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An Investigation of the Construct Validity of the Big Five Construct of Emotional Stability in Relation to Job Performance, Job Satisfaction, and Career Satisfaction

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To the Graduate Council:

I am submitting herewith a dissertation written by Vivian D. Cook entitled "An Investigation of the Construct Validity of the Big Five Construct of Emotional Stability in Relation to Job Performance, Job Satisfaction, and Career Satisfaction." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

John W. Lounsbury, Major Professor

We have read this dissertation and recommend its acceptance:

Eric Sundstrom, Michael Johnson, John Peters

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Eric Sundstrom

Michael Johnson

John Peters

Acceptance for the Council:

Ann Mayhew
Vice Chancellor and Dean of Graduate Studies

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A Dissertation
Presented for the
for the Doctor of Philosophy
Degree
the University of Tennessee, Knoxville

Vivian D. Cook
August 2005

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Abstract

The present study examined the Big Five dimension of Emotional Stability and explored its relationship to work outcomes. Six archival data sets were used. Pearson correlation coefficients were calculated between the Big Five dimensions of personality and job performance, job satisfaction, and career satisfaction. Results demonstrated that all Big Five personality dimensions were significantly, positively related to job performance, job satisfaction, and career satisfaction. Additionally, part correlations between Emotional Stability and job performance, job satisfaction, and career satisfaction were calculated controlling for the other Big Five dimensions of Extraversion, Openness, Conscientiousness, and Agreeableness. Emotional Stability demonstrated unique variance, continuing to have a significant, positive correlation with all criteria. In order to examine how Emotional Stability is related to job performance, job satisfaction, and career satisfaction in jobs with varying stress levels, data sets were sorted by job categories and Spearman Rank Order Correlations were calculated between job stress measures and Emotional Stability-Criteria correlations. No significant results were found. Emotional Stability mean scores were also compared for job categories using one-way ANOVA and independent groups t-tests. Individuals in jobs that were considered “high stress” had higher mean scores on Emotional Stability. In addition to supporting previous research findings, this study contributed unique information by demonstrating that Emotional Stability contributes unique information to the prediction of job outcomes.

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Chapter 1

Introduction and Review of the Literature

Personality and Work Outcomes

The proposition that personality relates to vocational outcomes has been a topic of much research in past years. However, until recent decades, the link between personality and work behaviors was somewhat tenuous. While some research indicated that there was a link between personality and work behavior, the nexus was still rather questionable. In recent years, a great deal of evidence has accrued regarding the link between personality and career outcomes (Judge, Higgins, Thoresen, & Barrick, 1999). Of interest to researchers and organizational managers alike are questions such as: What personal qualities make an individual more or less likely to succeed in a work environment? Does the presence or absence of some personality dimension make it more or less likely that an individual will be successfully able to get and keep a job? Researchers have begun to explore the psychological processes that might underlie dispositional sources of work performance, success, and satisfaction.

Until recently, many psychologists have taken a skeptical view of personality measures as predictors of workplace outcomes for several reasons: 1) early literature often gave a negative review of the topic (e.g., Guion & Gottier, 1965), 2) challenges appeared in the late 1960's and 1970's with regard to how "scientific" the study of personality was (e.g., Mischel, 1968), and 3) there were concerns over low validities and the possibility of faking (e.g., Reilly & Warech, 1993).

Since the 1980's, however, this link has been strengthened by a growing body of research, and there has been a return to the idea that personality can predict workplace outcomes. Now a number of researchers are turning to personality measures as a way of predicting employee behavior (Hogan, Hogan, & Roberts, 1996).

Many researchers contend that personality does, in fact, predict various workplace behaviors such as occupational choices, job performance, or satisfaction in the workplace. It seems logical that qualities such as "follows through with commitments," "seeks learning opportunities," "works well with others," "works well under pressure," all of which refer to behaviors anchored in personality, are also qualities that affect how an employee performs, succeeds, and responds to the job.

The Big Five

While there are still differing views of personality most psychologists agree that personality is made up of various traits, or tendencies to behave in certain ways. Individuals differ on these traits and individual differences can be organized. No consensus exists as to exactly what these traits are, how many there are, or what names they should be given. There are many differing views on the structure of personality traits (Tokar, Fischer, & Subich, 1998). However, one common view is the Five-Factor Model (FFM) of personality. Tupes and Christal's (1961) analysis of trait ratings provides the current foundation for the Big Five. A good definition for the FFM comes to us from a review by Tokar, Fischer, and Subich (1998) and states that,

“When a broad domain of personality attributes, assessed for a large and representative sample of adults, is factor analyzed, the resultant covariance structure most often is comprised of five orthogonal, superordinate dimensions of

normal personality – most often labeled Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.....Based on research supporting the FFM's robustness, generalizability, and comprehensiveness, we contend, as have others that the Big Five taxonomy provides a useful preliminary organizational framework for most, if not all, nontrivial personality features" (p. 117).

One of the greatest advances in the field of personality-job research was the emergence and acceptance of the Five-Factor Model (FFM) of personality traits.

Five Factors Defined

The FFM, or "Big Five" as it is often referred to, includes five, bipolar, broad factors believed by many researchers to contain all facets of personality (Digman, 1990; Hogan, Hogan, & Roberts, 1996). The labels most commonly accepted are those of Costa and McRae (1992) and include Extroversion, Neuroticism, Agreeableness, Conscientiousness, and Openness.

"Neuroticism concerns the degree to which the individual is insecure, anxious, depressed, and emotional versus calm, self-confident, and cool. Extroversion concerns the extent to which individuals are gregarious, assertive, and sociable versus reserved, timid, and quiet. Openness to experience defines individuals who are creative, curious, and cultured versus practical with narrow interests.

Agreeableness concerns the degree to which individuals are cooperative, warm, and agreeable versus cold, disagreeable, and antagonistic. Conscientiousness measures the extent to which individuals are hardworking, organized, dependable, and persevering versus lazy, disorganized, and unreliable" (Salgado, 1997, p. 30).

Arguments for the Big Five

There is much disagreement concerning the number of personality factors needed to predict and understand work behavior (Hogan & Holland, 2003). Research supports the robustness and generalizability of the Big Five across assessments, rating sources, language, and culture.

Since the introduction and general acceptance of the FFM in the early 1990's, many researchers agree that these "broadly defined traits are better in predicting job performance as well as in explaining behaviors, than narrowly defined personality traits" (Ones & Viswesvaran, 1996, p. 610) and have shown them to be valid predictors of job performance through over a decade of research in applied and academic settings (Murphy & Lee, 1994).

Recent research evidence indicates that FFM personality variables are significantly related to various job criteria. Numerous studies have correlated these broad traits with measures of job performance in a variety of job contexts (Borman, Hanson, & Hedge, 1997). Research in the past decade has demonstrated that personality measurement contributes unique information to the prediction of job performance, adding incrementally in most cases to that offered by methods like cognitive abilities testing (Goffin, Rothstein, & Johnston, 1996). Recent data provides sufficient evidence that a well-constructed measure of personality can be a valid predictor of success on the job (Hogan, Hogan, & Roberts, 1996; Borman, Hanson, & Hedge, 1997; Barrick & Mount, 1991; Robertson, 1993; Irving, 1993; Tett, Jackson, & Rothstein, 1991; Salgado, 1997).

There is broad consensus that these five, bipolar, broad factors can adequately describe the most prominent aspects of personality (Digman, 1990; Hogan, Hogan, &

Roberts, 1996). Elements of the Big Five can be seen in nearly all personality measurement systems. For example, Dependability relates back to Conscientiousness, Flexibility to Openness, or Anxiety to Neuroticism. Goldberg (1981), impressed with the consistency of results, suggested "it should be possible to argue the case that any model for structuring individual differences will have to encompass- at some level-something like these 'Big Five' dimensions" (p. 159).

Numerous studies have investigated the relationship of specific personality measures to the Big Five. Byravan and Ramanaiah (1995) examined the factor structure of the 16 PF (Fifth Edition) from the perspective of the FFM and found strong support for four factors (Neuroticism, Extroversion, Openness, and Conscientiousness) and moderate support for Agreeableness. Cattell (1995) also found that a factor analysis of the 16 PF and the NEO Personality inventories administered to 630 subjects resulted in the five facets of the revised NEO Personality Inventory correlating with the five 16 PF scales. Furnham (1996) examined the relationship between the Myers-Briggs Type Indicator (MBTI) and NEO-PI FFM of personality and found indications that the NEO-PI Agreeableness score was correlated with the MBTI Thinking-Feeling dimension; the NEO-PI Conscientiousness score was correlated with both the Thinking-Feeling and Judging-Perceiving dimensions; and the NEO-PI Extroversion score was strongly correlated with the Extroversion-Introversion dimensions.

