by personality, predicts team functionality and employee attitudes, which in turn directly predict organizational performance. If a leader's personality is disordered, that leader may seek to use the organization for personal gain. In fact, Higgs (2009) observed leaders using their organizations for the purpose of meeting their own personal needs. If leadership personality drives the organization, few things are more important than understanding leadership and selecting the right leader. The right leader will have the right personality and motivational preference and will not lead with psychopathy and a distorted need for power. Because psychopaths deceive with charm and intelligence, personality inventories are the best way to identify and determine psychopathy (Hogan & Hogan, 2009; Stevens et al., 2012).

Successful Leader Personality Traits

Personality traits that can predict a successful leader have been identified. Collins's (2005) research indicated that the chief executive officers (CEOs) who turned companies from failure to profit had the following two characteristics in common: they were humble and modest, and they also possessed a persistence that was almost

preternatural. Because many successful leaders do not promote themselves and often are quiet and unassuming, there is a danger that they might not shine when asked to perform before a leadership committee. Good leaders who are not strongly charismatic in their personalities will use facts, logic, and data to persuade others. Because their decisions are more likely based upon logical methodology, there is less likelihood that they will be leading a company to accept a path for their own personal gain (Heffes, 2005). Desirable leadership behaviors and personality traits are further discussed in Chapter 2.

Failed Leader Personality Traits

Personality traits that can predict a failed leader have been identified. Van Velsor and Leslie (1995) summarized the research on managerial failure categorically into the following four themes:

- (a) problems with interpersonal relationships and skills (being insensitive, arrogant, aloof and cold to others); (b) failure to meet business objectives (failing to follow through while betraying trust and exhibiting excessive ambition); (c) failure or inability to build and lead a team; and (d) inability to change or adapt during a transition, especially after a promotion (p. 63).

Hogan and Hogan (2001) reported that managerial failure is more aligned with traits the leader possessed, rather than traits that were lacking. McCall and Lombardo (1983) observed that leadership failure is attributed to both the leader's performance failures and personality flaws. The factors they found that contributed to leadership failure included lacking the proper skills for the job, burning out, insensitivity to others, coldness and aloofness, being arrogant and betraying the trust of others, and exhibiting

excessive ambition. McCall and Lombardo argued that the personal flaws (dysfunctional tendencies) were more important than skill deficiencies as drivers of derailment.

Collins (2005) actually found a strong negative correlation between a leader's charisma and building a strong company, and reported that the best leaders build enduring greatness "through a paradoxical combination of personal humility plus professional will" (p. 140). Collins's finding was supported by Babiak, Neumann, and Hare (2010), who studied 203 corporate professionals using the PCL-R and found a positive correlation between personality psychopathy and charisma and a negative correlation between psychopathy and good team management. "There is a need to move beyond the charismatic leader" (Nadler & Tushman, 1990, p. 85).

Charisma in a leader is defined as "a special quality that enables the leader to mobilize and sustain activity within an organization through specific personal actions combined with perceived personal characteristics" (Nadler & Tushman, 1990, p. 82). Chryssides (2013) noted that there are different types of charismatic leaders. Nadler and Tushman reported that charisma is not enough for a leader to be successful, and there are limitations to how effective charismatic leaders can be. While the charismatic leader may motivate and energize, Nadler & Tushman reported that there may be unrealistic expectations followed by unwillingness to disagree with the leader, which could lead to a sense of betrayal. Their recommendation is for balanced leadership: charisma to motivate the employees and instrumental leadership to carry out the vision.

Leaders with strong charisma persuade others outside of the data, logic, group dissension, and even evidence through the power of their personalities. Some of the

psychopathic characteristics such as grandiose behaviors, manipulation, and callousness to the feelings of others may contribute to the ability to persuade and make ruthless decisions (Babiak et al., 2010). Thus, the danger is that a charismatic leader could take a company down a less desirable road, persuading others to forego logical decisions in lieu of the leader's personal preferences.

Those responsible for leadership selection need training to recognize that charisma and personality sparkle do not equate to good leadership. In a study of 203 corporate high level managers, Mathieu et al. (2013) found that psychopathic leaders appeared to achieve success through their personality traits of charm, manipulation, and deceit, and their success appeared to be constant despite the negative performance ratings they received and the potentially harmful behaviors they exhibited. Babiak et al. (2010) noted that psychopathic traits correlated to poor performance and decisions included failure to take responsibility, impulsive behaviors, and problems with behavioral control.

Motivation: Need for Power

While personality traits can derail a leader, motivation can determine success or failure. In addition to undesirable personality traits, the motivational need for power can also predict failure. Shannon and Keller (2007) reported that individuals with higher scores in the power motivation are more likely to be autocratic rather than collaborative in decision-making and will focus on payoffs that benefit them. They also noted that leaders with higher power motivation scores will also be more willing to manipulate and deceive others to achieve their goals.

Correlating Dark Leadership Traits to the Need for Power

There is a gap in the current literature correlating dark and psychopathic leadership traits to a leader's need for power. Because leadership decisions affect the entire organization and drive the organization's performance (Hogan & Kaiser, 2005), I intended this study to add that correlation to the literature and found a correlation between some of the *dark traits* as measured by the HDS and a need for power. If the personality traits and the motivations that predict failure in a leader can be identified prior to leadership selection, then potential strife for employees and business difficulties might be avoided. Leadership candidates with the predictive dark (psychopathic) personality traits and potentially dangerous power motivation could then be removed from consideration.

Purpose of the Study

The purpose of this quantitative study was to ascertain if leadership personality traits can predict a *need for power* and to measure if leaders with higher scores in the darker traits have an increased need for power. The dependent variable in this study was the need for power, and the independent variables were the 11 personality traits measured by the HDS. Participants were from the Managers and Executives job family from the Hogan Assessments database.

McClelland (1975) defined the need for power as the need to influence, dominate, or control people or groups. Managers are often motivated by a higher need for power than nonmanagers (McClelland & Boyatzis, 1982). Collins (2005) reported that leaders with large egos contribute to the destruction and mediocrity of their organizations. If

personality traits (and especially dark personality traits), including ambition, correlate to a higher need for power, then leaders possessing those traits could be avoided and employees and businesses could be spared the potential chaos that could ensue.

Understanding the correlation between personality traits and the need for power would fill a current void in the literature and also could lead to social change through more effective leadership selection.

Hare (2002), who created the PCL-R, stated in an address to the Canadian Police, “Not all psychopaths are in prison. Some are in the boardroom” (p. 1). Hare followed the PCL-R with the B-Scan 360, a tool designed to measure psychopathy in the workplace (Mathieu et al., 2013). The corporate psychopath fits the psychological guidelines for psychopathy but is working in an organizational environment. The characteristics of a psychopath include lack of emotional affect and an inability to have remorse or empathy for others, and researchers have hypothesized these are connected to abnormal brain chemistry (Boddy, 2011). The motivation of corporate psychopaths is to use their organizations for their own ends, gaining power through ruthless manipulation (with no conscience or remorse) for personal gain (Boddy, 2011; Mathieu et al., 2013). Prior to the current global financial crisis, Boddy (2005) warned of the characteristics of corporate psychopaths—that they are “not psychotic or delusional (insane) but merely opportunistic, lacking any concern for the consequences of their actions and ruthless in their pursuit of their own aims and ambitions” (p. 31).

Since the onset of the global financial crisis, the need is now elevated for management researchers to focus on the aspects of dark leadership in order to understand

and explain the current financial turmoil and organizational disasters taking place globally (Boddy, 2011). Even after the recent emergence of Ponzi schemes, fraudulent banking practices, insider trading, and other immoral and socially devastating schemes, and even though psychopathy could provide an explanation for the behaviors behind these destructive events, there remains a “dearth of empirical data on the role of psychopathy in fraud, corruption, malfeasance, and other egregious violations of the public trust” (Babiak et al., 2010, p. 175).

The personality traits of a psychopath, even a corporate psychopath, are suited for criminal activity. “The psychopath’s egocentricity and need for power and control are the perfect ingredients for a lifetime of antisocial and criminal activity” (Babiak et. al, 2012, p. 4). The PriceWaterhouseCoopers Global Economic Crime Survey (2014) found that 37% of more than 5,000 companies surveyed had experienced financial fraud. From the affected participants, two thirds (67%) reported the misappropriation of assets, almost one third reported procurement fraud (29%), with lesser percentages reported for bribery and corruption (27%), cybercrime (24%), and 22% reported fraudulent accounting (PriceWaterhouseCoopers, 2014). Participants in Africa and North America consistently report the highest levels of crime, at 50% and 41% respectively.

Thoroughood and Padilla (2013) reported that a destructive triangle led to the Penn State scandal in which a head coach sexually abused those under his leadership. An environment existed that was conducive to abuse of power, compliant followers, and a lack of checks and balances. A toxic leader requires assistance to achieve his or her goals, and in the case at Penn State, power was consolidated into the hands of a few selected

people, allowing for the secretive culture where Sandusky was free to abuse children.

From a social change perspective, understanding why and how leaders with dark traits and an excessive need for power should be avoided could reduce the costly consequences businesses and society can face when the wrong leaders are selected.

The Hogan Motives, Values and Preferences Inventory (MVPI; Hogan & Hogan, 1996) is built upon the theory that understanding a person's values and interests provides insight into that person's motivations. The person who identifies with the power motive is drawn to leadership roles, prefers freedom, possesses ambition, and wants to be in charge; Hogan & Hogan reported that those who score high in power motive on the MVPI are found to be successful, accomplished, have status, be competitive, and are in control.

The purpose of this study was also to identify leaders' scores in the darker traits and to measure if leaders with higher scores in the darker traits have an increased need for power. The need for power was the dependent variable, and the independent variables were the 11 personality traits measured by the HDS. The mediating variable was *Ambition*, as measured by the Hogan Personality Inventory (HPI) and was used to mediate the variables categorized as moving against people (Bold, Mischievous, Colorful, and Imaginative) from the HDS against the Need for Power from the MVPI. The participants were from the job family Managers and Executives from the Hogan Assessments database.

The HDS organizes 11 dark personality traits into three categories (Hogan & Hogan, 2009), based on the motivational work of Horney (1950). Horney hypothesized

that everyone feels inadequate in some way, and that everyone manages their sense of inadequacy in one of three ways: (a) moving toward people—that is, managing insecurities by connecting with others and building alliances; (b) moving away from people—that is, managing one’s insecurities and feelings of inadequacy by avoiding others; and (c) moving against people—that is, managing one’s insecurities and sense of inadequacy by dominating and intimidating others.

As will be discussed in Chapter 2, the traits of Bold, Mischievous, Colorful, and Imaginative from the HDS, which are associated with moving against people, are hypothesized to correlate positively with the Need for Power from the MVPI. It was also the hypothesis of this study that the trait of Ambition as measured by the HPI would act as a mediator variable when combined with the moving against variables (Bold, Mischievous, Colorful, and Imaginative) from the HDS and correlated with the Need for Power as measured by the Motivation, Values and Preference Inventory (MVPI). Further discussed in Chapter 2, the traits that measure the tendency to move away from others (Excitable, Skeptical, Cautious, Reserved, and Leisurely) and move toward others (Dutiful and Diligent) from the HDS were hypothesized to show no correlation with the Need for Power as measured by the MVPI.

Research Questions and Hypotheses

The first hypothesis of this study was that the personality trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) would predict a Need for Power as measured by the MPVI (Hogan & Hogan, 1996).

Second, it was the hypothesis of this study that a regression model, including measures of darkness and psychopathy determined by the Bold, Mischievous, Colorful, and Imaginative traits (moving against others; Horney, 1950), would predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B3 in Appendix B.

Third, it was also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Excitable, Skeptical, Cautious, Reserved, and Leisurely traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), would not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as illustrated in Figure B4 in Appendix B.

Fourth, it was also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Dutiful and Diligent traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), would not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B5 in Appendix B.

It was also the hypothesis of this reduced regression study that Ambition from the HPI would act as a mediator variable for the Moving Against Others grouping of variables from the HDS (Hogan & Hogan, 2009), as shown in Figures B1 and B6, in Appendix B.

Finally, a full regression model with all HDS (Hogan & Hogan, 2009) variables, and Ambition from the HPI (Hogan & Hogan, 2006), was analyzed using the Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as the dependent variable.

The following research questions were formulated for and guided the study. These questions were answered through an analysis of the secondary data provided by Hogan Assessments. All figures illustrating this study are found in Chapter 4 and Appendix B.

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving

toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)?

Null Hypothesis: There is no additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

Alternative Hypothesis: There is additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no variance between any of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will not increase variance against the Need for Power.

Alternative Hypothesis: There is variance between some or all of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will increase variance against the Need for Power.

Theoretical Framework for the Study

The theoretical framework and concepts structuring this study included personality trait theory, motivation theory, selection theory, and performance theory (predictive). A manager's personality traits have been shown to predict managerial

performance, which influence the manager's employees and company (Hogan & Kaiser, 2005). As with many personality traits, the degree to which a person possesses the traits can vary. Personality traits are dimensional and measured on a spectrum (Birch & Foo, 2010). Personality disorders will negatively predict work performance, and Birch & Foo noted that the use of a dimensional approach allows researchers to measure the effect to which those negative personality traits predict performance. In other words, the literature indicated that to some degree managerial failure or success can be predicted through personality traits.

Managerial motivation can also be a driver when assessing organizational performance. McClelland (1975) identified three *primary needs drivers* in human behavior: Need for Power (nPow), Need for Affiliation (nAff) and Need for Achievement (nAch). McClelland and Boyatzis (1982) reported that managers with high needs for power move to higher levels than those who have lower needs for power. Horney (1939) attributed the need to strive for power as a defense mechanism against anxiety and channel for the discharge of repressed hostility. McClelland (1975) observed that a person who is motivated by a high need for power expresses the need in three ways: through either positive or negative strong actions towards others, by generating strong emotional responses in others and influencing them to move, or by having a fastidious concern for others' opinions, which is another expression of a person's effect upon others. Shannon and Keller (2007) reported that managers who are low in their need for power and low in their belief that they can control events are more likely to respect organizational constraints and work within guidelines established by others. The

manager's high need for power may not necessarily predict dark tendencies, but if the high need for power is coupled with a high measurement of dark personality traits (i.e., moving against others as measured by the HDS, the manager may then be potentially a dark and dangerous leader.

Nature of the Study

A series of multiple regression models were used to measure the effect of the independent variables (personality traits) upon the dependent variable (motivation for the Need for Power). The survey data used in this study came from Hogan Assessments Consulting firm. The mediator variable, Ambition, as measured by the HPI, was measured separately from the independent HDS variables, and then with those variables, to determine if Ambition mediates prediction of the dependent variable, the Need for Power as measured by the Motivation, Values and Preference Inventory (MVPI). The independent variables measured for potential influence upon the Need for Power were all of the traits measured by the HDS, which include the HDS scales (Hogan & Hogan, 2009) of Excitable, Skeptical, Cautious, Reserved, and Leisurely (associated with moving away from people), the HDS scales of Bold, Mischievous, Colorful, and Imaginative (associated with moving against people), and the HDS scales of Dutiful and Diligent (associated with moving toward people). The three groupings of HDS variables were run as three separate entities against the Need for Power as measured by the MVPI. I hypothesized that the grouping of variables that indicate moving against people (Bold, Mischievous, Colorful, and Imaginative) would predict a Need for Power and that the mediator variable of Ambition would strengthen that prediction.

Definitions

To provide clarity and understanding, the following definitions have been provided. Appendix A contains further detailed definitions of the variables found in each tool.

Ambition: The drive to display initiative and be energetic, self-confident, competitive, and display motivation for leadership roles (Hogan & Hogan, 2007).

Charisma: “A special quality that enables the leader to mobilize and sustain activity within an organization through specific personal actions combined with perceived personal characteristics” (Nadler & Tushman, 1990, p. 82). Leaders who possess charisma are “observable, definable, and having clear behavioral characteristics” (p. 82).

Dark traits: “Dark side personality traits are socially undesirable attributes that have been shown to predict career derailment across a variety of organizations, levels, and positions” (Dalal & Nolan, 2009, p. 434). All personalities have expressions of these traits to some degree, and so the presence of the trait per se does not indicate pathology (Zibarras, Port, & Woods, 2008). Traits are viewed along a continuum, and the candidate’s disposition is viewed through multiple dimensions and the degree to which a person possesses the traits can vary (Birch & Foo, 2010). However, those who are heavily weighted in dark traits could be undesirable for company leadership positions.

Power or Need for Power: The degree to which a person desires success, achievement, status, dominance, and control (Hogan & Hogan, 1996).

Primary needs driver: A term McClelland (1975) used to reference the motivation in human behavior. Three main drivers are identified in McClelland's works: Need for Achievement (nAff), Need for Affiliation (nAff), and Need for Power (nPow).

Psychopathy: Clinical term which references a cluster of personality traits and behaviors that include "grandiosity, egocentricity, deceptiveness, shallow emotions, lack of empathy or remorse, irresponsibility, impulsivity, and a tendency to ignore or violate social norms" (Mathieu et al., 2013, p. 288). Personality disorders are considered persistent and incurable. "Although usually manageable, psychopathy is not curable" (Babiak et al., 2012, p. 5).