Other personality measures that have been studied in conjunction with the FFM are the Jackson Personality Inventory and the Personality Research Form. The Personality Research Form (PRF) and Jackson Personality Inventory (JPI) scales were jointly factor analyzed on a sample of 528 undergraduate students (Ashton, Jackson,

Helmes, & Paunonen, 1998). The goal was to compare them to the Big Five personality factors. Comparisons revealed that three of the PRF-JPI factors had strong relations to the Big Five dimensions of Extroversion, Conscientiousness, and Openness. The other two PRF-JPI factors were strongly related to Agreeableness and Emotional Stability. Detwiler (1996) sought to apply the Five-Factor Model to the scales of the Jackson Personality Inventory. Factor analysis indicated that the JPI measures four of the Big Five: Neuroticism, Extroversion, Openness, and Conscientiousness.

Further, the Big Five factors have been shown to be stable over time and are robust (Costa & McCrae, 1988b; Costa, McCrae, & Norris, 1981; Digman, 1990; McCrae & Costa, 1987, 1990; Piedmont, McCrae, & Costa, 1991; Digman, 1989). With regard to its robustness, the Five-Factor Model has been shown to provide similar results across cultures. In a review that summarized the state of empirical research on the Five-Factor Model, Ostendorf and Angleitner (1994) focused on the structural validity of the FFM across several languages. They summarized that the FFM provides a robust description of personality that proves to be highly replicable. In one cross-cultural study by Mabon (1998), a Swedish version of the Hogan Personality Inventory (HPI; R. Hogan, 1992), a Big Five personality measure, was administered to several hundred employees, job applicants, and students in a range of organizations. Despite cultural differences, the Swedish norms and factor structures were remarkably similar to those of the US, confirming that Big Five measures can be used in different environments and across cultures. When compared with the Myers-Briggs Type Indicator, the results also confirmed that the construct validity had endured the transformation to a new culture and language (Mabon, 1998). Another cultural study assessed the reliability and validity of

the Nonverbal Personality Questionnaire (NPQ; H. A. Murray, 1938) and its factor structure in data from 6 cultures: Canada, Finland, Poland, Germany, Russia and Hong Kong. Results indicated that the NPQ had good levels of internal consistency, reliability and convergent validity across samples. Further, the factors found in each culture's data resembled the Big Five factors of personality: Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience (Paunonen, Keinonen, Trzebinski, & Forsterling, 1996).

The stability and replicability of the Five-Factor Model of personality across samples and testing purposes remains a significant issue in personnel selection and assessment. In research that explored the stability of a new, Greek Big Five personality measure across different samples in order to explore the suitability of the measure in personnel selection and assessment, the factor structure of the measure across three samples (students, employee, and job applicants) was examined (Tsaousis & Nikolaou, 2001). The results of exploratory and confirmatory factor analyses showed that the five-factor structure remained intact for the students', the applicants' and the employees' samples. A review of studies on the cross-cultural generalizability of the Five-Factor Model found that comparisons of varimax structures in 16 different cultures clearly show the cross-cultural generalizability of Neuroticism, Openness, and Conscientiousness. Extroversion and Agreeableness appeared to be more sensitive to cultural context (Rolland, 2002). In other cultural research, Benet and John (1998) conducted three studies to evaluate a Spanish version of the Big Five Inventory (BFI) and explore the generalizability of the Big Five factor structure in Latin cultural groups. Results indicated that the Spanish BFI served as an efficient, reliable, and valid measure of the Big Five for

Spanish-speaking individuals and that there was little evidence for substantial cultural differences in personality structure at the broad level of abstraction represented by the Big Five dimensions.

McCrae and Costa (1997) assessed the cross-cultural generalizability of the FFM using data from studies using six translations of the Revised NEO Personality Inventory (Costa & McCrae, 1992) and comparing them to the U.S. factor structure. Versions in German, Portuguese, Hebrew, Chinese, Korean, and Japanese showed similar structures to the FFM. The median cross-language factor congruence coefficients were .96, .95, .94, .96, and .96 for Emotional Stability, Extroversion, Openness, Agreeableness, and Conscientiousness, respectively, and only 2 out of 105 coefficients failed to reach .90, and both of those were .89. They concluded that there is evidence for a common human structure of personality based on the FFM.

With regard to its stability over time, longitudinal studies have shown that similar results for an individual are found on Big Five measures of personality throughout the life span. In a longitudinal study that followed 163 men for over 45 years, individuals were rated on personality traits at the end of their college careers and subsequently took the NEO-Personality Inventory (NEO-PI) at approximately ages 67-68 years of age. The college traits were transformed, via a rating procedure, to scales assessing each of the Big Five dimensions and related to the NEO-PI. Three traits: Neuroticism, Extroversion, and Openness, exhibited significant correlations across the 45-year interval. Furthermore, the trait profiles remained relatively stable over that interval (Soldz & Vaillant, 1999). In a meta-analysis, Ardel (2000) sought to assess the stability of personality over time. It was found that studies assessing any of the "Big Five NEO" personality traits tended to find

higher personality stability coefficients. In another study that sought to assess the stability of personality, measures of Big Five dimensions vs. traits were compared over a two-year period (Vaidya, Gray, Haig, & Watson, 2002). Specifically, they retested on a Big Five personality measure and a trait inventory over a two and one half year period. Results provided clear evidence of differential stability: results on the trait measure were consistently less stable than the Big Five measure.

Costa and McCrae posit that personality is stable after the age of 30 (Costa & McCrae, 1988; McCrae & Costa, 1994). This was supported by a 6-year longitudinal study that measured personality on the Big Five dimensions for individuals and their spouses. It was found that retest stability was quite high for all five dimensions in self-reports and for the three dimensions in spouse ratings. They concluded that the data supported the position that personality is stable after age 30 based upon a Big Five measure.

With regard to occupational outcomes, personality traits are enduring predispositions that relate either directly to occupational outcomes or lead individuals to behave in certain ways or to seek out certain situations associated with occupational outcomes (Boudreau, Boswell, Judge, & Bretz, 2001). Since the introduction and general acceptance of the FFM in the early 1990's, many researchers agree that these "broadly defined traits are better in predicting job performance as well as in explaining behaviors, than narrowly defined personality traits" (Ones & Viswesvaran, 1996, p.610) and have shown them to be valid predictors of job performance through over a decade of research in applied and academic settings (Murphy & Lee, 1994).

In particular, the Big Five is useful in occupational research because it provides the following advantages in that it: 1) is an efficient taxonomy, 2) provides a useful framework for combining results of many studies carried out to investigate the relationships between personality and work behaviors, and 3) advances the understanding of work outcomes by offering a group of personality dimensions that are commonly related to all jobs and criteria (Salgado, 1997).

Arguments Against the Big Five

Despite its growing support, there are critics of the FFM. Some researchers contend that the Big Five as an incomplete classification and have suggested that important relationships are buried when research is limited to the Big Five and suggest that a six- or seven-factor taxonomy may be more appropriate (Hogan & Hogan, 1995; Hough, 1992). Hough (1992) suggested the factors of Surgency, Adjustment, Agreeableness, Dependability, Intellectance, Affiliation, and added a category called Miscellaneous. Of this 7-factor model, five factors correspond to the Big Five, with two additional factors. Hogan (1986) suggested six factors: Sociability, Ambition, Adjustment, Likeability, Prudence, and Intellectance. Schneider and Hough (1995) have identified narrower personality traits, such as Locus of Control, that have been shown to correlate with job performance but cannot be easily fit into a category of the FFM.

Many researchers feel that narrow traits are more useful in predicting job performance. In a critique of Ones and Viswesvaran, Schneider, Hough, and Dunnette (1996) argue that the optimal criterion-related validity will be attained if a construct-oriented approach is used to match narrow traits to specific job performance dimensions. Paunonen (1993) demonstrated the potential loss in validity that may occur as a result of

using only broad personality traits; Paunonen found that various self-report behavioral criteria were better predicted by lower-level traits than by the Big Five. Paunonen's results were confirmed in a subsequent study by Ashton, Jackson, Paunonen, Helmes and Rothstein (1995). Ashton (1998) found that broad personality measures were slightly less correlated with workplace delinquency than were narrow measures. Mershon and Gorsuch (1988) found that sixteen factors were better predictors of occupational outcomes than were six primary scales that resembled the FFM. Such criticisms were answered by Costa and McCrae (1995) and by Goldberg and Saucier (1995) who argued for the Big Five based on the fact that it has been replicated many times with different methods, by different researchers, with different instruments, and in different languages, with additional factors only being found in isolated samples.