Assumptions

This study assumed that all participants were administered the Hogan tools with equanimity and consistency, and that each participant understood the questions in each survey. It was also assumed that participants answered truthfully and provided their consent for each test. It was assumed that the sample provided for this study would be consistent with the population used in the development of the three Hogan Assessments tools.

Scope and Delimitations

This study was designed using the data from Hogan Assessment Systems, and the requested participants' data were for the Management and Executives job family. For the HDS, HPI, and MVPI, Hogan and Hogan grouped the Department of Labor Management Occupations participants into the Hogan job family of Managers and Executives. Hogan Assessments routinely and continuously collect data as they consult and partner with

clients. The results, then, were delimited to participants in the job family of Managers and Executives. Therefore, this study's conclusions were generalizable and applicable only to professional populations, and in particular, to Management Occupations as defined by the Department of Labor and grouped into the Hogan and Hogan job family of Managers and Executives. The HDS, HPI, and MVPI data samples were identified for gender and race.

Limitations

The findings of this study were limited to Management Occupations, the category defined by the Department of Labor, from which Hogan and Hogan (2007) categorized participants into the job family of Managers and Executives for the HDS, HPI, and MVPI. Therefore, findings were applicable only to that population and may not be applied to a broader audience.

While the HDS can indicate personality pathology, the HDS scores are not recommended to be interpreted alone for personality pathology. Hogan and Hogan (2007) recommended that the HDS scores indicating potential pathology be validated against the California Personality Inventory (CPI), Minnesota Multiphasic Personality Inventory (MMPI) or HPI. The HDS is not intended for use as a clinical or mental health assessment tool. It is instead intended for use in influencing work decisions surrounding personnel selection, job fit, and other aspects suited to the workplace. Thus, the HDS focuses on results that reveal how participants relate to others in a business context. It is not known if any populations were excluded during the norming process.

Significance

This study was designed in response to a lack of literature correlating managerial dark traits to a motivational need for power as it can be difficult to obtain access to corporate leaders for research purposes (Babiak et al., 2010). Although the literature exists for power motivation as it is exhibited by leadership, and although (especially in recent years) there has been more literature identifying psychopathy and dark traits in high level leadership positions, there has been no study designed to correlate the level of dark personality traits directly to a motivational need for power. Identifying potential leaders' traits and motives could assist companies in the difficult legal and financial climate of the 21st century. Predicting executive performance and selecting the right leader may make the difference between a company's potential success or potential failure.

Summary

Identifying potential leadership personality traits and potential leadership motivation can be a significant key to intelligent executive selection. If a leadership selection team understands that the darkest personality traits masquerade in the interview process as charm and effervescent wit, the selection team might be motivated to utilize tested tools, such as the HDS, HPI, and MVPI. Utilizing valid tools can provide a method to properly identify the true character of a candidate. Understanding the significance of personality traits and motivational factors could lead to social change, as selection teams rely upon data instead of subjective interviews in making executive choices.

This study endeavored to fill a gap in the current literature by examining whether there was a correlation between the dark personality traits as categorized in the HDS (moving against people; Hogan & Hogan, 2009; Horney, 1950) and the Need for Power as measured by the MVPI (Hogan & Hogan, 1996). Because corporate psychopaths are drawn to the prestige, power, and money they want to accrue for themselves (Boddy, 2005), it was the theory of this study that a strong Need for Power coupled with high scores in dark traits indicated a managerial candidate who should be avoided. It was also the hypothesis of this study that Ambition as measured by the HPI would be a moderating variable for the dark traits and could increase the Need for Power. The literature indicated that either excessive dark traits or an exaggerated Need for Power by itself can signal danger in a managerial candidate. However, there has been little or no study of dark traits predicting a Need for Power.

Chapter 2 will delve further into the literature, examining the personality theory of leadership, the motivation theory of leaders, and the gap that exists in endeavoring to draw a correlation between increasing dark traits and the need for power.

Chapter 3 will describe the methods for this study. It will also describe the reasons and rationale for the design used for this study. The full and reduced regression models will be described in detail and can also be viewed graphically in Appendix B.

Chapter 2: Literature Review

Introduction

The current and past literature affirmed the need for research regarding the impact of personality and motivation upon managerial performance and in the selection of managerial candidates within organizations. Hogan and Kaiser (2005) reported that the personality of a leader directly influences the culture and the dynamics of the top management team, which then directly influences organizational performance. Because the performance of managers within organizations has an influence on companies' earnings and profits, the failure of managers could be surmised to negatively affect companies' earnings and profits. The selection of managerial candidates could make the difference between a company's success or failure.

Search Strategy

The theoretical framework for this dissertation was grounded in leadership personality theory and motivation theory and how those attributes correlate to leadership performance. I conducted a digital literary search for peer-reviewed articles through EBSCO databases including PsycINFO, PsycARTICLES, PsycTESTS, Health and Psychosocial Instruments, and PsycEXTRA. The keywords used in database searches included searches for works by McClelland, Hogan and Hogan, Anderson, Collins, and Meehl. Additional searches using the terms *need for power* and *leadership personality* were conducted. Peer-reviewed journal articles were obtained through digital sources. Several original texts (Horney, 1939, 1950; McClelland, 1975) were also used for historical perspective on original research theories.

This chapter reviews current leadership personality theory through the work of Hogan and Hogan and other scholars, and the motivational theory from the articles and books of McClelland (1950s through 1980s). The focus will be upon the personality traits of leaders, and in particular the dark traits. Also scrutinized will be the leaders' motivational need for power. Research indicated that the cost of leaders with personality pathology is high for both society and organizations. This chapter will also examine the research that indicated managers' need for power has been shown to be greater than nonmanagers. The following question has been unanswered in the literature and was the foundation for this study: Will managers' need for power show a correlated increase as the degree of their personality pathology (dark traits) increases?

Leadership Personality Theory

Personality traits of successful leaders can be predicted. Hogan and Kaiser (2005) have shown that a leader's personality will predict leadership style, which then predicts and influences employee attitudes and how well company teams function, which then predicts organizational performance. If the personality of the leader influences the performance of the organization, selection committees could use predictive personality tools to select managers who will lead and perform successfully.

Collins (2001) found that the CEOs who turned companies from failure to profit had the following characteristics: humility coupled with modesty, and an almost preternatural persistence and work ethic. The primary job of a leader is to rally subordinates and motivate them on behalf of a cause by building and maintaining a team (Hogan & Hogan, 2001).

Lee, Koenigsberg, Davidson, and Beto (2010) described an effective leader as someone who is able bring the focus of individual contributors and the focus of the group as a whole to the company's vision, mission, and goal. Collins (2005) studied 11 companies in the Fortune 500 that had underperformed for 15 years but had, in the advent of new CEOs, excelled for the next 15 years. The only common denominator amongst these 11 companies was the new CEO. The CEOs who turned their companies from failure to profit, from good to great, had two contradictory characteristics: personal humility and an intense professional will, exemplified by a relentless drive to succeed. Collins calls these CEOs Level 5 leaders: those who can take a company from good to great. Level 1 people are highly capable individual contributors, Level 2 people are team contributors, Level 3 are competent managers, and Level 4 persons are effective leaders (Collins, 2001). Only the Level 5 leaders are those that are able to build enduring greatness through a contradictory blend of modesty, humility, and a strong personal work ethic.

In two thirds of the cases Collins (2005) studied, companies floundered in mediocrity or were ruined when the CEOs leading them had a gargantuan ego. When the leaders had a charismatic personality, Collins actually found a strong negative correlation between a leader's charisma and building a strong company (Collins, 2001). Companies with charismatic CEOs were less likely to become strong and profitable than those companies with more modest CEOs. Because boards of directors labor under the misconception that the charismatic and ego-driven leader will lead their companies to greatness, few leaders of Level 5 potential (with the accompanying humility and

persistent drive to succeed) are selected. Collins (2001) deduced that the dearth of Level 5 leaders explains why few companies ever make the transition from good to great. Collins explained that charismatic leaders can use their personalities, positions of power, and persuasive abilities to override logic, evidence, the arguments of others, and even factual data. Conversely, the noncharismatic leader must rely on logic, evidence, the arguments of others, peer-reviewed discussions, and even factual data (Heffes, 2005, p. 21) to persuade and win arguments. The charismatic leader is able to persuade others to do most anything, even if it is wrong. Heffes (2005) concluded that the charismatic CEO might be more likely to make mistakes because others will be persuaded to adopt the views of the charismatic leader, even if they are wrong. On the other hand, those with less charisma and innate persuasive ability might make fewer mistakes because they will not be able to win people over as often (Heffes, 2005).

Collins (as cited in Heffes, 2005) differentiated between power and leadership. Power is the ability to force others to do something, whereas leadership is the ability to motivate others to follow. Collins noted that in most of today's businesses, the CEOs and other leaders do not have absolute power over an entire company. Heffes (2005) also noted that governmental organizations, academic institutions, and non-profit organizations operate in a social system that includes checks and balances. In these companies, absolute power is not placed upon the leader. In the business world, many of the executives do have concentrated power in some areas. While they can try to force their will upon the company, the most talented workers have options and may not choose

to follow a willful, forceful leader. Heffes noted that the brightest and best workers will often go elsewhere rather than be bludgeoned into servitude to a domineering leader.

Managerial Failure

Organizational research spanning from the mid-1950s to the 1990s indicated that employees in 60% to 75% of all organizations reported that their immediate supervisors were the worst aspect of their jobs (Hogan, 1994). Van Velsor and Leslie (1995) summarized research on managerial failure and organized into four themes: (a) poor interpersonal skills (including traits of insensitivity, arrogance, coldness, aloof demeanor, and excessive ambition), (b) inability to get work done (result of betraying trust, failing to follow through, and exerting excessive ambition), (c) inability to build a team, and (d) failing to transition successfully after a promotion. The dark traits aligned with managerial failure will negatively affect the pathological manager's ability to motivate workers on behalf of the organization's cause. Although Benson and Campbell (2007) reported that failed executives shared many similarities with their successful counterparts, Hogan and Hogan (2001) reported that managerial failure was more aligned with traits the leader possessed rather than traits that were lacking.

Hogan and Warrenfeltz (2003) presented the domain model of competencies, which identified the following four areas for assessing managerial competency: (a) intrapersonal skills (the ability to regulate emotions and easily accommodate authority), (b) interpersonal skills (the ability to build and maintain relationships), (c) business skills (ability to plan, budget, coordinate, and monitor business activities), and (d) leadership skills (the ability to build and motivate a highly performing team).

Van Velsor and Leslie (1995) reported four reasons for managers' derailment, which can be correlated to the Hogan and Warrenfeltz (2003) domain model of competencies noted above. The first reason, problems and failures with interpersonal relationships (being insensitive, arrogant, cold, aloof, and overly ambitious), correlates to intrapersonal skills and impede the building of a high-performance team. The second reason for managerial failure, betraying trust and not following through, and being overly ambitious will lead to failure and inability to build and lead a team, which correlates to a failure of interpersonal skills. The third reason for managerial derailment, failure to achieve goals and meet business objectives, correlates to a deficit of business skills. The fourth reason for managerial failure, the inability to change or adapt during a transition after promotion, correlates to failure of leadership skills.

Personality Pathology

A leader's personality best can best be measured for successful performance through predictive personality tools. Most companies rely primarily upon the interview with a prospective candidate when making hiring decisions. Unfortunately, the managers who are likely to fail will probably perform well during an interview. Hogan & Kaiser (2005) reported that the dark traits and tendencies found in narcissists and psychopaths create favorable impressions, and thus the darkest traits tend to excel during interviews. These personality pathologies are difficult to detect because the individuals who possess them have very well-developed social skills, designed to create positive impressions for the purpose of manipulating others, and they do make positive impressions in the short run. Lilienfeld et al. (2012) noted that the personality of the psychopath includes a need

for social dominance, a fearlessness, and an immunity to anxiety. Hogan and Kaiser noted that these are traits that have shown to portend well for leaders. Psychopaths are immune to anxiety because the emotions others experience in social situations do not affect them. Because psychopaths are unable to bond and do not become enmeshed with the feelings of others, they have the ability to view the behavior of those around them with clarity (Babiak et. al, 2012). Lilienfeld et al. also pointed to a cluster of personality traits that mark psychopathy including “superficial charm, egocentricity, dishonesty, guiltlessness, callousness, risk taking, poor impulse control” (p. 489). Babiak et al. noted that psychopaths utilize their abilities to charm and persuade to extract trust and belief from others, leading to powerful appointments, monetary gifts or even assault.

Lilienfeld et al. (2012) stated that the difference between antisocial personality disorder (ASPD) and personality pathology might be the history of criminal behavior that is required by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) for an ASPD diagnosis. While ASPD references behaviors, psychopathy references traits. As a result, personality pathology could favorably influence a candidate’s likelihood of being selected. It would be unfortunate if managerial candidates are not screened for the personality pathology that can have disastrous consequences upon the organization, and yet which, upon first impressions, appears charming and charismatic. This research study sought to show that managers and executives can be screened for personality pathology, and thus identify unfavorable candidates who might otherwise appear favorable.

Hogan and Kaiser (2005) reported that the personality disorders are not indications of mental illness, but are instead interpersonal dysfunctions of the disposition

that coexist with seemingly good social skills as well as talent and ambition. However, Hogan & Kaiser noted that the leaders who possess these personality disorders will be unable to build effective teams. Because psychopaths view those around them as either “competitive predators or prey” (Babiak et. al, 2012), they do not have the collective mindset to pursue a common good. Hogan and Kaiser stated that the DSM-IV-TR, published by the American Psychiatric Association (2000), provides a taxonomy of the personality disorders which are the most important causes of managerial failure and derailment.

One of the personality disorders the DSV-IV-TR identifies, and which exists in some managerial candidates, is the narcissistic personality disorder. Mansi (2009) reported that most senior managers possess some level of narcissism in their personalities, which is required for attaining their positions. However, the difference between a personality with a narcissistic tendency and an actual narcissistic personality disorder is that the personality disorder includes a self-deceptive and enhanced view of themselves and their true abilities. Mansi noted that the narcissist has mastered self-presentation for the purpose of manipulating others. Babiak et al. (2010) studied 203 corporate professionals using the PCL-R and found a positive correlation between personality psychopathy and charismatic presentation and communication skills. They also found a negative correlation between psychopathy and measures of responsibility and performance, such as being a team player and demonstrating management skill. This study sought to show that the personality traits identified in the HDS as moving against

others, which correlate to the narcissistic personality, can be identified and thus avoided during managerial selection.

The narcissist is often charming, confident and possesses a strong sense of self-belief. He might also have a strong sense of entitlement while exploiting others (DSM-IV, 1994). The narcissist who possesses more dark traits may also be lacking in empathy for others, and fail to recognize his own shortcomings and mistakes (Mansi, 2009). However, Mansi noted that the narcissist's presentation of qualities such as assertiveness, self-confidence, charm, the ability to manage conflict and critical responses, and the ability to persist steadfastly for personal goals are perceived positively in the world of business. The strong portrayal of self-confidence and the expectation that others will also believe in them often leads to success in interviews. The darker traits of the narcissist's personality can include an aggrandized sense of self-perception, arrogance, contempt for others' views, and even overt hostility and rage towards those who question his behaviors. Robins & Paulhus (2001) reported a relationship between narcissism, a lack of insight, and also stubborn over-confidence. These traits exist on a spectrum, and can be measured by tools such as the HDS. This study is designed to show that the greater the darker traits as measured by the HDS, the higher the need for power as measured by the MVPI, and the less desirable the managerial candidate would be for the organization.

Mansi (2009) noted that the more extreme narcissists can be unrealistically demanding of others (ethically, morally and professionally) while they are personally ready to compromise ethically, take shortcuts, bend rules and standards, and even commit crimes to achieve their ends. Above all, the narcissist seeks to protect his self-image.

Narcissists will attack when they perceive their self-image is threatened. Their strong sense of entitlement will usually manifest in workplace behaviors through ruthless competitiveness, callousness to other people and oversensitivity to criticism. Mansi reported that other negative behaviors carried out by narcissistic managers in organizations include responding with hostility and vengeance to criticism, and bullying in order to get their own way. These behaviors will prevent the creation and leadership of an effective team (Hogan & Kaiser, 2001; Hogan and Warrenfeltz, 2003).

The two sides of narcissistic personality disorder (bright and dark) are measured on the HDS and defined by Mansi (2009) as follows:

a. Bright side characteristic of confidence versus dark side characteristics of arrogance, inflated feelings of self-worth, and a disregard for others.

b. Bright side characteristic of charming versus dark side of manipulative, risk-taking, impulsive, excitement-seeking, expedient.

c. Bright side characteristic of dramatic versus the dark side characteristics of histrionics, attention-seeking, interruptive, poor listening skills, strange manners and attire.

d. Bright side characteristic of imaginative versus the dark side characteristics of eccentricity, odd beliefs, deluded sense of grandeur, and odd and inappropriate behaviors and thoughts.

The cost of failed leadership is high, resulting in failed companies, plunging stock prices, and lost jobs. This study seeks to show that the traits that predict failed leaders can be measured on a spectrum through the HDS, and that recognition of high levels of dark

traits indicate a managerial candidate who should be avoided. Hogan & Hogan (2001) reported that studying these traits and characteristics can help the organizational psychologists predict managerial candidates who could potentially derail, and could also provide insights for both managerial selection as well as development (Birch & Foo, 2010).

Personality Measurement Tools

Hogan and Hogan developed an inventory of the 11 key dimensions of the dark side using the DSM-IV Axis II personality disorders as a guide. The inventory has been shown to predict managerial failure (Hogan & Hogan, 2001). In a study of over 10,000 participants, Hogan and Hogan correlated the HDS and the 11 Key dimensions to elements of DSM-IV Axis 2 (personality disorder) elements on the MMPI as well as the Five Factor Model. As a result, they have an interesting correlation between personality disorders and the 11 Key dimensions. The HDS “contains 154 items scored for 11 scales, each containing 14 items” (p. 41). The test can be completed in 20 minutes, is written at a fifth-grade level, and is in alignment with DSM -IV, Axis 2 categories. The HPI is “a measure of normal personality based on the Five Factor model and normed on 30,000 adults” (p. 43).

Although these characteristics are referred to as ‘dark,’ all personalities have expressions of these traits to some degree, and so the presence of the trait per se does not indicate pathology (Zibarras et al., 2008). In other words, the possession of dark traits are not absolute in their indication of pathology. Instead, the HDS traits are viewed along a continuum, and the candidate’s disposition is viewed through multiple dimensions (Birch

& Foo, 2010). As with many personality traits, the degree to which a person possesses the traits can vary. So while the possession of a dark trait or personality disorder could predict negative work performance, by placing the multi-dimensional approach Birch and Foo note that the researcher can study the extent to which these traits might affect performance. This study sought to show that the multi-dimensional assessment of managers and executives' traits can be measured by the HDS and could be used to identify those who are heavily weighted in dark traits, and thus could be undesirable for company leadership positions.

The structure of the HDS is a set of questions designed to measure and predict behavior, through an 'agree' or 'disagree' response. Each dimension has a range from 0-14, with the higher scores representing increased dysfunctional tendencies. It is not unusual for most respondents to have at least one score classified as 'high,' in the 90th percentile (Zibarras et al., 2008). Scores above the 90th percentile are generally considered problematic and indicative of an extreme manifestation of a trait (Hogan & Hogan, 2001). For example, people who test in the mid-range of the arrogant dimension may also possess social confidence and energetic demeanors, while testing in the mid-range of the dependent dimension indicates friendly and trustworthy traits. Zibarras et al reported that it could be useful for organizations to take note of, and be aware of, the potential for dysfunction associated with high or low dimension scores.

Each of the 11 key dimensions identified in the HDS are also categorized into one of three categories defined by Horney (1950). The excitable, cautious, skeptical, reserved, and leisurely components (also volatile, mistrustful, cautious, detached and passive-

aggressive) of the HDS are grouped as Horney's "moving away from people" (Hogan, 2001, p. 43). The mischievous, bold, colorful, and imaginative (also arrogant, manipulative, dramatic and eccentric) components are grouped as Horney's "moving against people" (p. 43). The third group of components is categorized as "moving toward people" (43), and includes the diligent and dutiful (also dependent and perfectionist) traits. Horney (1950) stated that "moves towards, against, or away from others are not mutually exclusive" (p. 19).

Motivational Theory

McClelland (1975) identified three primary needs drivers in human behavior: Need for Power (nPow), Need for Affiliation (nAff) and Need for Achievement (nAch). McClelland and Boyatzis' (1982) found that managers with high needs for power (nPow) move to higher levels than those who have lower needs for power. McClelland and Boyatzis also noted that managers are often motivated by a higher need for power than nonmanagers.

Hicks and McCracken (2014) note that most successful leaders have a need for power, but it needs to be leveraged in a positive way that benefits the organization. Leaders with a positive, strong and mature need for power possess "high self-control, the use of status for organizational goals and the creation of effective work environments" (p. 103). Those with a high need for power, but who are immature, may use the organization and their position and for egocentric purposes. This "often results in a dominance-submission style of leadership" (p. 103).

Horney (1939) attributed the need to strive for power as a defense mechanism against anxiety and “also a channel through which repressed hostility can be discharged” (p. 141). McClelland (1975) observed that a person who is motivated by a high need for power expresses the need in three ways: through either positive or negative strong actions towards others, by generating strong emotional responses and in others and influencing them to move, or by having a fastidious concern for how others view him and his reputation, which is another expression of impact upon others.

The manager’s high need for power may not necessarily predict dark tendencies as measured by HDS if the need for power is expressed in positive actions towards others. However, the hypothesis of this study was that a strong need for power would correlate positively with the dark traits and the 11 key dimensions of the HDS. There is a gap in the literature investigating the correlation between a manager’s need for power and the measurement of dark personality traits and personality disorders.

The MVPI is built upon the theory that understanding a person’s values and interests provides insight into that person’s motivations (Hogan & Hogan, 1996). Although the MVPI contains 10 scales, for the purpose of this study, the only scale that was used was the Power Motive scale. The person who identifies with the power motive is drawn to leadership roles, prefers freedom, possesses ambition, and wants to be in charge. Hogan and Hogan noted that those who score high in power motive on the MVPI are found to be successful, accomplished, have status, be competitive and are in control. The MVPI coding for participant response uses “a 3-point scale (1 = disagree, 2 =

uncertain, 3 = agree), and each scale contains 20 items, scale scores range from 20 to 60” (p. 16).

Managerial performance. Despite an abundance of leaders in the corporate world, there is a dearth of effective and ethical leadership (Plinio, Young & Lavery, 2010). Rutgers University reflects this dearth when it created the Institute for Ethical Leadership (IEL), designed to train current and future leaders (Plinio, 2009). The IEL is expected to be a resource for leaders to learn not only skills for sustainable organizational performance but also for sustainable behavioral ethical practices. The IEL performed a comparative review of ethical research surveys, including those from educational, public and business venues. Plinio, Young and Lavery, researchers from Rutgers, conducted a survey that included a diverse group of employees from public and private sectors, government, health-care, students from high school, graduate and undergraduate backgrounds, and media-aware participants from more than 22 countries. The Rutgers researchers found that observed levels of misconduct are high, employees fear retaliation in response to reporting misconduct, recessionary measures spur an increase in ethical misconduct, and trust in CEOs is low.

There has been an increasing awareness that corporate leaders are not prepared for global effects in their businesses. The global trends for which executives need to be prepared, but may be inadequately prepared, are corruption, human rights violators, and growing inequality throughout the world (Sanders, 2010). In 2008 – 2009, the Ashridge Centre for Business and Sustainability conducted a survey of CEOs and executive leadership (Gitsham, Pegg & Culpin, 2011). The results of the Ashridge study were that

76% of the CEOs and senior executives who were surveyed reported that skills and knowledge are important for the 21st century leaders. Gitsham, Pegg and Culpin also noted that the CEOs identified the major issues that leaders will face include the challenges of poverty, climate change, scarcity of resources, human rights violations, and new markets underscore by poverty. Although these executives clearly identified current critical issues, less than 8% of those responding felt that the necessary skills and knowledge reside effectively amongst their peers. Also, less than 8% believed that the business schools possessed and taught appropriate responses to these issues.

The lack of effective leadership in a globally changing world and the acknowledgement by leaders themselves that they are not prepared for global changes raises the question: What characteristics and capabilities should a leader have? Gitsham, Pegg and Culpin (2011) found that leaders need to understand themselves, their “strengths, vulnerabilities and psychological preferences” (p. 4). The Ashridge survey identified several areas that are critical to leadership success. These areas are the ability to make decisions in the correct context, and in the midst of complexity and ambiguity, the ability to establish connectedness within their companies and externally as well, and the need for diverse learning approaches.

A manager’s performance might be most effectively measured by surveying subordinates (Hogan & Hogan, 2001). Hogan and Hogan reported that subordinates’ ratings of a manager’s performance are the most effective measure of a manager’s performance and that their ratings correlate reliably with their team’s effectiveness reliably correlated with team effectiveness. Using the HDS and the HPI together, with

observer's ratings, could yield a profile of a candidate that could more accurately predict and measure managerial performance. This study did not include subordinate ratings of managerial candidates, but sought to add to the gap in the literature through correlating dark traits to the need for power.

Managerial selection. A leader's personality can be measured and can predict successful performance. Lee et al. (2010) reported that the success and effectiveness of leadership style has been reliably and consistently predicted and correlated to personality traits. If the personality pathology that leads to failure could be predicted prior to selection, companies could make better managerial choices, and thus potentially positively influence their profits and earnings. If organizations could believe that the cost of placing managers with personality pathology in positions of leadership is detrimental to the organization and the well-being of the employees, new methods of leadership selection could be considered. Managers who do not possess the flashy social skills which often mask personality pathology might be given more opportunity to lead, and the workplace could be healthier and more productive. This study sought to add to the gap in the literature, showing a correlation between dark traits and the escalated need for power, which can be an undesirable combination in organizational leaders.

Chapter 3: Research Method

Introduction

The purpose of this study was to determine if leadership personality traits can predict a need for power and to measure if leaders with darker traits have an increased need for power. It was hypothesized that if personality traits (especially dark personality traits), including ambition, correlated to a high need for power, then leaders possessing those traits could be avoided and employees and businesses could be spared the potential chaos that could ensue. Understanding the correlation between personality traits and the need for power would fill a current void in the literature and could also lead to social change through more effective leadership selection.

The research design for this study will be discussed, and the variables used from the three tools for the study will be described. Methodology is quantitative, and the research design is a multiple regression on variables from the tools. The research questions and hypotheses are reviewed in this chapter, as well as the data analysis plan.

Research Design

The methodological approach for this study was a quantitative study using multiple regression analysis on archival data obtained from Hogan Assessments. Paul Meehl, Regents Professor at the University of Minnesota, was responsible for the model that integrated science and practice in clinical personality assessment (Harkness, 2005). Meehl was a board-certified clinical psychologist who insisted that the interpretation of personality assessment and the patient's diagnosis must be grounded in the reality of testing metrics. Meehl's work demonstrated conclusively that testing and assessments

provide better predictive results in executive search projects than the subjective judgments of management teams, existing leadership, or other talent search professionals.

Appropriateness of Design

This quantitative correlational research design was deemed appropriate for this study because it took a large number of participants, categorized their personality traits into groupings, and measured those groupings against a motivational factor. By reducing multiples traits into measurable categories, more definable trends could be observed. Hogan Assessments archived sufficient numbers of participants to ensure the required statistical power.

Methodology

A series of multiple regression models were used to measure the effect of the independent variables (personality traits) upon the dependent variable (motivation for the Need for Power). The survey data used in this study were provided by Hogan Assessments Consulting firm. The mediator variable, Ambition, as measured by the HPI, was measured separately from the independent HDS variables, and then with those variables, to determine if Ambition mediates prediction of the dependent variable, the Need for Power as measured by the MVPI. The independent variables measured for potential influence upon the Need for Power were all of the traits measured by the HDS, which included the HDS scales (Hogan & Hogan, 2009) of Excitable, Skeptical, Cautious, Reserved, and Leisurely (associated with moving away from people), the HDS scales of Bold, Mischievous, Colorful, and Imaginative (associated with moving against people), and the HDS scales of Dutiful and Diligent (associated with moving toward

people). The three groupings of HDS variables were run as three separate entities against the Need for Power as measured by the MVPI. It was the hypothesis of this study that the grouping of variables that indicated moving against people (Bold, Mischievous, Colorful, and Imaginative) would predict a Need for Power, and that the mediator variable of Ambition would strengthen that prediction.

Population

The data for this study were provided by Hogan Assessment Systems, and they provided test results for participants from the HDS, HPI, and MVPI. All participants for this study were identified from the Management Occupations category as defined by the Department of Labor, who were then grouped into the Hogan and Hogan job family of Managers and Executives. Because Hogan Assessment Systems has collected participants' data for years after the tools were created, the data for this study did not necessarily come from the sample data used during the initial construction of the three tools.

Sampling and Sampling Procedures

Hogan Assessments prepared the sample for this study by beginning with the 2014 U.S. Normative Dataset, filtered for Managers and Executives job family. The initial filter yielded 7,778 participants, from which a data set of 500 participants was randomly sampled and de-identified. This sample was more than adequate to meet the criteria of 33 participants indicated by the power analysis (see Appendix C). The zip file of 500 participants from the Managers and Executives participant pool were provided

through e-mail for this study. Hogan Assessments applied the sample and norming procedures below when categorizing participants.

HDS sample data. The sample data used to norm the HDS was gathered between 1995 and 1996 and included over 2,000 people. The participants in this sample included working adults, prisoners, graduate students, and job applicants (Hogan & Hogan, 2009). The age range for participants was from 21 to 64 years of age. The mean of the participants' age was 38.5 years. The gender distribution was as follows: 1,532 males, 322 females, with 620 participants identifying as White and 150 participants identifying as Black. The estimate for this sample was that 15% had received college educations. The HDS categorizes participants using job categories from the Department of Labor. For this study, participants from the Department of Labor's category of Management Occupations, which Hogan and Hogan classified into their job family of Managers and Executives, were used. This category is described as "employees assigned to positions of administrative or managerial authority over the human, physical, and financial resources of the organization" (Hogan & Hogan, 1996, p. 73).

HPI sample data. For the HPI norming data sample, after removing participants who had missing data or were outside of the threshold for HPI validity scale, 585,988 participants remained (Hogan & Hogan, 2007). The HPI data were also mapped into occupational categories as defined by the Department of Labor. This study used the data that was categorized using the guidelines for the Management Category from the Department of Labor. There were 12,097 participants in the Management Category,

which was 5.43% of the total participants in the Hogan HPI archive. These participants were also categorized into the Hogan and Hogan job family of Managers and Executives.

MVPI sample data. The sample data used to norm the MVPI were based on 68,565 adults, most of whom were job applicants or employees. The MVPI offers the same participant job grouping from the Department of Labor as the HDS and the HPI. The Department of Labor's Management Category, which is grouped into the Hogan and Hogan job family of Managers and Executives, were used in this study. The MVPI includes five racial categories: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. The only ethnic category indicated is for the Hispanic or Latino categorization. MVPI participants were also allowed to identify with two or more races. Gender information was gathered for MVPI participants, as well as age, categorized by over 40 or under 40 years of age. The Managers and Executives included 22,252 participants, which equaled 32.5% of the total sample.

The Hogan Development Survey Manual (Hogan & Hogan, 2009) reported that for the 11 personality variables measured by the HDS, the average alpha reliability for those variables is .67. This gives an effect size of .4489 (alpha reliability squared). I conducted a power analysis for a two-tailed multiple regression model, with alpha of .05, using G*Power 3 tool (Faul, Erdfelder, Lang, & Buchner, 2009). The total sample size, using this model, is recommended at 33 participants (see Appendix C). Although the power analysis formulated a sample size of 33 participants, I opted to request a larger sample size from Hogan Assessments in the interest of strengthening the analysis and

results. I requested 500 participants from the Hogan Archival Data, which has over 10,000 participants in the database.

Data Collection

Hogan and Hogan Assessments provided the data for this study and Appendix E contains the signed Hogan Data Use Agreement. Walden IRB approval number for the study is found in Appendix F.

Instrumentation and Operationalization of Constructs

Hogan Development Survey (HDS). The HDS was a joint project between Drs. Robert and Joyce Hogan, begun in the fall of 1992, with completion of HDS test items in the summer of 1995. Six revisions were completed, with peer-reviews from the United and Europe, before the final version was published. Norming of sample populations was performed during 1995 and 1996. The influences for the genesis of the HDS were the DSM-IV (in particular, the section on Axis 2 personality disorders), existing literature on managerial failure and derailment, and published material from the Center for Creative Leadership (Hogan & Hogan, 2009). Hogan and Hogan reported that efforts were made to enhance internal consistency reliability and sharpen convergent and discriminant validity.

The items from the HDS were carefully screened for invasive or offensive content. Every effort was made to prevent the invasion of privacy, and no questions pertain to “sexual preferences, religious beliefs, criminal or illegal behavior, racial/ethnic attitudes, or attitudes about disabled individuals” (Hogan & Hogan, 2009, p. 9).

The 11 personality scales of the HDS, and the motivational categories into which they fall, are as follows: The HDS scales of Excitable, Skeptical, Cautious, Reserved, and Leisurely are associated with moving away from people. The HDS scales of Bold, Mischievous, Colorful, and Imaginative are associated with moving against people. The HDS scales of Dutiful and Diligent are associated with moving toward people (Hogan & Hogan, 2009). Each scale contained 14 items, and the answers are on a dichotomous scale, with 0 = disagree and 1 = agree. There is an additional experimental scale for social desirability which also contains 14 items with the same disagree/agree scale. The total number of items on the HDS is 168.