Another argument against the Big Five is not necessarily that there is disagreement that there are fewer broad factors, but *which* broad factors (or *whose* broad factors) should be included in the taxonomy? Are there three (Eysenck, 1991), eight (Comrey & Backer, 1970), or sixteen (Cattell, Eber, & Delhees, 1968)? There is not complete agreement in the interpretation of the Big Five (Hofstee, de Raad, & Goldberg, 1992). Norman's (1963) early labels of the Big Five included Extroversion, Agreeableness, Conscientiousness, Stability, and Culture. Later findings led to the abandonment of Culture in favor of Openness (McCrae & Costa, 1985) or Intellect (Peabody & Goldberg, 1989). However, some researchers still did not consider either label satisfactory. While there is general agreement with regard to Extroversion and Emotional Stability, researchers disagree over the other three. Agreeableness has been interpreted as Likeability, Friendliness, Social Conformity, and Compliant.

Conscientiousness has been interpreted alternately as Conformity, Dependability, Will to Achieve, and Work; as the disparity in labels suggests, there is apparently some disagreement with regard to the essence of this dimension. The most extensive disagreement, however, seems to be with regard to the dimension commonly labeled Openness. It has been variously interpreted as Intellectence, Openness to Experience, or Culture (Barrick & Mount, 1991). In addition to difficulty agreeing upon labels for the Big Five, other researchers found a “big four.” For example, in a factor analytic study of the MMPI, Costa, Zonderman, McCrae, and William (1985) found four factors, with Conscientiousness excluded. In a similar study, Johnson, Butcher, Null, and Johnson (1984) found four factors, with Agreeableness excluded. Eysenck (1991) consistently described his system as a three-factor system made up of Psychoticism, Extroversion, and Neuroticism (PEN). Although various numbers and labels have been suggested, the most commonly accepted are those of Costa and McCrae. Factor analysis and content analysis of a large number of personality measures indicates that there is general agreement regarding the meaning of the factors and the differences among authors is minor and should not be considered an issue (Mount & Barrick, 1998; Salgado, 1997). Despite such criticism, the usefulness of the FFM in the realm of studying the relationship between personality and job criteria has been well established in the literature (Digman, 1990; Goldberg, 1993; Wiggins & Trapnell, 1997) and, as such, it will serve as the model for the current research.

Strongest Predictors of Job Outcomes

Many different studies have reported a relationship between the Big Five and job behaviors. The Big Five factors have been found to predict outcomes relevant to job

performance/success and to job and career satisfaction. Most of this research has focused on the relationship between Conscientiousness and job performance. Conscientiousness repeatedly surfaces as a strong predictor of various job performance criteria and does so in a variety of job contexts. Conscientiousness embodies characteristics such as responsibility, dependability, and reliability, all of which are generally perceived as important characteristics for success in most jobs (Barrick & Mount, 1991; Murphy & Lee, 1994; Salgado, 1997). Conscientiousness could be called the “GMA” (General Mental Ability) of personality testing, in that it is a “universal” predictor, predicting performance for all jobs in all contexts.

Despite the fact that Conscientiousness seems to be the most predictive factor, it is generally agreed that the others also contribute unique information since the Big Five traits seem to be only minimally correlated. The other four personality dimensions have also been shown to be good predictors of job outcomes in certain contexts and for certain performance criteria (Barrick & Mount, 1991). In particular, Extroversion and Emotional Stability emerge as other strong predictors of many job criteria in a variety of job contexts (Murphy & Lee, 1994; Salgado, 1997; Barrick & Mount, 1991; Judge, Higgins, Thoresen, & Barrick, 1999). Salgado (1997) concluded, “the estimated true validity for Emotional Stability has a size very close to that for Conscientiousness. Moreover, as in the case of Conscientiousness, the validity of Emotional Stability is generalizable across jobs and criteria” (p. 36).

It is difficult to determine exactly which of the Big Five factors holds the most promise as a sound predictor of job outcomes. Despite the fact that Conscientiousness

seems to be the most predictive factor, the other Big Five traits also contribute unique validity information.

Emotional Stability

Emotional Stability has been identified by many names, including Low Neuroticism, Adjustment, or Positive Emotionality, with all referring to the same general qualities: resilient, stable, hardy, not easily depressed, unreactive, steady, assured, untroubled, as opposed to anxious, easily depressed emotionally reactive, worried, negative affect or insecure (Barrick & Mount, 1991). I will use the term Emotional Stability hereafter.

Individuals who are low in Emotional Stability will focus primarily on those negative aspects of themselves, their life, and others around them. Regardless of the label, researchers have sought to establish a link between Emotional Stability and the workplace.

Emotional Stability has emerged as the most consistent predictor of work outcomes in the literature on the Big Five (Barrick & Mount, 1991). Emotional Stability encompasses traits such as nervousness, anxiety, stress resilience, and affect. It seems logical that these qualities would have some bearing on job outcomes. An individual who is easily depressed, who cannot tolerate a very high stress level, who is highly anxious, or who has a negative affect is not likely to have job outcomes that are as favorable as an individual who is resilient, stress tolerant, and has a positive affect. In particular, Emotional Stability affects work outcomes for several reasons: 1) it relates to how well one can adjust to work demands, 2) it determines how resilient one is to work stressors,

and 3) it is related to negative affectivity, which colors how one perceives and reacts to job situations.

Seibert and Kramer (2001) define Emotional Stability as indicative of adjustment versus maladjustment with individuals low in Emotional Stability demonstrating high levels of anxiety, hostility, depression, and self-consciousness. Within the Five-Factor Model framework, Emotional Stability distinguishes individuals who are well adjusted from those who are prone to experience high levels of psychological distress (i.e., negative affective states, such as anxiety, fear, hopelessness, and vulnerability) (Hollenbeck, Moon, Ellis, West, Ilgen, Sheppard, Porter, & Wagner, 2002). As defined by Boudreau et. al. (2001), “Neuroticism (i.e., low Emotional Stability) represents the tendency to exhibit poor emotional adjustment and experience negative affect such as anxiety, insecurity, and hostility” (p. 56). Judge, Higgins, Thoresen, and Barrick (1999) state that low Emotional Stability generally refers to a “lack of positive psychological adjustment” (p. 624). Hogan and Holland (2003) defined it through the following characteristics, “remains even tempered,” “manages people, crisis, and stress,” “shows resiliency,” and “demonstrates patience.”

Emotional Stability, often referred to as Neuroticism, can be interpreted as an individual’s ability to adjust to the surrounding world. It was one of the earliest of the five-factor personality traits identified by researchers (Roberts & Hogan, 2001).

One indication of low Emotional Stability is negative reaction to life and work situations, particularly those that are demanding or stressful. People with low Emotional Stability (i.e., high Neuroticism) tend to be anxious, become depressed, have poor self-concept, and experience negative emotions. Such individuals are likely to be insecure,

guilty, or timid. Low emotional stability also makes one more prone to tendencies to fear novel or unfamiliar situations and have feelings of dependence or helplessness (Costa & McCrae, 1988). Individuals who are low in Emotional Stability often focus primarily on those negative aspects of themselves, their life, and others around them. These individuals are more likely to report the experience of emotional distress (Decker & Borgen, 1993). Thoms, Moore, and Scott (1996) state that, “Neuroticism has been described in the literature on the Big Five as a person’s degree of Emotional Stability, anxiety, self-confidence, pessimism, and self-consciousness” (p. 352). Salgado (1997) calls Emotional Stability the “degree to which the individual is insecure, anxious, depressed, and emotional versus calm, self-confident, and cool” (p.30).

Emotional Stability has been considered the most pervasive personality trait across personality measures (Costa & McCrae, 1988) and is highly related to anxiety and well-being. Judge and Bono (2001) contend that Emotional Stability should be conceptualized even more broadly, also incorporating negative emotionality, along with other tendencies related to core self-evaluation, such as self-esteem, generalized self-efficacy, and locus of control.

Negative affectivity is often viewed as being related to Emotional Stability, and, in fact, research indicates that they are closely related concepts (Larsen & Ketelaar, 1991; Judge, Cable, Boudreau, & Bretz, 1995; Watson & Clark, 1997). Emotional Stability has been described as the primary source of negative affectivity (Judge, Heller, & Mount, 2002). Judge, et. al. (1998) conclude that “Negative affect and Neuroticism act as a negative lens through which the environment is interpreted...” with emotionally unstable individuals experiencing more negativity than other individuals (Magnus, Diener, Fujita,

& Pavot, 1993). They also tend to select themselves into situations that foster negative affect (Emmons, Diener, & Larson, 1985). High negative affect is represented by terms such as “distressed, fearful, nervous...” (George, 1989), all of which are also descriptors of Emotional Stability.