The Hogan Development Survey Manual (Hogan & Hogan, 2009) reported that for the 11 personality variables measured by the HDS, the average alpha reliability for those variables is .67. The construct validity for the 11 HDS variables was correlated to each of the 10 variables from the HPI. Since this study only included the HPI variable of Ambition, the construct validity for Ambition is correlated to the 11 HDS variables and is provided in Appendix D. The 11 HDS variables were correlated to the 10 MVPI variables. Since this study only included the MVPI variable of Power, the construct validity for Power is also shown in Appendix D.

Huebner (Hogan & Hogan, 2012) stated in a Mental Measurement Yearbook review of the HDS that the grouping of the HDS variables into the three interpersonal styles of Horney are supported in the construct validity. Huebner also reported that the HDS scales, when factors are analyzed, conform to expectations. Huebner also found that the correlations between the Hogan and Hogan tools--HDS, HPI, and MVPI--and even

the MMPI (Minnesota Multi-phasic Personality Inventory) were encouraging. These correlations are shown in Appendix D.

Operationalization of Variables

This study utilized three instruments: HDS, HPI, and MVPI. Operationalization of the constructs and their definitions follow below. Figure B1 in Appendix B illustrates the study and grouping of the variables.

HDS. Variables within the HDS are grouped into three categories based upon the work of Karen Horney (1950): moving away from others, moving against others, and moving toward others. The HDS variables in their corresponding variables are listed below (Hogan & Hogan, 2009).

HDS variables, moving away from others. Figure B4 in Appendix B illustrates this grouping of HDS variables.

Excitable: moody, difficult to please, and emotionally intense but short-lived enthusiasm for projects and others

Skeptical: cynical and suspicious, mistrustful of others , anticipates betrayal

Cautious: risk aversion born of a fear of criticism or negative assessment, change-resistant, and hesitant to make decisions

Reserved: unaware of the feelings of others, aloof and detached, uncommunicative

Leisurely: overtly cooperative but privately stubborn and irritable, ignoring the request of others and becoming annoyed if others persist with their requests

HDS variables, moving against others. Figure B3 in Appendix B illustrates this grouping of HDS variables.

Bold: highly self-confident and entitled, over-evaluation of personal capabilities, feelings of grandiosity

Mischievous: charming, risk-taking, manipulative, deceitful and excitement-seeking

Colorful: dramatic, attention-seeking, interruptive and needing to be noticed

Imaginative: creative, but acting and thinking in eccentric or unusual ways

HDS variables, moving toward others. Figure B5 in Appendix B illustrates this grouping of HDS variables.

Diligent: meticulous, precise, inflexible and difficult to please, critical of others and micromanaging with uncompromising regard for rules and regulations

Dutiful: eager to please, fearful to act independently or against popular opinion, reluctant to make a decision for fear of disapproval.

HPI. The HPI contains seven variables but only one, Ambition, was used in this study. The complete set of HPI variables are: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive and Learning Approach (Hogan & Hogan, 2006). Ambition is defined as follows:

Ambition: initiative, energetic, self-confident, competitive, motivation for leadership roles (Hogan & Hogan, 2007).

MVPI. The MVPI contains ten variables but only one, Power, was used in this study. The complete set of MVPI variables are: Recognition, Power, Hedonism,

Altruistic, Affiliation, Tradition, Security, Commerce, Aesthetics and Science (Hogan & Hogan, 1996). Although the MVPI contains 10 scales, for the purpose of this study, the only scale that was used is the Power Motive scale. The MVPI “response coding uses a 3-point scale (1 = disagree, 2 = uncertain, 3 = agree), and each scale contains 20 items, scale scores range from 20 to 60” (Hogan & Hogan, 1996, p. 16). Power is defined as follows:

Power: the degree to which a person desires success, achievement, status, dominance and control (Hogan & Hogan, 1996).

Data Analysis Plan

The software used for this study was SPSS v. 21. There were no data cleaning or screening procedures to implement since this study used archival data from Hogan Assessments. The procedures for cleaning and screening the data were applied by Hogan Assessments.

Research Questions and Hypotheses

Below are the research questions and hypotheses for this study. Because the data is archival, no time constraints for data collection apply.

Appendix B contains Figures that graphically illustrate the construct of this study. The independent variables from the HDS (Hogan & Hogan, 2009) are grouped into the theoretical constructs of Horney: moving against others, moving towards others, and moving away from others (Horney, 1950). The mediator variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) links the theoretical construct of moving

against others to the motivational Need for Power, measured by the MVPI (1996). The Need for Power is the dependent variable.

First, it was the hypothesis of this study that the personality trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) would predict a Need for Power as measured by the MPVI (Hogan & Hogan, 1996). This theory is shown in Figure B2 in Appendix B.

Second, it was the hypothesis of this study that a regression model, including measures of darkness and psychopathy determined by the Bold, Mischievous, Colorful, and Imaginative traits (moving against others; Horney, 1950), would predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B3 in Appendix B.

Third, it was also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Excitable, Skeptical, Cautious, Reserved, and Leisurely traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), would not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as illustrated in Figure B4 in Appendix B.

Fourth, it was also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Dutiful and Diligent traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), would not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B5 in Appendix B.

It was also the hypothesis of this reduced regression study that Ambition from the HPI would act as a mediator variable for the Moving Against Others grouping of variables from the HDS (Hogan & Hogan, 2009), as shown in Figures B1 and B6, in Appendix B.

Finally, a full regression model with all HDS (Hogan & Hogan, 2009) variables, and Ambition from the HPI (Hogan & Hogan, 2006), was analyzed using the Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as the dependent variable.

The following research questions were formulated for and guided the study. These questions were answered through an analysis of the secondary data provided by Hogan Assessments. All Figures illustrating this study are found in Appendix B.

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The statistical hypotheses can be stated as:

$$H_{01} : \rho_{Ambition, Need\ for\ power} = 0 \text{ and}$$

$$H_{a1} : \rho_{Ambition, Need\ for\ power} \neq 0$$

Null Hypothesis: There is no correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009).

Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Using the following regression model where the subscript i refers to an individual, the equation was:

$$Y_i = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \beta_3 X_{3,i} + \beta_4 X_{4,i} + \varepsilon_i \text{ where}$$

$$X_1 = \textit{Bold.}$$

$$X_2 = \textit{Mischievous}$$

$$X_3 = \textit{Colorful}$$

$$X_4 = \textit{Imaginative}$$

$$Y = \textit{Need for Power, and}$$

$$\varepsilon = \textit{error,}$$

the following hypothesis was tested:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

$$H_a : \textit{Not } H_0$$

Null Hypothesis: There is no predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? Using the following regression model where the subscript i refers to an individual, the equation was:

$$Y_i = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \beta_3 X_{3,i} + \beta_4 X_{4,i} + \beta_5 X_{5,i} + \varepsilon_i \text{ where}$$

$$X_1 = \textit{Excitable}$$

$$X_2 = \textit{Skeptical}$$

$$X_3 = \textit{Cautious}$$

$$X_4 = \textit{Reserved}$$

$$X_5 = \textit{Leisurely}$$

$$Y = \textit{Need for Power, and}$$

$$\varepsilon = \textit{error,}$$

The following hypothesis was tested:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$$

$$H_a : \textit{Not } H_0$$

Null Hypothesis: There is no predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? Using the following regression model where the subscript i refers to an individual, the equation was:

$$Y_i = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \varepsilon_i$$

where

$$X_1 = \textit{Dutiful}$$

$$X_2 = \textit{Diligent}$$

$$Y = \textit{Need for Power, and}$$

$$\varepsilon = \textit{error,}$$

The following hypothesis was tested:

$$H_0 : \beta_1 = \beta_2 = 0$$

$$H_a : \text{Not } H_0$$

Null Hypothesis: There is no predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)? Using the following regression model where the subscript i refers to an individual, the equation was:

$$Y_i = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \beta_3 X_{3,i} + \beta_4 X_{4,i} + \beta_5 X_{5,i} + \varepsilon_i \text{ where}$$

$$X_1 = \textit{Bold}$$

$$X_2 = \textit{Mischievous}$$

$$X_3 = \textit{Colorful}$$

$$X_4 = \textit{Imaginative}$$

$X_5 = \textit{Ambition}$

$Y = \textit{Need for Power, and}$

$\varepsilon = \textit{error,}$

The following hypothesis was tested:

$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$

$H_a : \textit{Not } H_0$

Null Hypothesis: There is no additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

Alternative Hypothesis: There is additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by the MVPI (Hogan & Hogan, 1996)? For this research question, the full model was evaluated as shown in Figure B5 in Appendix B. Individual betas were examined, and the full model was as follows, where the subscript i refers to an individual:

$$Y_i = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \beta_3 X_{3,i} + \beta_4 X_{4,i} + \beta_5 X_{5,i} + \beta_6 X_{6,i} + \beta_7 X_{7,i} + \beta_8 X_{8,i} + \beta_9 X_{9,i} + \beta_{10} X_{10,i} + \beta_{11} X_{11,i} + \beta_{12} X_{12,i} + \varepsilon_i$$

where

$X_1 = \text{Bold}$

$X_2 = \text{Mischievous}$

$X_3 = \text{Colorful}$

$X_4 = \text{Imaginative}$

$X_5 = \text{Ambition}$

$X_6 = \text{Excitable}$

$X_7 = \text{Skeptical}$

$X_8 = \text{Cautious}$

$X_9 = \text{Reserved}$

$X_{10} = \text{Leisurely}$

$X_{11} = \text{Dutiful}$

$X_{12} = \text{Diligent}$

$Y = \text{Need for Power, and}$

$\varepsilon = \text{error,}$

The statistical hypothesis for RQ6 is:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = \beta_9 \\ = \beta_{10} = \beta_{11} = \beta_{12} = 0$$

$$H_a : \text{Not } H_0$$

Results were interpreted using beta values with probability values and confidence intervals. Unstandardized betas were used to specify the model. An analysis of variance

(ANOVA) was used to validate the model and determine if the model is significant. To determine the effect size, R^2 was used.

Null Hypothesis: There is no variance between any of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will not increase variance against the Need for Power.

Alternative Hypothesis: There is variance between some or all of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will increase variance against the Need for Power.

Ethical Procedures and Treatment of Data

In order to use Hogan and Hogan Assessments data, Dr. DiMatteo-Gibson and I signed a confidentiality agreement for their firm. I will not be responsible for storing their data, or for preserving anonymity of participants. Hogan Assessments manages the privacy and storage concerns for their participant data. The zip file of Hogan Assessments data does not display the personal information of any of the participants. Because these archival data were not collected by me, there is no conflict within my work environment or danger of any disclosure of a participants' identity or personal details. Because I did not be interacting directly with participants from Hogan Assessments archival data set, there is no research risk for participant harm. The signed Hogan Data

Use Agreement and the Walden IRB Approval for the study are contained in Appendixes E and F.

Summary

In summary, this proposed quantitative study sought to add to the literature and address the gap between the dark personality traits and the motivational Need for Power. Multiple regression analysis was performed on the 11 traits within the HDS and the motivational Need for Power as measured by the MVPI. The trait of Ambition as measured by the HPI was the mediating variable.

Chapter 4: Results

Introduction

This study was quantitative and was designed to ascertain if the personality traits of leaders can predict a need for power and to measure if leaders with higher scores in the darker personality traits have an increased need for power. The dependent variable in this study was the need for power, and the independent variables were the 11 personality traits measured by the HDS. The participants in this study were from the Managers and Executives job family from the Hogan Assessments database.

Research Questions and Hypotheses

The following research questions were formulated for and guided the study. These questions were answered through an analysis of the secondary data provided by Hogan Assessments.

The 11 independent variables from the HDS (Hogan & Hogan, 2009) are grouped into the theoretical constructs of Horney (1950): moving against others, moving towards others, and moving away from others. The mediator variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) links the theoretical construct of moving against others to the motivational Need for Power, measured by the MVPI (1996). The Need for Power is the dependent variable.

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of

Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as

measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)?

Null Hypothesis: There is no additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

Alternative Hypothesis: There is additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by

the MVPI (Hogan & Hogan, 1996)? For this research question, the full model was evaluated as shown in Figure B5 in Appendix B.

Results were interpreted using beta values with probability values and confidence intervals. Unstandardized betas were used to specify the model. An analysis of variance (ANOVA) was used to validate the model and determine if the model is significant. To determine the effect size, R^2 was used.

Null Hypothesis: There is no variance between any of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will not increase variance against the Need for Power.

Alternative Hypothesis: There is variance between some or all of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will increase variance against the Need for Power.

Results

Descriptive Statistics

Hogan Assessments began with the 2014 U.S. Normative Dataset, which was filtered for Managers and Executives job family. This Hogan job family closely follows the Department of Labor's group of Management Occupations. The initial result of the Hogan data sample for this study was 7,778 participants, from which a data set of 500

participants was randomly sampled and de-identified. This sample was significantly larger than the 33 indicated by the power analysis (see Appendix C).

The data participants' ages range from 0 – 71 years, where 0 represents no age reported. The mean age was 31.51 and the standard deviation was 21.40 years of age. From the 500 participants, 143 did not report age, which is 28.6% of the data set.

There were 263 male participants, which is 52.6% of the data set. There were 123 female participants, which is 24.6% of the data set. The participants omitting gender identification included 114, which is 22.8% of the data set.

For ethnicity, the data set is coded as 0 = 2 or more races, 1 = Black (14 participants, 2.8%), 2 = Hispanic (10 participants, 2.0%), 3 = Asian, 4 (13 participants, 2.6%) 4 = Native American (0 participants), 5 = White (282 participants, 56.4%), 6 = Not Indicated (180 participants, 36.0%), and 8 = Native Hawaiian or Pacific Islander (1 participant, .02%). The data set does not give a value for 7.

Table 1 displays the descriptive statistics for the 11 HDS variables, the 1 HPI variable and the MVPI variable of Need for Power.

Table 1

Descriptive Statistics for the Model Variables (N = 500)

Variable	M	SD	Skewness	Kurtosis
Ambition	25.30	3.44	-1.67	3.74
Excitable	2.61	2.41	1.26	1.70
Skeptical	4.01	2.25	0.67	0.52
Cautious	2.82	2.51	1.13	0.98
Reserved	3.96	2.19	0.80	0.46
Leisurely	4.55	2.36	0.49	-0.11
Bold	7.58	2.64	-0.22	-0.32
Mischievous	5.93	2.39	0.10	-0.44
Colorful	7.55	2.86	-0.14	-0.54
Imaginative	5.18	2.43	0.34	-0.28
Diligent	9.35	2.09	-0.46	-0.16
Dutiful	7.66	2.11	-0.07	-0.27
Power	48.31	6.45	-0.53	-0.10

Assumptions

The assumptions for the data sample were as follows: that all participants were administered the Hogan tools with equanimity and consistency, and that each participant understood the questions in each survey. Also assumed was that participants were truthful and provided their consent for each test. The sample provided for this study was the 2014 US Normative Dataset which was filtered for Managers and Executives Job Family by Hogan Assessments.

It was assumed that the Hogan Assessments data set also fits a normal curve for the Managers and Executives job family. It was also assumed that the participants are a fair representation of the managerial population by gender, age, and ethnicity. Because the random sample was 500 participants, and the power analysis recommended 33, it was assumed that this sample provided a sound population for this study. In regard to

skewness and kurtosis, Field (2013) stated that significance tests for skewness and kurtosis are not recommended for large samples because some variables might appear to be significantly skewed when in fact they are not that far from normal distribution.

It was assumed that the data set was appropriate for the linear regression model, and that the independent and dependent variables were linearly related. Assumption was also that errors between the model and the data set are independent of each other as measured by the Durbin-Watson test. The Durbin-Watson test indicates whether the residuals (errors) are uncorrelated, and a score of 2 on the Durbin-Watson test signifies that the errors are uncorrelated (Field, 2013). The closer the score is to 2, the more independent the errors are from each other. Field (2013) noted that values greater than 3 on the Durbin-Watson test and less than 1 could indicate that variables are not correlated for the regression model.

Hypothesis 1

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Results. “ R^2 yields a value that represents the proportion of variation in the dependent variable that is explained by the independent variables” (George & Mallery, 2011, p. 194). The Enter procedure yielded the following significant results, with $F(1, 498) = 20.002, p < .001$. The independent variables account for 3.9% of the variance in the Need for Power (as measured by $R^2 = .039$).

Regression coefficients. The B is the slope of regression, the “coefficient and constant for the linear regression equation” (George & Mallery, 2010, p. 188). Beta (β) is the standardized parameter estimate, or “standardized regression coefficient” (George & Mallery, 2010, p. 188). For linear relationships, it will vary between + 1 and – 1 (George & Mallery, 2010). Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Hypothesis 1: constant ($B = 38.990, p < .001$, lower $CI = 34.858$, upper $CI = 43.122$), Ambition ($B = .368, \beta = .197, p < .001$, lower $CI = .207$, upper $CI = .530$). Although the result indicates a positive correlation between Ambition and the Need for Power, the wide confidence interval suggests that it might not be a very strong correlation. Because the $R^2 = .039$, this is a small effect.

Table 2 displays the standardized parameter estimates and confidence intervals for variables in the Enter Model. Field (2013) recommended reporting the Constant in a multiple regression model. The Standardized β was estimated by SPSS for the predictor and outcome variables. The Constant did not have a Standardized β when both the predictor and the outcome are 0 (Field, 2013). The predictor variables, also known as the independent variables, were the 11 HDS traits and the HPI trait of Ambition. The

outcome variable, also known as the dependent variable, was the Need for Power, as measured by the MVPI.

Table 2

Ambition Correlates to the Need for Power (N = 500)

Variable	Standardized β	B	95% CI for B	p
Ambition	.197	.368	.207-.530	<.001
Constant		38.990	34.858-43.122	<.001

Hypothesis 2

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, together (moving against others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Results. The Enter procedure yielded the following significant results, with $F(4, 495) = 76.679, p < .001$. The independent variables account for 39.2% of the variance in the Need for Power (as measured by $R^2 = .392$). The Durbin-Watson test ($DW = 1.936$) indicates that the adjacent residuals are uncorrelated. Field stated that the variance inflation factor (VIF) indicates “whether a predictor has a strong linear relationship with other predictors” (Field, 2013, p. 325). If the average VIF is substantially greater than 1, the regression may be biased. The average VIF ($VIF = 1.338$) indicates that the regression is unbiased.

Regression coefficients. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Hypothesis 2: constant ($B = 35.193, p < .001$, lower $CI = 33.568$, upper $CI = 36.819$), Bold ($B = 1.209, \beta = .496, p < .001$, lower $CI = 1.019$, upper $CI = 1.399$); Mischievous ($B = .553, \beta = .205, p < .001$, lower $CI = .331$, upper $CI = .775$); Colorful ($B = .245, \beta = .109, p = .008$, lower $CI = .063$, upper $CI = .427$); Imaginative ($B = -.226, \beta = -.085, p = .036$, lower $CI = -.437$, upper $CI = -.015$).

Using the following regression model, the equation was:

$$\text{Need for Power} = 35.193 + 1.209(\text{Bold}) + .553(\text{Mischievous}) + .245(\text{Colorful}) - .226(\text{Imaginative}) + \varepsilon$$

Table 3 displays the standardized parameter estimates and confidence intervals for variables in the Enter Model.

Table 3

Moving Against Others Variable Correlates to the Need for Power (N = 500)

Variable	Standardized β	B	95% CI for B	p
Bold	.496	1.209	1.019 -1.399	<.001
Mischievous	.205	.553	.331 -.775	<.001
Colorful	.109	.245	.063 -.427	.008
Imaginative	-.085	-.226	-.437- -.015	.036
Constant		35.193	33.568-36.819	<.001

The data set did not have a robust sample size for measuring responses by ethnicity, so those are not included. However, differences between gender responses were noted in the data set. Gender specific descriptives were prepared for male, female and no gender specified. Multiple Regression results were also run for the Moving Against Variables by gender (male, female and no gender specified).

There were 263 participants who identified as male. The descriptive statistics for male participants' Moving Against Others and their Need for Power are displayed in Table 4. The regression coefficients for the males Moving Against Others follow.

Table 4

Descriptive Statistics for the Male Moving Against Others Variables (N = 263)

Variable	M	SD
Bold	7.81	2.56
Mischievous	6.16	2.45
Colorful	7.71	2.80
Imaginative	5.43	2.33
Power	49.25	6.18

Results for Males Moving Against Others. The Enter procedure yielded the following significant results, with $F(4, 258) = 37.504, p < .001$. The independent variables account for 36.8% of the variance in the Need for Power (as measured by $R^2 = .368$).

Regression coefficients for Males Moving Against Others. There was a significant effect for males. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Males Moving Against Others: constant (B = 37.07, $p < .001$), Bold (B = 1.22, $\beta = .502, p < .001$); Mischievous (B = .60, $\beta = .237, p < .001$); Colorful (B = .06, $\beta = .025, p = .654$); Imaginative (B = -.26, $\beta = -.098, p = .076$). The difference between the gender specified results for males and the full data set with no gender specified is that Colorful is not significant for males. Imaginative has a negative correlation and is not significant. In fact, the less Imaginative a male is, the more likely he has a Need for Power.

There were 123 participants who identified as female. The descriptive statistics for male participants' Moving Against Others and their Need for Power are displayed in Table 5. The regression coefficients for the males Moving Against Others follow.

Table 5

Descriptive Statistics for the Female Moving Against Others Variables (N = 123)

Variable	M	SD
Bold	7.34	2.54
Mischievous	5.42	2.25
Colorful	7.46	2.77
Imaginative	4.56	2.63
Power	46.89	6.39

Results for Females Moving Against Others. The Enter procedure yielded the following significant results, with $F(4, 118) = 18.680, p < .001$. The independent variables account for 38.8% of the variance in the Need for Power (as measured by $R^2 = .388$).

Regression coefficients for Females Moving Against Others. There was a significant effect for females. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Males Moving Against Others: constant (B = 33.52, $p < .001$), Bold (B = .995, $\beta = .395, p < .001$); Mischievous (B = .10, $\beta = .035, p = .708$); Colorful (B = .80, $\beta = .347, p < .001$); Imaginative (B = -.10, $\beta = -.040, p = .643$). The difference between the gender specified results for females and the full data set with no gender specified is that

Mischievous is not significant for females. Imaginative has a negative correlation and is not significant. In fact, the less Imaginative a female is, the more likely she has a Need for Power.

There were 114 participants who identified with no gender. The descriptive statistics for no gender specified participants' Moving Against Others and their Need for Power are displayed in Table 6. The regression coefficients for the no gender specified participants' Moving Against Others follow.

Table 6

Descriptive Statistics for the No Gender Specified Moving Against Others Variables (N = 114)

Variable	M	SD
Bold	7.30	2.92
Mischievous	5.94	2.34
Colorful	7.27	3.08
Imaginative	5.26	2.33
Power	47.67	6.80

Results for No Gender Specified Moving Against Others. The Enter procedure yielded the following significant results, with $F(4, 109) = 24.876, p < .001$. The independent variables account for 47.7% of the variance in the Need for Power (as measured by $R^2 = .477$).

Regression coefficients for No Gender Specified Moving Against Others.

There was a significant effect for No Gender Specified. Unstandardized regression

coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for No Gender Specified Moving Against Others: constant (B = 34.38, $p < .001$, Bold (B = 1.30, $\beta = .561$, $p < .001$); Mischievous (B = .66, $\beta = .225$, $p = .008$); Colorful (B = .24, $\beta = .107$, $p = .220$); Imaginative (B = -.35, $\beta = -.121$, $p = .167$). The people who chose not to specify gender have a higher need for power as witnessed by the effect size of 47.7% of the variance. The difference between the gender specified results for males and the full data set with no gender specified is that Colorful is not significant for participants with No Gender Specified, resembling the male responses. Imaginative has a negative correlation and is not significant. In fact, the less Imaginative the participants who chose not to specify gender were, the more likely they were to have a Need for Power. This result also resembles the male participants' Imaginative results.

Hypothesis 3

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from

others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Results. The Enter procedure yielded the following significant results, with $F(5, 494) = 22.676, p < .001$. The independent variables account for 18.7% of the variance in the Need for Power (as measured by $R^2 = .187$). The Durbin-Watson test ($DW = 1.991$) indicates that the adjacent residuals are uncorrelated. The average VIF ($VIF = 1.430$) indicates that the regression is unbiased.

Regression coefficients. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Hypothesis 3: constant ($B = 43.488, p < .001$, lower $CI = 42.101$, upper $CI = 44.875$), Excitable ($B = -.220, \beta = -.082, p = .106$, lower $CI = -.488$, upper $CI = .047$); Skeptical ($B = 1.045, \beta = .365, p < .001$, lower $CI = .776$, upper $CI = 1.315$); Cautious ($B = -.524, \beta = -.204, p < .001$, lower $CI = -.780$, upper $CI = -.269$); Reserved ($B = .070, \beta = .024, p = .606$, lower $CI = -.196$, upper $CI = .336$); Leisurely ($B = .528, \beta = .194, p < .001$, lower $CI = .280$, upper $CI = .777$).

Using the following regression model, the equation was (only including significant variables, which excluded Excitable and Reserved):

$$\text{Need for Power} = 43.488 + 1.045(\text{Skeptical}) - .524(\text{Cautious}) + .528(\text{Leisurely}) + \varepsilon$$

Table 7 displays the standardized parameter estimates and confidence intervals for variables in the Enter Model.

Table 7

Moving Away from Others Variable Correlates to the Need for Power (N = 500)

Variable	Standardized β	B	95% CI for B	p
Excitable	-.082	-.220	-.488 - .047	.106
Skeptical	.365	1.045	.776 - 1.315	<.001
Cautious	-.204	-.524	-.780 - -.269	<.001
Reserved	.024	.070	-.196 - .336	.606
Leisurely	.194	.538	.280 - .777	<.001
Constant		43.488	42.101 - 44.875	<.001

Hypothesis 4

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Alternative Hypothesis: There is a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others; Horney, 1950), as

measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996).

Results. The Enter procedure yielded the following significant results, with $F(2, 497) = 34.264, p < .001$. The independent variables account for 12.1% of the variance in the Need for Power (as measured by $R^2 = .121$). The Durbin-Watson test ($DW = 1.872$) indicates that the adjacent residuals are uncorrelated. The average VIF ($VIF = 1.010$) indicates that the regression is unbiased.

Regression coefficients. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Hypothesis 4: constant ($B = 46.632, p < .001$, lower $CI = 33.655$, upper $CI = 49.609$), Diligent ($B = .816, \beta = .265, p < .001$, lower $CI = .560$, upper $CI = 1.072$); Dutiful ($B = -.777, \beta = -.254, p < .001$, lower $CI = -1.031$, upper $CI = -.523$).

Using the following regression model, the equation was:

$$\text{Need for Power} = 46.632 + .816(\text{Diligent}) - .777(\text{Dutiful}) + \varepsilon$$

Table 8 displays the standardized parameter estimates and confidence intervals for variables in the Enter Model.

Table 8

Moving Toward Others Variable Correlates to the Need for Power (N = 500)

Variable	Standardized β	B	95% CI for B	p
Diligent	.265	.816	.560 -1.072	<.001
Dutiful	-.254	-.777	- 1.031 -.523	<.001
Constant		46.632	43.655-49.609	<.001

Hypothesis 5

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)?

Null Hypothesis: There is no additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

Alternative Hypothesis: There is additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous,

Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

The mediation model, which utilized Hayes (2014) process as an add-on to SPSS, was run for each of the Moving Against HDS variables: Bold, Mischievous, Colorful, and Imaginative, with a mediating variable of Ambition from the HPI, and measured against the Need for Power from the MVPI. To measure the effect size of the model which includes the mediating variable, Field (2013) stated that kappa squared (κ^2) "expresses the indirect effect as a ratio to the maximum possible indirect effect that could have found given the design of the study" (p. 413). Field (2013) reported that a small kappa squared effect would be approximately .01, a medium effect would be approximately .09, and a large effect would be approximately .25. Field also recommended diagramming the results of a mediating variable in relationship to the independent and dependent variable. Each Moving Against variable from the HDS was run separately with the mediating variable of Ambition and against the Need for Power. The indirect effect of Ambition on each Moving Against variable is diagrammed in Figures 1 through 4 below.

Results for Bold. There was a significant indirect effect for Ambition on a Need for Power when Bold is the primary variable, with $F(1, 498) = 258.554, p < .001$. The independent variable accounts for 34.2% of the variance in the Need for Power (as measured by $R^2 = .3418$). The indirect effect of Ambition on Need for Power is $B = .0409$, lower $CI = .0063$, upper $CI = .0976$). This represents a relatively small effect, $\kappa^2 = .0223$, 95% $CI [.0047, .0501]$. Figure 1 illustrates these results.

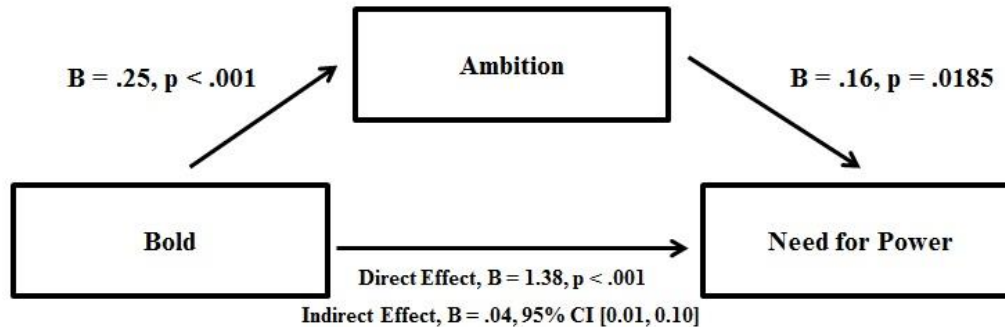


Figure 1. The indirect mediating effect of Ambition on Need for Power when Bold is primary.

Results for Mischievous. There was a significant indirect effect for Ambition on a Need for Power when Mischievous is the primary variable, with $F(1, 498) = 15.0223$, $p = .001$. The independent variable accounts for 2.9% of the variance in the Need for Power (as measured by $R^2 = .0293$). The indirect effect of Ambition on Need for Power is $B = .0619$, lower $CI = .0201$, upper $CI = .1385$). This represents a relatively small effect, $\kappa^2 = .0250$, 95% $CI [.0082, .0524]$. Figure 2 illustrates the relationship between these three variables.

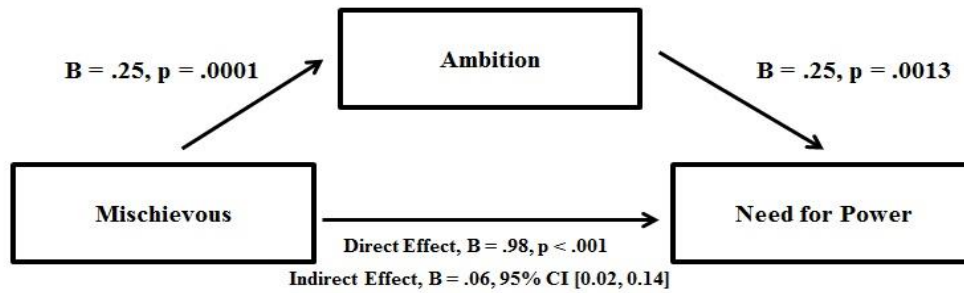


Figure 2. The indirect mediating effect of Ambition on Need for Power when Mischievous is primary.

Results for Colorful. There was an insignificant indirect effect for Ambition on a Need for Power when Colorful is the primary variable. However, there is a significant effect on Ambition when Colorful is the primary variable, with $F(1, 498) = 75.8126, p < .001$. The independent variable accounts for 13.2% of the variance in the Need for Power (as measured by $R^2 = .1321$). The indirect effect of Ambition on Need for Power when Colorful is primary is $B = .0508$, lower $CI = -.0463$, upper $CI = .1526$). This represents a small effect, $\kappa^2 = .0223$, 95% $CI [0.0010, .0638]$. Figure 3 illustrates the significant effect of Colorful upon the Need for Power and the insignificant effect of the mediating variable, Ambition.

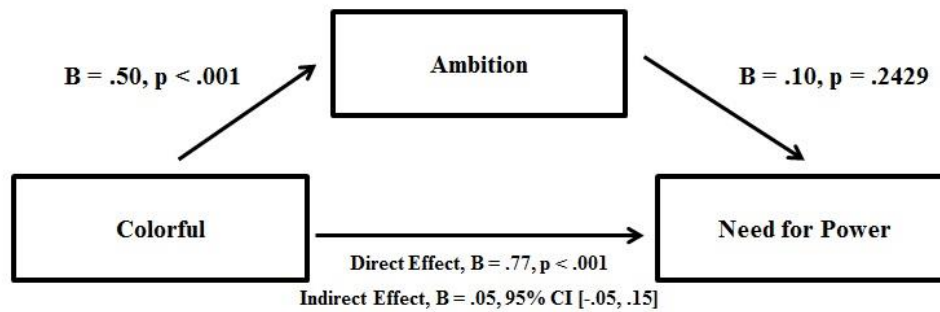


Figure 3. The indirect mediating effect of Ambition on Need for Power when Colorful is primary.

Results for Imaginative. There was a significant indirect effect for Ambition on a Need for Power when Imaginative is the primary variable, with $F(1, 498) = 21.3976$, $p < .001$. The independent variable accounts for 4.1% of the variance in the Need for Power (as measured by $R^2 = .0412$). The indirect effect of Ambition on Need for Power when Imaginative is primary is $B = .0569$, lower $CI = .0170$, upper $CI = .1305$). This represents a small effect, $\kappa^2 = .0217$, 95% $CI [.0063, .0486]$. Figure 4 illustrates these results.