In addition to negative affect, Costa and McCrae (1992b) deconstruct Emotional Stability into: anxiety, hostility, depression, self-consciousness, vulnerability, and impulsiveness. Individuals who are lower in Emotional Stability tend to experience more negative moods (anxiety, fear, depression, irritability) and physical symptoms. They are also more likely to be affected by negative life events and persistent bad moods (Suls, Green, & Hills, 1998). Boudreau, et. al. (2001) include pessimism, low self-confidence, low self-assurance, lack of achievement motivation, and indecisiveness as sub-factors of Emotional Stability.

Watson and Clark (1984) describe Emotional Stability in terms of “negative affectivity,” calling it a “stable personality trait that includes anxiety, depression, low self-esteem, fear, nervousness, guilt, anger, contempt, disgust, sadness, loneliness, and self-dissatisfaction” (p. 9- 10). Neckowitz and Roznowski also describe Emotional Stability in terms of negative affectivity and refer to it as “the tendency to experience unpleasant emotional states and to have a negative self-concept. report more distress, discomfort, and dissatisfaction over time and across situations, even in the absence of objective stressors. They also tend to focus more on negative aspects of themselves, other people, and the world in general, and tend to interpret ambiguous stimuli more negatively” (p. 271). Spector, Jex, and Chen (1995) refer to Emotional Stability as “Trait

Anxiety,” a tendency to view the world in a negative light and to experience distress, even in the absence of stressors.

Considering that Emotional Stability embodies adjustment, stress tolerance, and affect, there are good reasons for positing a linkage between Emotional Stability and work outcomes. The research bearing on this topic will be considered below.

Personality and Job Performance

With regard to job performance or job success, recent data indicate that a well-constructed measure of personality can be a valid predictor of success on the job (Hogan, et.al, 1996; Borman, et. al., 1997; Barrick & Mount, 1991; Robertson, 1993; Irving, 1993; Tett, Jackson, & Rothstein, 1991; Salgado, 1997). Further, research in the past decade has demonstrated that personality measurement contributes unique information to the prediction of job performance, adding incrementally in most cases to that offered by methods like cognitive abilities testing (Goffin, Rothstein, & Johnston, 1996; Salgado, Viswesvaran, & Ones, 2002). Conducting research that examined the incremental validity of personality over cognitive ability in predicting job performance, Avis, Kudisch, and Fortunato (2002) found that Conscientiousness provided incremental validity over cognitive ability in the prediction of several performance criteria. Black (2000) also demonstrated that personality added incremental validity to cognitive testing in a study that looked at predictors of job performance for police officers. Particularly, recent evidence from research indicates that FFM personality variables are significantly related to job outcomes. Numerous studies have found relationships between the Big Five traits and job performance in a variety of job contexts (Borman, et. al., 1997).

The Big Five and Job Performance

Support for the relationship between Big Five personality traits and performance predictors can be attributed to many recent meta-analyses based on the FFM. These recent meta-analyses provide evidence of the personality-job performance link using the Five-Factor Model. Two of the earliest meta-analyses are those of Barrick and Mount (1991) and Tett, Jackson, and Rothstein (1991), which present findings from over 200 studies and provide evidence for the personality-job performance link. These two meta-analyses were groundbreaking because, prior to this time, support for the link between the Big Five and job performance had primarily been conducted using studies that included measures that were not designed to assess the Big Five and support was inconsistent (Salgado, 1997).

Tett, Jackson, and Rothstein (1991) found that all Big Five personality dimensions are valid predictors of job performance. They found relationships between job performance and Neuroticism ($r = -.22$), Extroversion ($r = .15$), Openness ($r = .27$), Agreeableness ($r = .33$), and Conscientiousness ($r = .18$). Additionally, they found the overall relationship between personality and job performance to be .24, considering it a significant effect.

Barrick and Mount (1991) analyzed 117 validity studies and included sample sizes that ranged from over 14,000 to over 19,000 subjects. They found that Conscientiousness is a valid predictor ($r = .22$) across occupations and across criteria and that the other personality factors are valid predictors for certain occupations and some criteria. In their study, Conscientiousness demonstrated an estimated *true* validity from .21 to .23 for five different occupational groups. Extroversion was a valid predictor for

managers ($r = .18$); Emotional Stability was a valid predictor for police ($r = .10$); and Agreeableness was a valid predictor for police and managers ($r = .10$). With regard to performance criteria, Conscientiousness was found to have validities from .20 to .23 for three different job criteria (job proficiency, training, and personnel data). The other four were valid predictors of training proficiency: Extroversion ($r = .26$), Emotional Stability ($r = .07$), Agreeableness, and Openness ($r = .25$). Barrick and Mount (1991) concluded that, in particular, Conscientiousness demonstrates a positive correlation with job performance across job types. They report that Conscientiousness is a consistent predictor of job performance across contexts with true score correlations ranging from .20 to .23.

In later meta-analytic research, Mount, Barrick, and Stewart (1998) report a relationship between various Big Five factors and job performance. Using supervisor ratings as a measure of performance, Conscientiousness ($r = .26$), Emotional Stability ($r = .18$), and Agreeableness ($r = .21$) were related to overall performance in jobs involving interactions with others. In another meta-analysis, Hough and colleagues (1992) also found a relationship between Agreeableness and performance ($r = .17, p < .01$) as well as between dependability and performance ($r = .14, p < .01$). Finally, in a meta-analysis based upon samples from the European community, Salgado (1997) demonstrated relationships between job performance and Conscientiousness ($r = .25$) and Emotional Stability ($r = .19$).

Barrick and Mount (1991) found Extroversion to be a valid predictor for managers and sales. Also, Stewart and Carson (1995) found that, in addition to Conscientiousness, Extroversion was a valid predictor of overall performance for service workers. Additionally, Salgado (1997) found Extroversion to be a valid predictor for

managers and police; Openness to be a valid predictor for police and skilled labor; and Agreeableness to be a valid predictor for professionals, skilled labor, and managers. Mount, Barrick, and Stewart (1998) demonstrated that Conscientiousness, Agreeableness, and Emotional Stability are valid predictors in jobs that involve interpersonal interaction and teamwork. Finally, Blake, Potter, and Slimak (1993) found that scales of the CPI predict overall performance for military academy students.

These reviews show that the Big Five is a predictor of job performance. Although results are not completely consistent, the general consensus drawn by researchers is that the Big Five personality factors do hold some utility in predicting job performance. There is a lack of consensus, however, on which of the Big Five is the best predictor of job performance.

According to Stewart and Carson (1995), "Because there are few published validity studies incorporating scales based specifically on factor markers of the 'Big Five,' relationships between construct valid measures of the five traits and performance have not been clearly established. It is therefore difficult to determine which of the 'Big Five' traits holds the most promise for becoming a robust predictor of job performance" (p. 368). It is their belief that Conscientiousness is the most robust of the Big Five traits, with the others adding incrementally.

If Conscientiousness alone is a good predictor of job performance in all job contexts, one might consider discounting the other FFM dimensions when attempting to predict job performance. However, this would be unwise. According to Hogan, Hogan, and Roberts (1996), other dimensions should be included because

"...the domains of personality and occupational performance are multifaceted. Many employers want to make personnel decisions that are based on, for example, Conscientiousness scores alone. This practice is risky because most performance criteria are best predicted by a combination of scales" (p. 470).

To investigate the contributions that other FFM dimensions add to Conscientiousness when predicting job performance, Stewart and Carson (1995) conducted a concurrent validity study that examined the relationship between direct measures of "Big Five" traits and job performance for service workers. They investigated the usefulness of the "Big Five" personality dimensions as employee selection tests, specifically looking at (1) the relationship between explicit measures of Big Five and performance, (2) the relationships between Big Five and two domains of performance (job relevant behaviors and work outcomes), and (3) the incremental validity of personality traits beyond the measurement of a single trait dimension. With regard to the relationship between explicit measures of the Big Five and performance, they found that Conscientiousness was the strongest predictor of overall performance ($r = .33, p < .001$). Extroversion was also a significant predictor of overall performance ($r = -.18, p < .05$), as was Agreeableness ($r = .19, p < .05$). With regard to relationships between the Big Five and job behaviors, they found that Conscientiousness was correlated with higher levels of dependability ($r = .28, p < .01$) and Extroversion was correlated with both citizenship ($r = -.17, p < .05$) and dependability ($r = -.22, p < .01$). When they looked at work outcomes, they found that Conscientiousness predicted successful work outcomes ($r = .32, p < .001$). Finally, when they looked at the incremental validity of personality traits beyond the measurement of a single trait dimension, Stewart and Carson found that Extroversion

added incremental validity to the prediction of dependability based only on Conscientiousness.