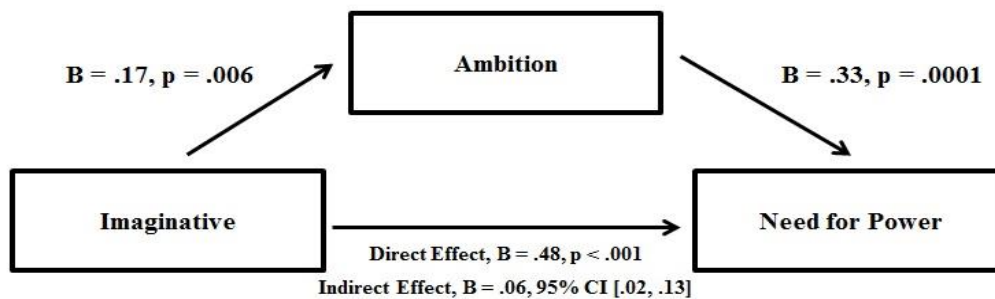


Figure 4. The indirect mediating effect of Ambition on Need for Power when Imaginative is primary.

Hypothesis 6

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by the MVPI (Hogan & Hogan, 1996)?

Null Hypothesis: There is no variance between any of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will not increase variance against the Need for Power.

Alternative Hypothesis: There is variance between some or all of the 11 HDS personality traits (Hogan & Hogan, 2009) when measured against the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996), and the variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) will increase variance against the Need for Power.

Results. The Enter procedure yielded the following significant results, with $F(12, 487) = 35.169, p < .001$. The independent variables account for 46.4% of the variance in the Need for Power (as measured by $R^2 = .464$). The Durbin-Watson test ($DW = 1.943$) indicates that the adjacent residuals are uncorrelated, which is desirable. The average VIF ($VIF = 1.665$) indicates that the regression is unbiased.

Regression coefficients. Unstandardized regression coefficients (B), the intercept, standardized regression coefficients (β) for the significant independent variables are as follows for Hypothesis 6: constant ($B = 29.02, p < .001$, lower $CI =$

22.89, upper $CI = 35.14$), Ambition ($B = 0.16, \beta = 0.09, p = .112$, lower $CI = -0.04$, upper $CI = 0.36$); Excitable ($B = -0.17, \beta = -0.06, p = .138$, lower $CI = -0.39$, upper $CI = 0.05$); Skeptical ($B = 0.32, \beta = 0.11, p = .008$, lower $CI = 0.8$, upper $CI = 0.57$); Cautious ($B = 0.10, \beta = 0.04, p = .470$, lower $CI = -0.18$, upper $CI = 0.38$); Reserved ($B = 0.22, \beta = 0.07, p = .061$, lower $CI = -0.01$, upper $CI = 0.44$); Leisurely ($B = 0.24, \beta = 0.09, p = .023$, lower $CI = 0.03$, upper $CI = 0.46$); Bold ($B = 0.86, \beta = 0.35, p < .001$, lower $CI = 0.66$, upper $CI = 1.06$); Mischievous ($B = 0.50, \beta = 0.19, p < .001$, lower $CI = 0.29$, upper $CI = 0.72$); Colorful ($B = 0.32, \beta = 0.14, p = .001$, lower $CI = 0.14$, upper $CI = 0.51$); Imaginative ($B = -0.16, \beta = -0.06, p = .110$, lower $CI = -0.36$, upper $CI = 0.04$); Diligent ($B = 0.46, \beta = 0.15, p < .001$, lower $CI = 0.24$, upper $CI = 0.68$); Dutiful ($B = -0.44, \beta = -0.14, p < .001$, lower $CI = -0.65$, upper $CI = -0.23$).

Using the following regression model, the equation including the significant variables was:

$$\text{Need for Power} = 29.02 + 0.32(\text{Skeptical}) + 0.24(\text{Leisurely}) + 0.86(\text{Bold}) + 0.50(\text{Mischievous}) + 0.32(\text{Colorful}) + 0.46(\text{Diligent}) - 0.44(\text{Dutiful}) + \varepsilon$$

Table 9 displays the standardized parameter estimates and confidence intervals for variables in the Enter Model.

Table 9

HDS, HPI, and MVPI General Variable Model Without Ambition as a Mediator (N = 500)

Variable	Standardized β	<i>B</i>	95% CI for <i>B</i>	<i>p</i>
Ambition	0.09	0.16	-0.04 – 0.36	.112
Excitable	-0.06	-0.17	-0.39 – 0.05	.138
Skeptical	0.11	0.32	0.08 – 0.57	.008
Cautious	0.04	0.10	-0.18 – 0.38	.470
Reserved	0.07	0.22	-0.01 – 0.44	.061
Leisurely	0.09	0.24	0.03 – 0.46	.023
Bold	0.35	0.86	0.66 – 1.06	<.001
Mischievous	0.19	0.50	0.29 – 0.72	<.001
Colorful	0.14	0.32	0.14 – 0.51	.001
Imaginative	-0.06	-0.16	-0.36 – 0.04	.110
Diligent	0.15	0.46	0.24 – 0.68	<.001
Dutiful	-0.14	-0.44	-0.65 – -0.23	<.001
Constant		29.02	22.89 – 35.14	<.001

Revised Model. When the regression model is run without the insignificant traits (Ambition, Excitable, Cautious, Reserved, and Imaginative) there was a slight reduction in the R^2 (from 0.464 to 0.452) and the Confidence Intervals were tightened. Results for the revised model are found in Table 10.

Results. The Enter procedure yielded the following significant results, with $F(7, 492) = 58.029, p < .001$. The independent variables account for 45.2% of the variance in the Need for Power (as measured by $R^2 = .452$). The Durbin-Watson test ($DW = 1.916$) indicates that the adjacent residuals are uncorrelated, which is desirable.

Table 10

Revised HDS, HPI, and MVPI Variable Model with Significant Variables Only (N = 500)

Variable	Standardized β	<i>B</i>	95% CI for <i>B</i>	<i>p</i>
Skeptical	0.09	0.25	0.03 – 0.47	.023
Leisurely	0.09	0.26	0.06 – 0.46	.011
Bold	0.35	0.86	0.66 – 1.06	<.001
Mischievous	0.16	0.45	0.24 – 0.65	<.001
Colorful	0.14	0.32	0.14 – 0.50	<.001
Diligent	0.16	0.50	0.28 – 0.71	<.001
Dutiful	-0.16	-0.50	-0.71 – -0.30	<.001
Constant		33.74	30.87 – 36.62	<.001

Summary

The purpose of this study was to ascertain a correlation between managerial and executive dark traits and the need for power. The results indicated that there is a correlation between some dark traits and a need for power. There were also some gender differences noted in the dark traits and the corresponding correlation to the need for power.

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The data showed that when Ambition is measured singly against a Need for Power, there is a small effect ($R^2=.039$). However, the study also examines the effect of Ambition as a mediating variable upon other dark traits, and when measured as a mediating variable, Ambition has a larger effect. The effects of Ambition as a mediating variable are explored in Research Question 5.

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The data showed a significant effect of 39.2% ($R^2=.392$) for each of these traits when measured against the Need for Power. Research Question 6 explored the total variance of the entire model, and it was found to be 46.4%. Therefore, most of the variance can be accounted for in the Moving Against Others traits (Bold, Mischievous, Colorful, and Imaginative). This initial result did not include the mediating variable of Ambition, and results were not separated by gender for the initial analysis. However, to further examine the data for possible gender specific results, additional analysis was performed to study these four traits by male, female and gender-not-specified. The gender-related data indicated a significant effect for Bold and Mischievous for males, for Bold and Colorful for females, and gender-not-specified had significant results for Bold and Mischievous. It is interesting to note that the results for gender-not-specified are reflective of the results for males, leading to a question of whether males tend to refuse to identify gender more than females. Another interesting and significant effect portrayed for both male, female and gender-not-specified is a negative correlation with Imagination. This data indicated that the stronger the Imagination trait, the lower the Need for Power will be. This could be a concern for creative people in the workplace, who might be working for power driven authorities who may not appreciate creativity or inspiration. Another point to note

is that in the general model, where participants are not specified by gender, the Imaginative trait fell within the significant range: $p = .036$. But when segregated by gender, the Imagination trait was no longer significant within the models. The reason for this difference could be that gender differences are homogenized when considered within a larger sample ($N = 500$).

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The effect ($R^2 = .187$) of 18.7% of was significant but smaller than the effect for the Moving Against Others traits. Excitable and Reserved were not significant in the model, and Cautious had a negative correlation with the Need for Power. The stronger the Cautious personality trait, the less likely the participant would be to have a strong Need for Power. Skeptical, Cautious and Leisurely had significance in the model ($p < .001$).

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The effect of 12.1% ($R^2 = .121$) was significant but the smallest of the three groups. The Diligent trait was

positively correlated, but the Dutiful trait was negatively correlated with the Need for Power. The stronger the Dutiful trait, the less likely a participant is to have a strong Need for Power.

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)? In order to evaluate and measure the data results using the Hayes (2014) SPSS add-on that allows for the mediating variables, each of the Moving Against Others traits had to be evaluated separately for the mediating effect of Ambition against the Need for Power. These effects are illustrated through diagrams (instead of two-dimensional tables) to show the three-dimensional effect of mediation. Research Question 2 provided data results in which the four Moving Against Others traits were run as a block to predict the Need for Power. This was not possible for evaluating Ambition as mediator. Each of the four traits had to be run separately in SPSS, with the Ambition mediating variable measured using Hayes (2014) process in SPSS. The data were presented in 4 diagrams for Research Question 5 (one for each Moving Against Other trait). Field (2013) reported that a small kappa squared effect would be approximately .01, a medium effect would be approximately .09, and a large effect would be approximately .25. The results for Bold account for 34.2% of the variance in the Need for Power (as measured by $R^2=.3418$). The indirect effect of Ambition on Need for Power when Bold is primary represents a

relatively small effect, where $\kappa^2 = .0223$. The results for Mischievous account for 2.9% of the variance in the Need for Power (as measured by $R^2 = .0293$). The indirect effect of Ambition on Need for Power when Mischievous is primary is a relatively small effect, $\kappa^2 = .0250$, but the largest for the four traits. The results for Colorful account for 13.2% of the variance in the Need for Power (as measured by $R^2 = .1321$). The indirect effect of Ambition on Need for Power when Colorful is primary is a small effect, $\kappa^2 = .0223$, which is the same as Bold. The results for Imaginative account for 4.1% of the variance in the Need for Power (as measured by $R^2 = .0412$). The indirect effect of Ambition on Need for Power when Imaginative is primary represents the smallest effect for all four traits, $\kappa^2 = .0217$.

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by the MVPI (Hogan & Hogan, 1996)? The final research question differs from the others in that no grouping or mediators were used to measure variables or weight them against the Need for Power. Each personality trait was run as a singular variable with the same weight as all of the other variables. The independent variables accounted for 46.4% of the variance in the Need for Power (as measured by $R^2 = .464$). When run independently, instead of in the Moving Against, Moving Away and Moving Toward Others groups, some variables were shown to be insignificant in the model. The insignificant variables (without respect to their groupings) were Ambition, Excitable, Cautious, Reserved, and Imaginative. When the regression model was run again without the insignificant traits,

there was a slight reduction in the R^2 (from 0.464 to 0.452) and the Confidence Intervals were tightened. Less than 1% of the variance was accounted for by the insignificant traits.

Chapter 5 will present conclusions from the data analysis and results of the research study. The prescriptives and recommendations, as well as connection to the literature review, will follow in Chapter 5. The implications for social change, and the limitations of the study, will also be discussed in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study using multiple regression analysis was to determine if leadership personality traits predict a need for power, to measure if leaders with high scores in the darker traits have an increased need for power, and to ascertain if ambition mediated that need for power. The dependent variable for this study was the Need for Power as measured by the MVPI, and the independent variables were the 11 personality traits measured by the HDS. Ambition was the mediating variable measured by the HPI. Participants were managers and executives from the Hogan Assessments database.

The HDS organizes 11 dark personality traits into three categories (Hogan & Hogan, 2009), which represent how participants manage anxiety, and which are based on the motivational work of Horney (1950). Those three categories for managing inadequacies and insecurities are as follows: (a) moving toward people—managing insecurities by connecting with others and building alliances, (b) moving away from people—managing one’s insecurities and feelings of inadequacy by avoiding others, and (c) moving against people—managing one’s insecurities and sense of inadequacy by dominating and intimidating others. Appendix A contains a glossary of the variables found in each of the three Hogan tools.

The traits of Bold, Mischievous, Colorful, and Imaginative (moving against people) were hypothesized to correlate positively with the Need for Power. It was also the hypothesis of this study that the trait of Ambition as measured by the HPI would act

as a mediating variable when combined with the moving against variables (Bold, Mischievous, Colorful, and Imaginative) from the HDS and when correlated with the Need for Power. As discussed in Chapter 2, the traits that measure the tendency to move away from others (Excitable, Skeptical, Cautious, Reserved, and Leisurely) and move toward others (Dutiful and Diligent) from the HDS were hypothesized to show no correlation with the Need for Power as measured by the MVPI.

A series of multiple regression models were used to measure the effect of the independent variables (personality traits) upon the dependent variable (motivation for the Need for Power). The mediating variable, Ambition, was measured separately from the independent HDS variables, and then with those variables, to determine if Ambition mediates prediction of the dependent variable, the Need for Power. The three groupings of HDS variables were run as three separate entities against the Need for Power. Appendix B contains diagrams of each hypothesis and research question for this study.

I conducted this study to address an existing knowledge gap in the literature in correlating leaders' personality traits to their need for power. The findings of this study supported the hypotheses that dark traits predict a need for power, and indicated that the null hypotheses can be rejected. However, ambition did not mediate need for power as greatly as was expected.

Interpretation of the Findings

The literature indicated that the personality traits of leaders can be measured and that those traits can predict organizational success or failure (Collins, 2001; Kaiser & Hogan, 2005). Collins (2001) identified a preternatural work ethic and humility as the

two traits of CEOs that predicted the highest organizational performance and profitability. These two traits are the antithesis of a strong Need for Power, indicating that these successful CEOs may not have a strong Need for Power, and also probably would not measure with high scores in dark traits. The HDS traits of Dutiful and Diligent, which were strongly represented in participants who move toward others in times of crisis, could indicate a leader who is capable of building a strong team. This study found that executives with high scores in Dutiful and Diligent did not have a strong Need for Power. Also, the HDS trait of Imaginative was found to be negatively correlated to a Need for Power for both male and female executives. It could be argued that the executives who are Imaginative are not seeking power, but instead are seeking to build a strong team and lead the organization through creative thinking.

Hogan and Hogan (2001) stated that the primary role of a leader is to motivate subordinates and rally them on behalf of a cause by building and maintaining a team. Collins (2005) found that in two thirds of the cases he studied, companies either stagnated or were ruined when their CEOs had a gargantuan ego. Collins also found a strong negative correlation between a leader's personal charisma and the ability to build a strong company. The dark traits measured by the HDS encompass the traits that Collins observed in the CEOs who failed. The four traits categorized as Moving Against Others (Bold, Mischievous, Colorful, and Imaginative) can be correlated with unsuccessful CEOs behavior as described in the literature. The HDS trait of Bold includes characteristics of entitlement, extreme self-confidence, high assessment of one's own personal abilities, and feelings of grandiosity (Hogan & Hogan, 2009), which correlate to

Collins's observations of the gargantuan ego (Collins, 2005). The findings of this study were that the highest predictor of the Need for Power for male and female executives was the trait of Bold. For male executive participants, the second highest trait predicting Need for Power was Mischievous, which includes charismatic behavior designed to manipulate. For female executive participants, Colorful was the second highest trait predicting Need for Power, and includes behaviors designed to secure attention through drama, interruptions, and needing to be noticed.

The executive participants in this study who had strong traits in Moving Away from Others (Excitable, Skeptical, Cautious, Reserved, and Leisurely) exhibited behaviors that included a moody and difficult-to-please demeanor, limited attention span for projects, lack of trust in others, expecting betrayal, fearful of risk and criticism, avoidant of change, and an aloof and insensitive attitude towards others (Hogan & Hogan, 2009). These participants did not have a strong Need for Power. It could be argued that these participants personify the traits that the literature indicated would predict leadership failure (Hogan & Kaiser, 2005; Van Velsor & Leslie, 1995). McCall and Lombardo (1983) stated that both leaders' performance failures and personality flaws contribute to leadership failure, but that the personal dysfunctional traits would more accurately predict failure. The traits McCall and Lombardo identified as derailment predictors included insensitivity others, coldness, and aloofness, which correlate to Skeptical, Cautious, and Reserved.

RQ1: Is there a positive correlation between the personality trait of Ambition as measured in the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured in the

MVPI (Hogan & Hogan, 1996)? The results of the study showed that Ambition had a small effect on Need for Power. It had a larger effect when used in other research questions as a mediating variable.

RQ2: The HDS traits of Bold, Mischievous, Colorful, and Imaginative measure the participants' tendency to move against others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Bold, Mischievous, Colorful, and Imaginative, grouped together as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The Moving Against Others group showed the largest effect of all three groups in predicting a Need for Power. The data showed a significant effect for each of these four traits when measured against the Need for Power, when gender was not factored into the model. Imaginative was negatively correlated, while the other three traits were positively correlated. Research Question 2 did not include the mediating variable of Ambition.