In summary, it appears all Big Five personality dimensions, not just Conscientiousness, have value as predictors of job performance.

Emotional Stability and Job Performance

One personality dimension that has received less attention than Conscientiousness in job performance research is that of Emotional Stability. While some research has shown a link between Emotional Stability and the workplace, not much research has been done on the relationship between Emotional Stability/Neuroticism and Job performance or between Emotional Stability/Neuroticism and other job outcomes.

While most evidence in research points to the predictive value of Conscientiousness in relation to job performance, there is also evidence to indicate for a relationship between Emotional Stability and job performance in certain contexts. As early as the 1930's, Emotional Stability has been linked to occupational outcomes (i.e., performance, job satisfaction, or career satisfaction). In 1932, Hersey demonstrated a relationship between emotional affect and daily performance levels among a small group of skilled workers. He also found a relationship between employees' emotional lives at home and their subsequent work behaviors.

More recently, Emotional Stability has been shown to be a valid predictor for job performance in several meta-analytic studies. Barrick and Mount (1991) found Emotional Stability to be a marginally significant predictor of job performance for Police ($r = .06, p < .10$). In his 1992 meta-analysis, Hough found an observed validity of .13 for Emotional Stability where job proficiency served as the criterion. In addition, Salgado's (1997)

meta-analytic study compared Big Five dimensions to three job performance criteria (supervisory ratings, personnel data, and training ratings) and found that Emotional Stability was a valid predictor for all performance criteria for most occupational groups studied (professionals, police, managers, sales, and skilled labor). Tett, Jackson, and Rothstein (1991) also found a significant relationship between job performance and Emotional Stability ($r = -.22$). Additionally, Mount, Barrick, and Stewart (1998) reported a significant relationship between supervisor ratings of performance and Emotional Stability ($r = .18$).

In response to these meta-analyses, Hertz and Donovan (2000) performed their own meta-analysis examining the relationship between personality and performance using only personality measures actually designed to measure the Big Five. Their results closely paralleled prior meta-analytic results. They found true score correlations between Emotional Stability and overall performance (.14), job performance (.15), training performance (.09), task performance (.14), and job dedication (.14).

Following a summary of these meta-analytic studies, Hogan and Holland (2003) conclude that, “The most robust Big Five predictors of subjective performance criteria (e.g., overall job-performance ratings) are Emotional Stability and Conscientiousness. Persons who seem calm, self-confident, and resilient.....will be evaluated more positively...” (p. 104). In their own meta-analysis, Hogan and Holland’s (2003) results exceeded previously reported values for the Emotional Stability construct. The criterion variables used in each archived study were reviewed by subject matter experts (SMEs) and were classified into one of two “global” performance categories: getting along or getting ahead. Additionally, all individual performance criteria from the individual

studies were matched by SMEs to the one personality construct they were deemed most relevant to. Hogan and Holland reported an estimated true validity of .43 between Emotional Stability and the specific job performance criteria matched to that personality construct (i.e., Remains even tempered: Manages people, crisis, and stress; Shows resiliency; and Demonstrates patience). For the global criterion measures, they found validities of .19 (getting along) and .14 (getting ahead). They concluded that, “these analyses suggest that measures of Emotional Stability—for example, the HPI Adjustment scale—are much more potent and general predictors of occupational performance than previously realized” (p. 109). They also stated that, “These findings are an important qualification to the view that conscientiousness is the personality variable of greatest practical importance in applied psychology. The broad domain of neuroticism, widely studied in clinical psychology, may also prove useful for understanding such occupational outcomes as job satisfaction, commitment, and productivity” (p. 109).

In addition to the meta-analytic studies correlating Emotional Stability with overall job performance, Emotional Stability has also been linked to specific job behaviors indicative of performance. Piedmont and Weinstein (1994) found a significant relationship between Emotional Stability and supervisors’ performance ratings of “interpersonal relations” ($r = -.16, p < .05$) and “adaptive capacity” ($r = -.17, p < .05$). Hogan, Hogan, and Busch (1984) reported a positive association between service orientation (made up of Conscientiousness, Agreeableness, and Emotional Stability) and job success in service jobs. They found that people who were higher in cooperation, self-control, dependability, and emotional adjustment scored higher on service orientation. Dunn, Mount, Barrick, and Ones (1995) found that Conscientiousness and Emotional

Stability were the most important factors that influence hirability. Also, Wright and Cropanzano (1998) found that emotionality was negatively related to job performance and positively related to job burnout in social welfare workers. Judge and Bono (2001) found a positive correlation between Emotional Stability and overall job performance ($r = .19$) in a meta-analytic study that evaluated the relationship of core self-evaluation traits to job satisfaction and performance.

In addition, Emotional Stability has emerged as a predictor of success in teamwork. Thoms, Moore, and Scott (1996) found that Emotional Stability significantly predicted efficacy in self-managed work groups, with workers higher in Emotional Stability being more suitable for self-managed workgroups. Mount, Barrick, and Stewart found Emotional Stability to be a valid predictor ($r = .18, p < .01$) for all jobs in their 1998 study, with the relationship being stronger for jobs involving teamwork. In another study examining the relationship between personality and teamwork, Barrick, Stewart, Neubert, and Mount (1998) found that teams higher in Emotional Stability were better performers in manufacturing jobs.

Emotional Stability has also emerged as a predictor of performance in other specific contexts. Hormann and Maschke (1996) found that personality variables related to Neuroticism predicted variance in the performance of pilots; poor pilots were higher in Neuroticism than successful pilots. In their study on sales performance in 1996, Mughal, Walsh, and Wilding found a positive correlation between Neuroticism (trait anxiety) and work effort and sales performance in two samples of insurance salespersons. For semi-truck drivers, Barrick and Mount (1996) found that Emotional Stability positively correlated with supervisor ratings, even when adjusted for impression management and

self-deception. In research on customer service occupations, Stewart, Carson, and Cardy (1996) studied the relationship between personality and self-directed customer service behavior. Emotional Stability was positively correlated with supervisor ratings of employees' self-directed behavior. Finally, Turban and Dougherty (1994) researched Emotional Stability and performance in 147 managers and professionals. They found that those with greater Emotional Stability were more likely to initiate mentoring relationships.

Emotional Stability has also been found to be related to career performance/success. Judge, Higgins, Thoresen, and Barrick (1999) found a negative relationship between Emotional Stability and career success. Specifically, they reported a negative correlation between Neuroticism and: job income ($r = -.26, p < .01$), occupational status ($r = -.26, p < .01$), and overall career success ($r = -.34, p < .01$). Piedmont (1995) found that Neuroticism correlated positively with a fear of success ($r = .29, p < .01$) and fear of failure ($r = .21, p < .01$) and correlated negatively with achievement scores ($r = -.30, p < .01$).

Holland, Johnston, Asama, and Polys (1993) compared scores on the NEO (Big Five personality measure) to the Career Beliefs Inventory (CBI, Krumboltz, 1994). Holland, et. al., found that the certain beliefs that individuals hold about career success were correlated with levels of Emotional Stability: Career Plans was positively correlated with Neuroticism ($r = .26, p < .01$); achievement was negatively correlated with Neuroticism ($r = -.25, p < .01$); control was negatively correlated with Neuroticism ($r = -.35, p < .01$); responsibility was negatively correlated with Neuroticism ($r = -.19, p < .01$); persisting while uncertain was negatively correlated with Neuroticism ($r = -.28, p < .01$);

taking risks was negatively correlated with Neuroticism ($r = -.25, p < .01$); negotiating/searching was negatively correlated with Neuroticism ($r = -.26, p < .01$); overcoming obstacles was negatively correlated with Neuroticism ($r = -.31, p < .01$); and working hard was negatively correlated with Neuroticism ($r = -.51, p < .01$).

Boudreau, Boswell, and Judge (2000) examined the relationship between career success and personality in both U.S. and European samples. They posited that, “Traits associated with low Neuroticism “such as ‘optimism,’ ‘self-confidence,’ ‘self-assurance,’ achievement motivation, and decisiveness have been correlated positively with managerial advancement, occupational level, executive pay, and job success” (p. 58). Their subjects included executives from an international search firm. They found that Neuroticism in the U.S. sample correlated with two measures of success: pay ($r = -.31, p < .01$) and promotions ($r = -.21, p < .01$). Corresponding results were not significant in the European sample.

Thus, there is cumulative evidence across studies that Emotional Stability, along with other Big Five personality dimensions, has predictive value in relation to work performance, in general contexts and in specific contexts.

Personality and Job Satisfaction

In addition to its link to job performance, personality has also been linked to job satisfaction in recent years. Job satisfaction is generally thought of as “how workers feel about their jobs” and therefore lends itself to be studied in terms of feeling, affect, moods, emotions, or temperament (Brief & Weiss, 2002). Since the 1980’s, researchers have sought to link personality to job satisfaction data. In 1985, Staw and Ross analyzed data on job satisfaction for over 5,000 45-59 year-old men in order to investigate the concept

that job attitudes (assessed by a one-item satisfaction measure) are consistent within individuals, showing stability both over time and across situations. Data were collected longitudinally, with the majority of the sample assessed on job satisfaction between 1966 and 1971. Results indicated significant stability of attitudes (satisfaction) over a five-year time period. There was also significant cross-situational attitudinal consistency when individuals changed employers and/or occupations- job satisfaction remained fairly consistent. Previously held attitudes (job satisfaction measured in 1966) were also a stronger predictor of subsequent job satisfaction (job satisfaction measured in 1971) than either changes in pay or the social status of the job.

Staw, Bell, and Clausen (1986) subsequently examined the influence of emotional disposition on job attitudes over long periods of time. Data were taken from a combination of three separate longitudinal studies that investigated the lives of selected individuals for over fifty years. Measures of emotional disposition from as early as adolescence were used to predict job attitudes later in life. Results indicated that dispositional measures significantly predicted job attitudes over the fifty-year time span.

This research gave impetus to other studies. In 1989, Arvey, Bouchard, Segal, and Abraham conducted an extensive study in which they looked at monozygotic twins who were raised separately from an early age. They tested the hypothesis that there is a significant genetic component to job satisfaction. Results indicated that approximately 30% of the observed variance in general job satisfaction was due to genetic factors. Additional analysis indicated that these results were obtained even when job characteristics were held constant. In their 1993 research, Watson and Slack investigated the extent to which job satisfaction is related to emotional affect. They found that affect

was not only significantly correlated with several aspects of concurrent employee satisfaction, but it also predicted some facets of job satisfaction that were assessed two years later. Their analysis indicated that emotional temperament, major job changes, and occupational quality variables each made independent contributions to the prediction of job satisfaction. Watson and Slack thus concluded that job satisfaction and personality influence one another.

As a result of these studies and others like them, most researchers recognized that job satisfaction was influenced by personality traits by the 1990's (Brief, 2002). From this interest and general agreement that personal dispositions contributed to job satisfaction, a multitude of personality traits have been studied as possible determinants of job satisfaction.

The Big Five and Job Satisfaction

Although the Big Five has been studied in relation to the workplace, it has most commonly been studied in relation to job performance. The relationship between the Big Five and occupational satisfaction is much less studied. While there is a great deal of research on the link between the Big Five and job performance, there is very little on the Big Five and job satisfaction. While many studies have investigated the relationship between one factor of the Big Five (e.g., Emotional Stability) and job satisfaction, research on the Big Five as a whole is scarce (Judge, Heller, p;& Mount, 2002). Further, while many meta-analyses have examined the relationship between the Big Five and performance, there is a dearth of meta-analytic research on the Big Five-satisfaction relationship. However, some early research has led to recent interest in this relationship as a source for research.

Early research surfaced in the 1930's when Hoppock (1935) and Fisher and Hannah (1931) examined relationships between workers' satisfaction and dispositions. After that early research, with a few exceptions, the research in this area lay dormant (Judge, Heller, & Mount, 2002). In the 1980's several studies led to a renewed interest in the subject (Arvey, Bouchard, Segal, & Abraham, 1989; Staw, Bell, & Clausen, 1986; Staw & Ross, 1985). Since the 1980's, researchers have once again attempted to link personal qualities to job satisfaction data. Early research indicated that job satisfaction was significantly related to personality (Staw & Ross, 1985; Staw, Bell, & Clausen, 1986; Arvey, Bouchard, Segal, & Abraham, 1989). Since Staw, Bell, & Clausen (1986) linked childhood personality to job satisfaction later in life, there has been a great deal of research interest in personality and satisfaction. Watson and Slack (1993) investigated the extent to which job satisfaction is related to emotional affect. They found that affect was not only significantly correlated with several aspects of concurrent employee satisfaction, but it also predicted some facets of job satisfaction that were assessed two years later. Emotional temperament also made an independent contribution to the prediction of job satisfaction. Watson and Slack concluded that job satisfaction and personality influence one another.

As a result of these and other similar studies, most researchers recognized that job satisfaction was influenced by personality traits by the 1990's (Brief, 2002). This led to research on the Big Five as possible determinants of job satisfaction. Boudreau, et. al. (2001) examined career success by relating traits from the Five-Factor Model of personality to several dimensions of career success, including career satisfaction. Data were collected from 2 large samples of American and European executives. They found

that Extroversion was positively related to career satisfaction in both the American sample ($r = .18, p < .05$) and the European sample ($r = .32, p < .01$). They also found that Neuroticism related negatively to career satisfaction in both the American sample ($r = -.39, p < .01$) and the European sample ($r = -.17, p < .01$). Finally, they found that both Conscientiousness and Agreeableness were negatively related to career satisfaction in the American sample ($r = -.13, p < .05$ and $r = -.18, p < .01$). In related research, Seibert and Kraimer (2001) examined the relationship between the Big Five personality dimensions and career success by surveying a sample of almost five hundred employees in a diverse set of occupations and organizations. Results showed that Extroversion was related positively to career satisfaction and that Neuroticism and Agreeableness were related negatively to career satisfaction.

Judge, Heller, and Mount (2002), using the Barrick and Mount (1991) meta-analysis linking the Big Five to job performance as a guide, conducted a similar meta-analysis linking the Big Five to job satisfaction. Three of the Big Five demonstrated statistically significant relationships to job satisfaction. They found Neuroticism to be the strongest predictor ($r = -.29$), followed closely by Conscientiousness ($r = .26$) and Extroversion ($r = .25$). Agreeableness was correlated to job satisfaction ($r = .17$), but the relationship was not statistically significant. Openness demonstrated a weak relationship with job satisfaction ($r = .02$).

Emotional Stability and Job Satisfaction

Unlike the scarcity of research on the Emotional Stability-job performance link, there is a great deal of research on the Emotional Stability-job satisfaction relationship. One of the most commonly studied personality dimensions in relation to job satisfaction

has been Emotional Stability, with other Big Five dimensions receiving less emphasis (Tokar, et. al. 1998).

Dispositions have been shown to affect job satisfaction (Judge & Larsen, 2001; Levin & Stokes, 1989), both across time (Staw, et. al., 1986; Gerhart, 1987) and across jobs (Staw & Ross, 1985). Emotional Stability has been consistently linked to employee well-being and satisfaction (Tokar, et. al., 1998). Studies investigating the relationship between low Emotional Stability and job satisfaction have consistently found a significant negative correlation (Furnham & Zacherl, 1986; Smith, Organ, & Near, 1983; Tokar & Subich, 1997). In the view of some researchers, Emotional Stability is the strongest predictor of job satisfaction among the Big Five traits, (e.g., Tokar, et. al. 1998).

Individuals low in Emotional Stability tend to be less satisfied in their jobs than those higher in Emotional Stability (Brief, Burke, George, Robinson & Webster, 1988; Levin & Stokes, 1989). McCrae and Costa (1991) noted that Emotional Stability is related to satisfaction because individuals who score low in Emotional Stability are predisposed to experience more negative life events. Less emotionally stable individuals may tend to dwell more on the negative aspects of their job. They may also have more of a tendency to interpret ambiguous stimuli in a negative way. These individuals have a tendency to recall more negative aspects than others may when they are thinking about their work (Neckowitz and Roznowski, 1994).

Individuals lower in Emotional Stability may also be less able to cope with normal stress and strain on the job, resulting in feelings of dissatisfaction. Osipow (1991) states, "...the work environment places individuals in roles that create a perception of stress, that people use various methods to resolve (cope with) these stresses, and the

degrees of success of these methods in combination with the intensity of the stress as well as a number of personal variables interact” (p. 324). Lower Emotional Stability is characterized by a greater perception of stress and anxiety and a diminished ability to cope with it (Decker & Borgen, 1993).

Numerous studies have demonstrated a negative relationship between low Emotional Stability and job satisfaction (Furnam & Zacherl, 1986; Smith, Organ & Near, 1983; Seibert & Kraimer, 2001). As early as the 1930’s, researches have linked Emotional Stability to job satisfaction. In their book, *The Dissatisfied Worker*, Fisher and Hanna (1931) concluded that life dissatisfaction, in part, could be linked to emotional maladjustment. They felt that, vocational maladjustment in American industry was due to maladjustive emotional predispositions within the individual that created discord between the employee and his job. On the heels of Fisher and Hannah’s work, Hoppock conducted research in 1935 using surveys and interviews from workers in New Hope, PA and concluded that emotional maladjustment influenced job satisfaction.