Additional regressions were run to examine the possibility of gender-specific results for the Moving Against Others traits. The gender-related data showed a significant effect for Bold and Mischievous for males, and Colorful, and Imaginative were not significant. For female participants, Bold and Colorful were significant, but Mischievous and Imaginative were not. For participants who did not specify gender, Bold and Mischievous were significant, and Colorful, and Imaginative were not significant. The findings for gender-not-specified might indicate that these were mostly males, since they are similar to the results for males.

RQ3: The HDS traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely measure the participants' tendency to move away from others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Excitable, Skeptical, Cautious, Reserved, and Leisurely, together (moving away from others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The second largest effect was discovered for the Moving Away from Others group in predicting a Need for Power. The effect was small, but still significant. Skeptical, Cautious and Leisurely were significant in this model, while Excitable and Reserved were not significant. As noted by McCall and Lombardo (1983), the traits predictive of leadership failure included insensitivity to others, coldness and aloofness, which correlate to Skeptical and Cautious. Cautious had a negative correlation with the Need for Power, indicating that the more Cautious a participant tends to be, the less likely a Need for Power. No results by gender were run for the Moving Away from Others traits.

RQ4: The HDS traits Dutiful and Diligent measure the participants' tendency to move toward others (Horney, 1950; Hogan & Hogan, 2009). Is there a predictive relationship between the personality traits of Dutiful and Diligent, together (moving toward others), as measured by the HDS (Hogan & Hogan, 2005), and the Need for Power, as measured in the MVPI (Hogan & Hogan, 1996)? The smallest effect of three groups on the prediction of a Need for Power was discovered for the Moving Toward Others traits. The Diligent trait was positively correlated with a Need for Power. McClelland (1975) reported that a person who is motivated by a high need for power

(nPow) can express the need in three ways: through either positive or negative strong actions towards others, by generating strong emotional responses in others and influencing them to move, or by having a fastidious concern for how others view him and his reputation (McClelland, 1975). The Ashridge Survey from 2008-2009 identified the ability to establish connectedness within their companies as a positive skill for a leader (Gitsham, Pegg & Culpin, 2011), and correlates to the Moving Towards Others traits. The manager's high need for power (nPow) may not necessarily predict dark tendencies as measured by HDS if the nPow is expressed in positive actions towards others, as could be the case with a manager who is high in the Diligent trait and also strong in the Need for Power. Dutiful was negatively correlated, indicating that the stronger a participant's sense of duty, the less likely that participant is to have a strong Need for Power. Shannon and Keller (2007) reported that managers who are low in their need for power and do not believe that they can control events are more likely to respect organizational constraints and work within guidelines established by others (Shannon & Keller, 2007), which correlates to the Dutiful traits, which supports the findings of this study. No results by gender were run for the Moving Toward Others traits.

RQ5: Does the inclusion of the addition of the Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950) account for or explain additional variance in the Need for Power as measured in the MVPI (Hogan & Hogan, 1996) beyond that explained by Ambition as measured by the HPI (Hogan & Hogan, 2006)? To evaluate the mediating effects of Ambition on the Moving Against Others

traits, the traits had to be run individually instead of in a group, as they were in Research Question 2. Bold accounted for the majority of the variance in model in predicting the Need for Power when Ambition was the mediator. Ambition had a small effect, when run indirectly as a mediator, with Bold as primary, predicting a Need for Power. Mischievous had a small but significant effect, as did the indirect effect of Ambition on the Need for Power. Colorful had a moderate effect on the Need for Power. The indirect effect of Ambition on Need for Power when Colorful is primary was small but significant. The results for Imaginative in predicting in the Need for Power were also small but significant, and the indirect effect of Ambition on Need for Power when Imaginative is primary, represented the smallest effect for all four traits.

RQ6: Does the inclusion of all 11 of the independent variables as measured by the HDS (Hogan & Hogan, 2009), and the mediator trait of Ambition as measured by the HPI (Hogan & Hogan, 2006), account for variance in the Need for Power as measured by the MVPI (Hogan & Hogan, 1996)? Research Question 6 included no groupings of variables, or positioning of mediating variables. Each trait was run singly and with the same weight as all other variables. When run independently, outside of the Moving Against, Moving Away and Moving Toward Others groupings, some variables were shown to be insignificant in the model. The insignificant variables (without respect to their groupings) were Ambition, Excitable, Cautious, Reserved, and Imaginative. When the regression model was run again without the insignificant traits, there was a slight reduction in the effect size of the remaining traits.

Limitations of the Study

This study assumed that Hogan Assessments administered their tools to all participants consistently and with equanimity. It is assumed that participants understood the questions in each survey tool. The assumption is also that participants' consents were obtained, and that they answered truthfully for each test. It is assumed that the sample provided for this study was consistent with normalized populations used in the designing of the three Hogan Assessments tools, and that the participants in the sample fit into the Hogan category of Management and Executives job family. This category was modeled on the Department of Labor Management Occupations. Because the participants were all from the Hogan category of Management and Executives, results should only be applied to those populations. It is not known if any populations were excluded during the norming process.

While this study did not seek to analyze gender, age and ethnic differences, the Hogan Assessment data samples were identified by age, race and gender. No regressions by age categories were run. The racial sampling was too small for analysis. Gender was identified by three categories: male, female and gender-not-specified. Data for Research Question 2, which analyzed Moving Against Others traits against the Need for Power, was run two ways: without gender specifications, and then rerun by gender. Moving Against Others represented most of the variance in the model. The limitation on this study is that gender was not broken out for study on Moving Toward Others or Moving Away from Others traits, since these groupings represented significantly smaller effects than the Moving Against Others traits.

Another limitation of this study is that comparison between results of Research Question 2 and Research Question 5 cannot be directly associated. This is because the Hayes (2014) SPSS add-on tool cannot analyze results using a mediator against groups of variables. Therefore, each trait in the Moving Against Others group was evaluated separately for the mediating effect of Ambition against the Need for Power for Research Question 5. The comparison is probably slightly different between Research Question 2, where the variables were run as a group, and Research Question 5, where variables were run singly.

The HDS is not intended for use as a clinical assessment tool, and is meant only for use in personnel selection, job fit and other functions in the workplace. Hogan Assessments does not recommend that the HDS scores be interpreted alone for personality pathology, but recommends that potential pathology be validated against the California Personality Inventory (CPI), Minnesota Multiphasic Personality Inventory (MMPI) or HPI.

Recommendations

A further research opportunity would be exploring the different motivations of the Managers and Executives in the Hogan Assessments data sample. This study limited motivational assessment to measuring for the Need for Power. However, per McClelland's theories of motivation (McClelland, 1975), which include the Need for Power, the Need for Achievement and the Need for Affiliation, a potential study could examine managers and executives for dark traits against all three motivational needs. The hypothesis could be that managers and executives with high scores in dark traits will be

motivated by either a strong need for power or possibly a strong need for achievement. It seems unlikely that managers and executives with high scores in dark traits would have a strong need for affiliation with others.

Another research opportunity would be examining ethnic differences in this study, but a larger data sample, which allows for the power analysis of minimum of 33 participants in each category as indicated by G*Power 3 tool (Faul, Erdfelder, Lang, & Buchner, 2009) would be required. The current data sample was $N = 500$. These participants were randomly selected from 7,778 participants. To obtain reliable and valid ethnic results, it is possible that several thousand participants would need to be included.

Implications

This study found the strongest correlation for the personality trait of Bold in predicting the Need for Power, and this correlation was the strongest for all gender categories: males, females and those who did not specify gender. Lilienfeld, Latzman, Watts, Smith, and Dutton (2014) were the first to report research results that show psychopathic traits are associated with the probability of holding a leadership role or a management position. The trait that predicts management and leadership position in their study is Fearless Dominance (Lilienfeld et al., 2014), which is similar to the trait of Bold. Lilienfeld et al. (2014) also reported that people are drawn to professions that allow for the expression of their dispositions, and for those with Fearless Dominance, those positions would include leadership, managerial roles and physically highly risky occupations.

The implications for positive social change within organizations as a result of this study are that selection committees could give more weight to personality and motivational selection tools when they are interviewing candidates for high level managerial positions. Currently, many organizations promote from within, rely upon interviews only, and may not use tools for assessing a potential leader's personality. The impact upon the organization is that someone who might have expertise in a field might not be suited to lead. The other potentially disastrous implication upon the organization, when assessment tools are not used, is that a particularly dark candidate with a strong Need for Power could be selected, based upon the charm and manipulation they exhibit (Mathieu et al., 2013). Using tools, such as those available from Hogan Assessments, to measure dark traits and the Need for Power, could potentially help organizations avoid hiring or promoting a manager who has a strong likelihood of derailing, even if they present with a charming personality.

Another possible implication for organizational social change is that if selection committees could implement assessments before hiring managers and executives, more truly appropriate and great leaders might emerge throughout the world of business. Collins (2005) noted that because boards of directors interpret charismatic and ego-driven leaders as great, few leaders who possess truly great Level 5 potential (with the accompanying humility and persistent drive to succeed) are selected. Collins (2005) stated that the lack of great Level 5 leaders explains why few companies ever make the transition from good to great.

Conclusions

The heart of this study, and the strongest conclusion the data supports, is that those who have high scores in their dark traits also have a strong need for power. This combination of dark traits with a strong need for power is potentially dangerous for organizations, as this pairing could lead to criminal behavior at the worst, and unpleasantness for subordinates at the very least. Boddy (2011) reported that the characteristics of a psychopath include lack of emotional affect and inability to have remorse or empathy for others. Since the literature indicated (Boddy, 2011; Mathieu et al., 2013) that the motivation of corporate psychopaths could be to use their organizations for their own ends, gaining power through ruthless manipulation (with no conscience or remorse), there is great urgency for organizations to objectively assess managerial candidates for dark traits and a need for power. Assessment tools offer a valid and reliable method for the identification of corporate psychopathy in a managerial candidate before it is revealed through a charming executive who could plunder the corporate coffers for personal gain.

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Appendix A: Glossary of Variables

Hogan Development Survey (HDS). A test created by Drs. Robert and Joyce Hogan, and is designed to measure the dark traits of personality (Hogan & Hogan, 2009). These darker traits present during stressful times and can damage careers as well as personal relationships. The HDS offers a tool to identify these dark personality traits, allowing for awareness and planning, which can lead to increased success. The HDS variables are grouped into three categories, representing three different ways that people handle anxiety and express feelings of inadequacy. These three categories are based upon the work of Karen Horney (1950): moving away from others, moving against others, and moving toward others. The HDS variables in their corresponding variables are listed below (Hogan & Hogan, 2009).

The three categories are representative of the work of Karen Horney (1950): moving against people, moving toward people, and moving away from people.

HDS variables, moving away from others:

Excitable: moody, difficult to please, and emotionally intense but short-lived enthusiasm for projects and others

Skeptical: cynical and suspicious, mistrustful of others, anticipates betrayal

Cautious: risk aversion born of a fear of criticism or negative assessment, change-resistant, and hesitant to make decisions

Reserved: unaware of the feelings of others, aloof and detached, uncommunicative

Leisurely: overtly cooperative but privately stubborn and irritable, ignoring the request of others and becoming annoyed if others persist with their requests

HDS variables, moving against others:

Bold: highly self-confident and entitled, over-evaluation of personal capabilities, feelings of grandiosity

Mischievous: charming, risk-taking, manipulative, deceitful and excitement-seeking

Colorful: dramatic, attention-seeking, interruptive and needing to be noticed

Imaginative: creative, but acting and thinking in eccentric or unusual ways

HDS variables, moving toward others:

Diligent: meticulous, precise, inflexible and difficult to please, critical of others and micromanaging with uncompromising regard for rules and regulations

Dutiful: eager to please, fearful to act independently or against popular opinion, reluctant to make a decision for fear of disapproval.

Hogan Personality Inventory (HPI). A test created by Drs. Robert and Joyce Hogan, and is designed to measure the brighter traits of personality (Hogan & Hogan, 2006). The HPI measures the brighter traits which present when careers and relationships are going well. The HPI offers insight into understanding normal behaviors, and predicting how people will behave and how successful they will be. The complete set of HPI variables are: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive and Learning Approach (Hogan & Hogan, 2006). While the HPI

contains seven variables, this study is only including one: Ambition. Ambition is defined as follows:

Ambition: initiative, energetic, self-confident, competitive, motivation for leadership roles (Hogan & Hogan, 2007).

Motives, Values, Preferences Inventory (MVPI). A test created by Drs. Joyce and Robert Hogan (Hogan & Hogan, 1996), which describes the core goals, values, drivers, and interests of the personality that determine what a person desires and will strive to attain. Understanding a person's motivation provides insight into what type of position and environment they will find most suitable, and where a person will be most productive. The complete set of MVPI variables are: Recognition, Power, Hedonism, Altruistic, Affiliation, Tradition, Security, Commerce, Aesthetics and Science (Hogan & Hogan, 1996). While the MVPI contains ten variables for measuring motivation, this study is including only one: Power. Power is defined as follows:

Power: the degree to which a person desires success, achievement, status, dominance and control (Hogan & Hogan, 1996).

Appendix B: Study Diagrams

Figure B1, below, graphically illustrates the construct of this study. The independent variables from the HDS (Hogan & Hogan, 2009) are listed on the left, and grouped into the theoretical constructs of Horney (Horney, 1950). The mediator variable of Ambition as measured by the HPI (Hogan & Hogan, 2006) links the theoretical construct of moving against others to the motivational Need for Power, measured by the MVPI (1996). The Need for Power is the dependent variable.

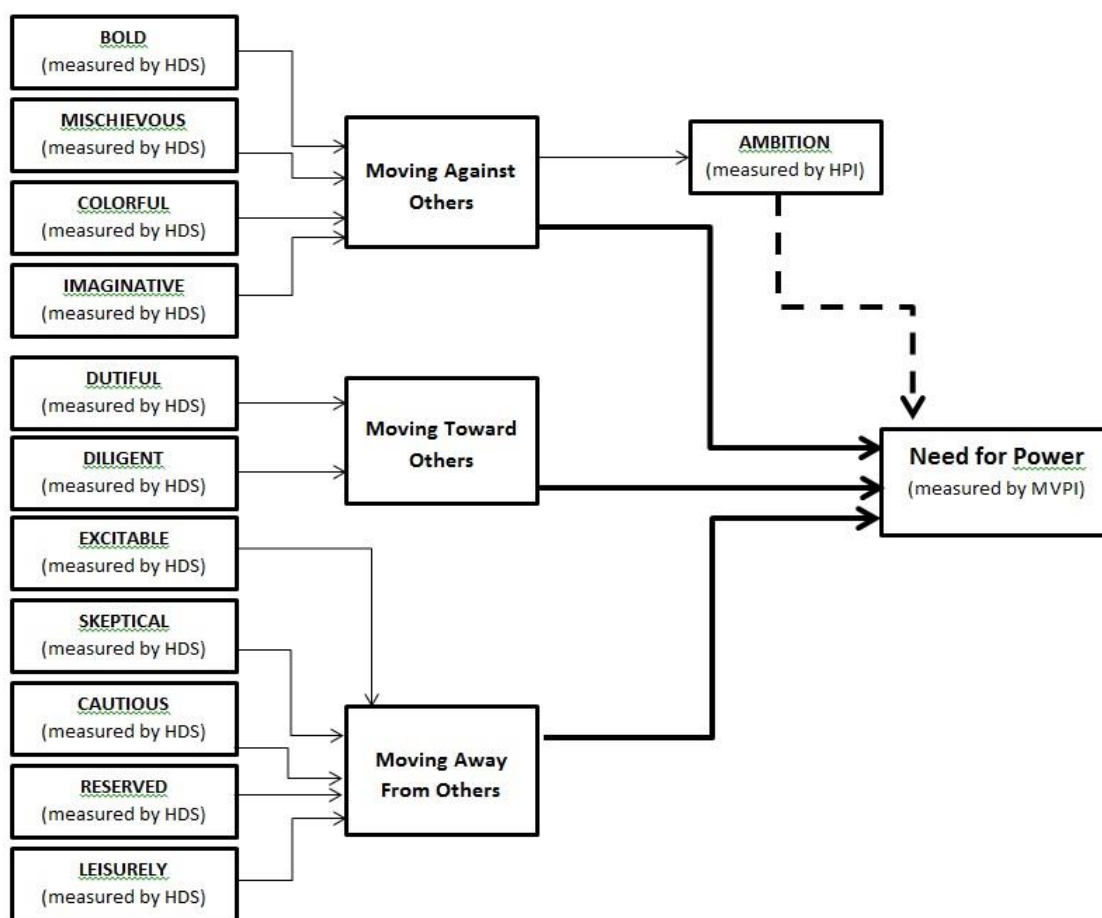


Figure B1. Dark traits correlating to the Need for Power.

First, it is the hypothesis of this regression study that Ambition as measured in the HPI (Hogan & Hogan, 2006) positively correlates with the need for power as measured in the MVPI (Hogan & Hogan, 1996) as shown in Figure B2. It is also the hypothesis of this reduced regression study that Ambition from the HPI will act as a mediator variable for the Moving Against Others grouping of variables from the HDS (Hogan & Hogan, 2009), as shown in Figure B1 and Figure B6.

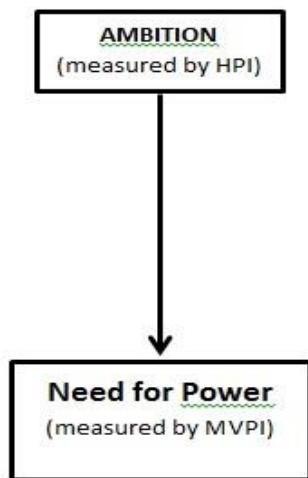


Figure B2. Ambition predicting the Need for Power.

Second, it is the hypothesis of this study that a regression model, including measures of darkness and psychopathy determined by the Bold, Mischievous, Colorful, and Imaginative traits (moving against others; Horney, 1950), will predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B3.

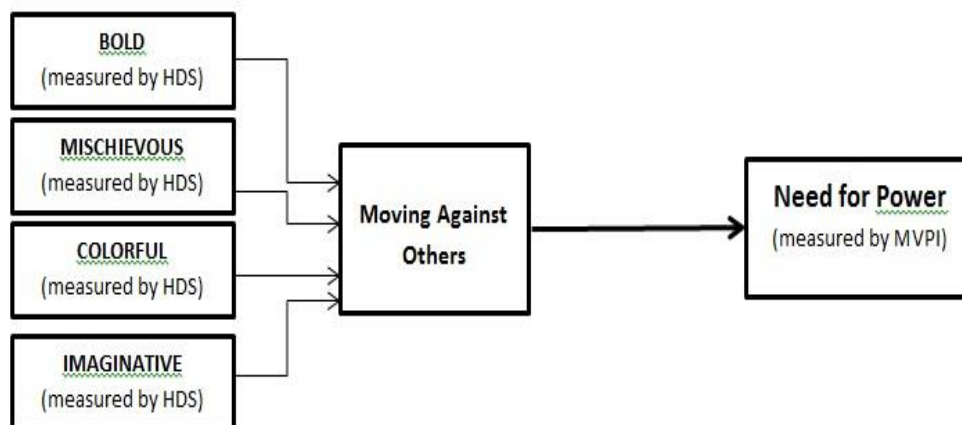


Figure B3. Moving Against Others variables predicting the Need for Power.

Third, it is also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Excitable, Skeptical, Cautious, Reserved, and Leisurely traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), will not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as illustrated in Figure B4.

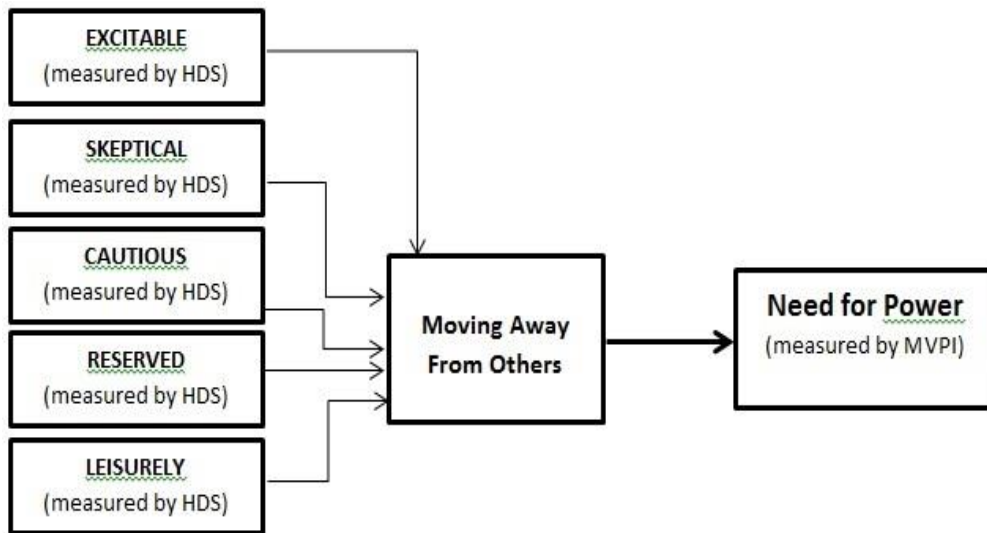


Figure B4. Moving Away From Others variables predicting the Need for Power.

Fourth, it is also the hypothesis of this study that the regression model including measures of darkness and psychopathy determined by the Dutiful and Diligent traits (moving away from others; Horney, 1950), as measured by the HDS (Hogan & Hogan, 2009), will not predict a Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as shown in Figure B5.

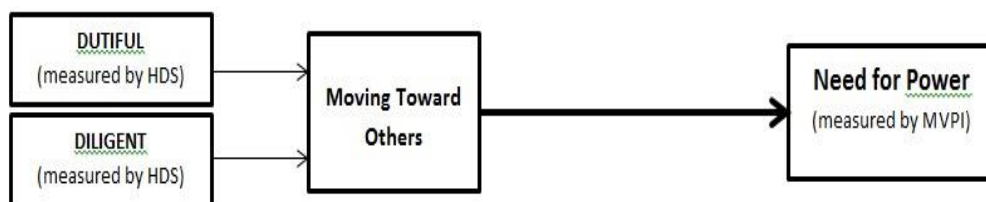


Figure B5. Moving Toward Others variables predicting the Need for Power.

Fifth, it is the hypothesis of this study that there is additional variance between the trait of Ambition as measured by the HPI (Hogan & Hogan, 2006) and the Need for Power, as measured by the MVPI (Hogan & Hogan, 1996) when the personality traits of Bold, Mischievous, Colorful, and Imaginative variables as measured by the HDS (Hogan & Hogan, 2005), indicating participants' tendencies to move against others (Horney, 1950), are included.

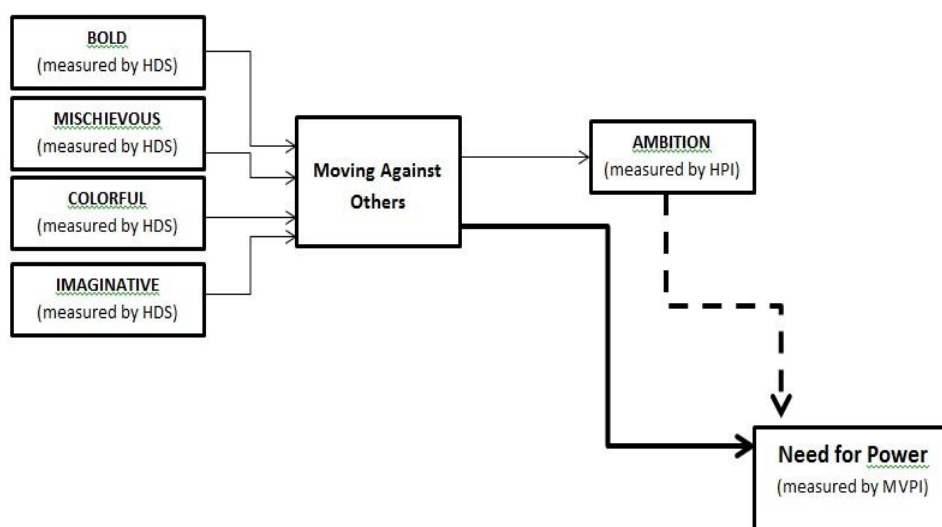


Figure B6. Moving Against Others with Ambition mediating variables predicting the Need for Power.

Finally, a full regression model with all HDS (Hogan & Hogan, 2009) variables, and Ambition from the HPI (Hogan & Hogan, 2006), was analyzed using the Need for Power as measured by the MVPI (Hogan & Hogan, 1996) as the dependent variable. This model is illustrated in Figure B1.

Appendix C: Power Analysis

The Hogan Development Survey Manual (Hogan & Hogan, 2009) reported that for the 11 personality variables measured by the HDS, the average alpha reliability for those variables is .67. This gives an effect size of .4489 (alpha reliability squared). I conducted a power analysis for a two-tailed multiple regression model, with alpha of .05, using G*Power 3 tool (Faul, Erdfelder, Lang, and Buchner, 2009). The total sample size, using this model, is recommended at 33 participants.

Input:	Tail(s)	=	Two
	Effect size f^2	=	.4489
	α err prob	=	0.05
	Power (1- β err prob)	=	0.95
	Number of predictors	=	11
Output:	Noncentrality parameter δ	=	3.8488570
	Critical t	=	2.0796138
	Df	=	21
	Total sample size	=	33
	Actual power	=	0.9561453

Appendix D: Correlations Between HDS, HPI, and MVPI Variables

Horney Interpersonal Style	HDS Variables	HPI Ambition (<i>N</i> = 826)	MVPI Power (<i>N</i> = 735)
Moving Away from Others	Excitable	-.63**	-.07*
	Skeptical	-.51**	.26**
	Cautious	-.70**	-.18**
	Reserved	-.53**	-.09**
	Leisurely	-.26**	.14**
Moving Against Others	Bold	.28**	.57**
	Mischievous	.12**	.47**
	Colorful	.44**	.42**
	Imaginative	-.06	.31**
Moving Toward Others	Diligent	.09	.15**
	Dutiful	.06	-.17**

Note. * $p < .05$, ** $p < .01$, one-tailed test

Appendix E: Hogan Signed Data Use Agreement

SERVICE AGREEMENT FOR STUDENT OR ACADEMIC RESEARCH

This Service Agreement for Student or Academic Research ("Agreement") is made this 29th day of January, 2015 ("Effective Date"), between the undersigned individual, JEWEL D. ADAMS ("RESEARCHER") and Hogan Assessment Systems, Inc. ("HOGAN") located at 2622 E. 21st Street, Tulsa OK 74114.

BACKGROUND

WHEREAS HOGAN is a psychological test publisher and a consulting firm, which HOGAN developed certain psychological assessments to predict an individual's on-the-job performance for organizational employee selection and/or development.

WHEREAS RESEARCHER desires to use HOGAN's psychological assessment(s), namely, HOGAN Personality Inventory (HPI), the HOGAN Development Survey (HDS), the Motives Values Preference Inventory (MVPI), (the "Assessments") as part of a student or academic research project (the "Project") at the following academic institution: WILSON UNIVERSITY

WHEREAS HOGAN desires to provide the Assessments and related scoring service for benefit of RESEARCHER according to the terms and conditions set forth in this Agreement.

NOW THEREFORE, IN CONSIDERATION of the premises of the mutual covenants and conditions contained herein, it is agreed by and between the parties hereto as follows:

SECTION I. TERMS & CONDITIONS

- A. HOGAN agrees to provide RESEARCHER with access to one or more datasets from the HOGAN archive, which includes data from one or more of the following assessments, the HPI, HDS, MVPI, and HBRI ("Assessments"), so that RESEARCHER can conduct analysis for his/her research.
- B. HOGAN will remove all identifying information (e.g., name, identification number, mailing address, email address, supervisor name, company name, etc.) from the archival dataset(s) but will include basic descriptive information (e.g., race/ethnicity, age, gender) when available.
- C. Restrictions upon RESEARCHER:
 1. No Reverse Engineering. RESEARCHER shall not modify, translate, reverse engineer, decompile, disassemble, or create derivative works of the Assessments or Intellectual Property of HOGAN or any portion thereof or assist any Person in performing such prohibited acts.
 2. No Transfer of Rights. RESEARCHER shall not attempt to assign any grant of rights set forth herein to any Person for any reason or authorize any third Person to access the data without the written consent of HOGAN.
 3. Compliance with Applicable Standards. RESEARCHER shall abide by all applicable domestic and international professional and ethical standards in the use of the Assessments and the conducting of any research and/or data collection pursuant to this Agreement or included within the Project.
 4. Trademarks, Copyrights and Proprietary Notices. RESEARCHER shall not publish any HOGAN trademark, copyright or proprietary notice except in compliance with HOGAN's present and future policies with respect to any use of the same. All such copyrights, trademarks or proprietary notices shall read as published by HOGAN and RESEARCHER will not obscure, delete or alter said marks or notices.
 5. No Unauthorized Use, Profit or Personal Gain. RESEARCHER shall use the Assessments and any data collected pursuant to this Agreement only for the express purpose of the Project. RESEARCHER is expressly prohibited from making any unauthorized use of the Assessments or from receiving any profit or personal gain as a result of the Project or the research and/or data collection conducted pursuant to this Agreement.
 6. Advance Copy of Work. RESEARCHER shall provide HOGAN an advance copy of all publishable work resulting from the Project or any research or data collection performed pursuant to this Agreement at least forty-five (45) days in advance of the submission of such proposed publication. HOGAN shall have thirty (30) days, after receipt of said publishable work to object to such proposed presentation or publication on the grounds that it contains any Intellectual Property of HOGAN which could be compromised by such presentation or publication, or that it implies

in any way HOGAN's endorsement of the methods or results of the research. In the event that HOGAN makes such objection, RESEARCHER shall refrain from making such publication or presentation or revise said publication or presentation as approved by HOGAN prior to publication.

7. Final Copy. RESEARCHER shall submit a copy of his/her final paper, study, presentation or publication created from any research or data collection performed pursuant to this Agreement to HOGAN's Research Department.
8. Contact Information. RESEARCHER shall submit to HOGAN his/her street address, telephone number and e-mail address for contact purposes.

SECTION 2. FEES

RESEARCHER shall not incur any fees associated with the scope of the Project or the use of the Assessments. RESEARCHER's submission of a Final Copy to HOGAN's Research Department shall be considered full and equitable trade for services rendered between the parties and shall be considered full and valuable consideration for the assessment and scoring fees associated with the Project.

SECTION 3. CONFIDENTIALITY

RESEARCHER shall take all reasonable measures to prevent the unauthorized disclosure of Confidential Information during the Project. Except as necessary to effectuate the terms of this Agreement and/or conduct the research and data collection contemplated by the Project, Confidential Information obtained by RESEARCHER pursuant to this Agreement may not be duplicated in any manner without the written permission of HOGAN. For the purpose of this Agreement, Confidential Information shall mean information, including trade secrets, know-how, proprietary information, formulae, processes, techniques and information relating to HOGAN's past, present and future marketing, financial, research and development activities, that may be disclosed, whether orally or in writing, to RESEARCHER, or that may be otherwise received or accessed by RESEARCHER in connection with this Agreement, whether transmitted prior to or after the Effective Date, and which is information either identified as being Confidential Information, or which is information that a reasonable business person would understand to be Confidential Information. Examples of Confidential Information include, but are not limited to, the terms and conditions of this Agreement, royalty or compensation rates, customer lists, pricing policies, market analyses, market projections, consulting, sales and marketing methods and techniques, expansion plans, programs, routines, operating systems, internal controls, security procedures, inventions, methods of operation, object and source codes (including updates thereto), and related items, together with all information, data, and know-how, technical or otherwise, included therein, manuals, printouts, notes, and annotations on disks, diskettes, tapes or cassettes, both master and duplicates.

SECTION 4. LIMITATION OF LIABILITY

RESEARCHER acknowledges and agrees that HOGAN, nor any of its affiliates, subsidiaries, third party licensors nor any of their respective officers, directors, employees, shareholders or representatives, will have no liability to RESEARCHER or to any third party in negligence or tort, with regard to the Project or the research and/or data collection conducted pursuant to this Agreement.

SECTION 5. INDEMNIFICATION

RESEARCHER shall indemnify and hold HOGAN harmless from and against all claims, suits, demands, actions and proceedings, judgments, penalties, damages, costs and expenses (including legal fees and costs), losses or liabilities of any kind which may arise or result from the use of the Assessments or any other HOGAN products or services in connection with this Agreement.

SECTION 6. MISCELLANEOUS PROVISIONS

Headings and References. The headings and captions used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

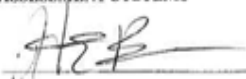
Language. This Agreement is executed in the English language, which shall be regarded as the authoritative and official text. In addition, any matters referred to arbitration or any other dispute resolving body shall also be in the English language and shall be the official language used therein.

Jurisdiction. This Agreement is governed by the Laws of the State of Oklahoma, and in the event of any dispute arising between the parties hereto, the courts of the United States of America, State of Oklahoma, County of Tulsa shall have exclusive jurisdiction to hear and determine the dispute.

Entire Agreement. Each party acknowledges that this Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes and merges all previous proposals, negotiations, representations, commitments, writings, understandings, agreements, and all other communications, both oral and written, between the parties. This Agreement may not be amended, modified or altered except by a written instrument executed by a duly authorized representative of each of the parties.

This Agreement HOGAN been reviewed, accepted, and executed by the parties' below on the day and year first written above.

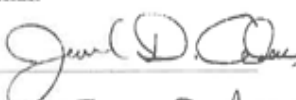
HOGAN ASSESSMENT SYSTEMS

Signature: 

Name (Print): Heather Bolen

Title: Research Consultant

RESEARCHER

Signature: 

Name (Print): JEWEL D. ADAMS

Institution: WALDEN UNIVERSITY

FACULTY ADVISOR

Signature: 

Name (Print): Donna DiMatter-Gibson, Ph.D.

Department: Psychology

Title: professor

Institution: Walden University

Appendix F: IRB Approval for Study

Walden IRB approval number for study: 02-02-15-0096889.