In other early research, Guha (1965) correlated job satisfaction with a variety of personality and demographic factors in a population of shoe factory workers. A negative correlation was found between Neuroticism and job satisfaction. Later, Furnham and Zacherl (1986) examined the relationship between various personality dimensions, including Neuroticism, and dimensions of job satisfaction in a group of computer employees. They found that Neuroticism was negatively correlated with job satisfaction. In yet another study, Kirkcaldy, Thome, and Thomas (1989) assessed the job satisfaction profiles of individuals in counseling professions and related them to personality scores. They found that Neuroticism was positively correlated with job dissatisfaction.

More recently, Tokar and Subich (1997) found that a combination of Big Five dimensions predicted only a small amount of variance in job satisfaction, with Neuroticism being a unique contributor to higher levels of satisfaction as measured by the Hoppock Job Satisfaction Blank (Hoppock, 1935). Similarly, Day and Bedeian (1995) correlated job satisfaction to personality variables of Extroversion, Conscientiousness, and Agreeableness, finding no relationship between Agreeableness and satisfaction and finding very weak relationships between Conscientiousness and satisfaction and Extroversion and satisfaction. Emotional Stability has risen as the most promising Big Five dimension in relation to job satisfaction (Tokar, et. al. 1998). Judge et. al. (1999) found a negative relationship between Emotional Stability and job satisfaction ($r = -.22, p < .05$). Judge and Locke (1993) found that employees with low Emotional Stability were more likely to experience dysfunctional job-related thought processes such as overgeneralization, perfectionism, and dependence on others, and were less satisfied in their jobs.

In their review of the literature on personality and job behavior from 1993-1997, Tokar, Fischer, and Subich (1998) state that, "Greater job satisfaction is related to lower Neuroticism and its variants..." (p.144). In their meta-analysis looking at the Big Five and Job satisfaction, Judge, Heller, & Mount (2002) found that of all the Big Five personality traits, Neuroticism was the strongest predictor of job satisfaction ($r = -.29$). They viewed Emotional Stability as a key aspect of a "happy personality" and that emotionally stable individuals tend to be happy in life which leads them to be happy in their jobs (p. 535). Judge et al. (ibid) concluded that their results support previous findings linking Emotional Stability to job satisfaction.

Meir, Melamed, and Dinur (1995) found a significant negative relationship between Neuroticism and satisfaction with person-environment fit. In a study that examined the relationship between congruence and measures of well-being, Meir et. al. included 6 measures of well-being: Occupational Choice Satisfaction, Work Satisfaction, , Burnout, Anxiety Level, Somatic Complaints, and Self-Esteem. The four latter measures are all elements of Emotional Stability. The first three measures are elements of job satisfaction. When these 6 measures were correlated with one another, several relationships were found. Negative correlations were found between Work Satisfaction and Anxiety ($r = -.58$) and between Work Satisfaction and Somatic Complaints ($r = -.47$). A positive correlation was found between Work Satisfaction and Self-Esteem ($r = .63$). Positive correlations were found between Burnout and Anxiety ($r = .70$) and between Burnout and Somatic Complaints ($r = .61$). A negative correlation was found between Burnout and Self-Esteem ($r = -.65$). Significance levels were not indicated in the research. However, high levels of anxiety, numerous somatic complaints, and low self-esteem are all descriptors of low Emotional Stability (Meir, et. al. 1995). Based on this research, those individuals exhibiting qualities of low Emotional Stability indicated less Work Satisfaction and higher likelihood of Burnout.

In a study that examined the prediction of life satisfaction using a sample of 479 police officers, Hart (1999) reported a negative correlation between Neuroticism and job satisfaction ($r = -.17, p < .05$). He also found that the experience of “work hassles” was related to higher levels of Neuroticism ($r = .44, p < .05$). Judge and Bono (2001) found a positive correlation between job satisfaction and Emotional Stability ($r = .24$) in a meta-

analysis based on 274 correlations, concluding that it was “among the best predictors of job satisfaction” (p. 80).

Further support for the link between Emotional Stability and job satisfaction came from the research of Leong and Boyle (1997), who used a longitudinal data set to identify major personality and individual differences variables that predict midlife career adjustment. They found that for women, lower Neuroticism predicted job stability. Gustafson and Mumford (1995) sampled 357 Navy enlisted men and found that individuals high in anxiety (Neuroticism) tended to be dissatisfied in their jobs and were more likely to withdraw. They concluded that high anxious personality types and low anxious personality types differed according to the job outcomes of satisfaction, performance, and withdrawal from work.

Several other studies have linked Emotional Stability with job satisfaction. Cropanzano, James, and Konovsky, 1993; Decker and Borgen, 1993; Necowitz and Roznowski, 1994; and Parkes, Mendham, and von Rabenau, 1994, all found that facets of Neuroticism predicted aspects of lower job satisfaction. Alpass, Long, Chamberlain, and MacDonald (1997) found that facets of Neuroticism predicted unique variance in job satisfaction for a large military sample. Bellani, Furlani, Gnechi, and Pezotta (1996) reported that high anxiety was correlated positively with burnout and negatively with feelings of job accomplishment. Noor (1997) found that facets of Neuroticism were correlated with job strain. Decker and Borgen (1993) found that individuals high in negative affectivity had lower levels of intrinsic job satisfaction ($r = -.20, p < .01$), extrinsic job satisfaction ($r = -.16, p < .05$), and general job satisfaction ($r = -.21, p < .001$). In a study that examined the role of social support in the context of the demand-discretion

theory of job stress, Parkes et. al. (1994) found Neuroticism to be a predictor of job satisfaction ($r = -.33, p < .05$) and accounted for a substantial portion of the explained variance. Boudreau, et. al. (2001) found a negative correlation between Emotional Stability and job satisfaction ($r = -.41, p < .01$) in his study relating the Big Five to career success in American and European executives. Cropanzano, James, and Konovsky (1993) concluded that negative affectivity was negatively correlated with global job satisfaction ($r = -.24, p < .01$).

Judge, Locke, Durham, and Kluger (1998) researched the relationship between self-esteem, self-efficacy, locus of control, and non-Neuroticism (Emotional Stability) and job and life satisfaction in a sample of physicians, college graduates, and Israeli college students. Using both self ratings and ratings from significant others, they found a correlation of $-.37$ between Neuroticism and job satisfaction when the same source (self/self or significant other/significant other) was used to report the predictor and criterion and a correlation of $-.29$ when a different source was used (self/significant other). In a follow-up to that study, Judge, Bono, and Locke (2000) evaluated the same personality characteristics in relation to job satisfaction and intrinsic job characteristics. They reported a correlation of $-.29$ ($p < .05$) between a composite measure of job satisfaction and Neuroticism.

The data seem convincing that there is cumulative evidence for a link between Emotional Stability and job satisfaction. These conclusions, based on a multitude of studies, are the result of mounting evidence in the literature that support the link between Emotional Stability and job satisfaction.

Personality and Career Satisfaction

Related to the research on job satisfaction is that of career satisfaction. Whereas job satisfaction indicates contentment with the current position of employment, career satisfaction refers to a broader satisfaction with one's career choice and outcomes. It embodies elements such as satisfaction with career decisions, satisfaction with career and life balance, less stress associated with career choices, and greater congruence between one's career desires and one's career outcomes.

The Big Five and Career Satisfaction

Like job satisfaction, career satisfaction has also been linked to personality variables, although not as extensively. Boudreau, et. al. (2001) examined career success by relating traits from the Five-Factor Model of personality to several dimensions of career success, including career satisfaction. Data were collected from two large samples of American and European executives. They found that Extraversion related positively to career satisfaction in both the American sample ($r=.18, p <.05$) and the European sample ($r=.32, p <.01$). They also found that Neuroticism related negatively to career satisfaction in both the American sample ($r=-.39, p <.01$) and the European sample ($r=-.17, p <.01$). Finally, they found that both Conscientiousness and Agreeableness were negatively related to career satisfaction in the American sample ($r=-.13, p <.05$ and $r=-.18, p <.01$). Seibert and Kraimer (2001) examined the relationship between the "Big Five" personality dimensions and career success by surveying a sample of almost five hundred employees in a diverse set of occupations and organizations. Results showed that Extraversion was related positively to career satisfaction and that Neuroticism and Agreeableness were

related negatively to career satisfaction. Of interest is that in both of the above studies, lower Emotional Stability was found to contribute to less career satisfaction.

Emotional Stability and Career Satisfaction

Career satisfaction has also been linked to Emotional Stability. In their review of research on career processes, Tokar et. al. (1998) concluded that, “greater Neuroticism is related to...less congruence, and greater career indecision...” (p 144). They further state that, “personality dimensions reflecting Neuroticism...tend to predict more negative perceptions of occupational stressors and strain or distress; further, Neuroticism appears to moderate (or inflate) the relation between stress and strain” (p. 144). Decker and Borgen (1993) assert that Neuroticism is a personality variable that may influence self-reports of occupational stressors and subsequent perceptions of stress or dissatisfaction. It seems clear that low Emotional Stability, or a negative affect, could influence an individual’s perception of career satisfaction. Brief and Atieh (1987) state that, “if an individual reports the existence of unfavorable job conditions and also that he or she is distressed, it is possible that both of these responses may be indicative of this underlying personality disposition” (p.122). There is some research that supports the relationship between Emotional Stability (or traits closely associated to it) and career satisfaction: Spector, Jex, and Chen (1995) related anxiety and pessimism (facets of Emotional Stability) to job measures in civil service employees in 129 different jobs. Their finding was that individuals high in anxiety and pessimism (low in Emotional Stability) tended to be in jobs characterized by low autonomy, variety, identity, significance, and complexity. Neuroticism is related to a person’s choice of routine, less complex, and less independent work. In other research, Holland, Johnston, Asama, and Polys (1993) found that low

Emotional Stability correlated negatively with beliefs about the importance of risk taking, working hard, and persisting in the face of obstacles. Low Emotional Stability also correlated negatively with beliefs about the importance of achievement and Openness.

While these findings do not specifically relate Emotional Stability to career satisfaction, they relate lower levels of Emotional Stability to other behaviors, traits, or beliefs that may explain why these individuals experience less career satisfaction.

Individuals who feel no autonomy in their career; choose uninteresting or routine work; don't take career risks, work hard, or persist; or do not believe that achievement is important do not sound like individuals who are seeking satisfaction in their careers.

Boudreau, et. al. (2001) found that Neuroticism related negatively to career satisfaction in both an American sample ($r = -.39, p < .01$) and a European sample ($r = -.17, p < .01$). Seibert and Kramer (2001) found that Neuroticism was negatively correlated to career satisfaction ($r = -.21, p < .01$) among a diverse set of occupations and organizations.

Similarly, a number of studies have focused on the relationship between career indecision and Emotional Stability. Again, while this does not specifically relate Emotional Stability to career satisfaction, it lends support in that individuals who are indecisive or anxious about their career choice are not likely to report career satisfaction. One such study was that of Chartrand, Rose, Elliot, Marmarosh, et. al. (1993), where they related the Big Five to problem-solving and decision-making style. They found that Neuroticism was the strongest predictor of any of the Big Five and that high Neuroticism predicted decision-making problems, dependent decision making styles, and career indecision. Meyer and Winer (1993) found a direct positive correlation between

indecision and Neuroticism in a sample of undergraduate students. Betz and Serling (1993) related Neuroticism to career decisional processes in samples of college students. Their research results indicated that high Neuroticism correlated positively with career indecisiveness and decision-making. Others who found relationships between Neuroticism and career decidedness are Meldahl and Muchinsky (1997) and Multon, Heppner, and Lapan (1995).

More specific to career satisfaction, Lucas and Wanberg (1995) found that Neuroticism predicted less comfort with career status. Additionally, Meir et. al. (1995) found negative correlations between Occupational Satisfaction and Anxiety ($r = -.46$), a facet of Emotional Stability. Mughal, Walsh, and Wilding (1996) found that employees with higher Neuroticism reported higher levels of occupational strain and unhappiness.

While evidence supporting the link between Emotional Stability and career satisfaction is not as abundant in the research as evidence supporting the links between Emotional Stability and other vocational outcomes, the extant research does support a relationship. Such results suggest that this is a fruitful area for research and provides a basis for a tentative link between Emotional Stability and career satisfaction.

Occupational Stress

The term “stress” is shrouded in a great deal of conceptual confusion and divergence of opinion. Many authors have noted the lack of consensus on even a definition of stress (Motowidlo, Packard, & Manning, 1986). Stress can be defined as an unresolved environmental demand requiring adaptive social readjustment (Holmes & Rahe, 1967). Since the 1980’s, there has been a growing interest in studying stress-related factors as possible predictors of both positive and negative organizational outcomes

(Bhagat, McQuaid, Lindholm, & Segovis, 1985). Despite the increase in studies of stress in the workplace, definitions of occupational stress and operationalization of measures have no consensus and tend to differ from study to study (Vagg & Spielberger, 1998). Most theories of occupational stress view excessive job demands as a feature of the environment that influences individual reactions through mediating psychological mechanisms. One theoretical premise is that job stress is so aversive that it will result in negative behaviors such as disinterest, dissatisfaction, lack of involvement, tardiness, absenteeism, poor work performance, or even leaving the job altogether. Alternatively, the absence of job stress will result in more satisfied and effective employees (Bhagat, et. al., 1985).

Frequently studied occupational stressors include work overload, role overload, and relationships at work (Decker & Borgen, 1993); time pressures and autonomy (Parkes, Mendham, & von Rabenau, 1994); role conflict, role ambiguity, resource inadequacy, underutilization of skills, information flow, and career advancement opportunities (Bhagat, et. al, 1985); interpersonal conflict at work, inadequate leadership, and poor resources (Spector & Jex, 1998); supervisory misbehavior (Kohli, 1985); and job insecurity (Strazdins, D'Souza, Lim, Broom, & Rodgers, 2004). Although many definitions for job stress have been proposed, it is typically conceptualized as a condition where job related factors interact with the individual to change (positively or negatively) his/her psychological or physical condition to the point that he/she is forced to deviate from normal behavior (Beehr & Newman, 1978).

Occupational stress theories try to explain how job stress affects job outcomes. The most common theoretical perspective posits that stressful work produces a condition

of psychological strain; this psychological strain then causes the employee to display negative behavioral reactions resulting in diminished work performance and satisfaction (de Croon, Sluiter, Blonk, Broersen, & Frings-Dresen, 2004). Several predominant theories of job stress are available. In the demand-control model, job stress is caused by job demands (physical, social, or organizational demands that require sustained mental or physical effort) and job control (the degree to which the job provides freedom, independence, and discretion in scheduling the work and determining the procedures to be used to carry the work out) (de Croon, et. al., 2004; Rau, 2004; Karasek, 1990). Sauter, Hurrell, and Cooper (1989) note that support for this model has been mixed and that “fundamental questions remain concerning the conceptualization and operationalization of the construct” (p. xvi). In the effort-reward imbalance model, job stress is caused by high work or effort demands paired with poor rewards (Siegrist, 1996). A combination of strong effort in response to extrinsic work pressures when there is low potential for reward leads to work stress (Vagg & Spielberger, 1998). A criticism of this model has been that it focuses primarily on general demands and not enough on specific job pressures (Vagg & Spielberger, 1998). The person-environment fit theory has also been widely accepted with regard to the study of occupational stress. This theory proposes that stress in the workplace results from the “interaction of the individual with her or his work environment. Occupational stress occurs when job demands that pose a threat to the worker contribute to incompatible person-environment fit, producing psychological strain” (Vagg & Spielberger, 1998, p. 295). Criticism of the person-environment fit model are that it has not yielded a “highly focused approach” to the assessment of occupational stress (Chemers, Hays, Rhodewalt, & Wysocki, 1985, p. 628)

and that it is “repeatedly plagued with serious theoretical and methodological problems....[that] include inadequate distinction between different versions of fit, confusion of different functional forms of fit, poor measurement of fit components, and inappropriate analysis of the effects of fit” (Edwards & Cooper, 1990, p. 294). All of these prevailing theories of occupational stress have both merit and limitations, with each one offering something toward the understanding and conceptualization for understanding stress in the workplace.

Reasonably consistent correlations have been found to relate various job stressors with work outcomes such as role conflict and ambiguity (Jackson & Schuler, 1985), control and autonomy (Spector, 1986a), and workload (Spector, 1987a; Ganster, Fusilier, and Mayes, 1986). Spector (1987a) found significant positive correlations of interpersonal conflict at work with anxiety, frustration, symptoms, and dissatisfaction. Finally, research has shown that organizational constraints can lead to adverse affective reactions (O'Connor, Peters, Rudolf, & Pooyan, 1982).

According to Vagg and Spielberger (1998), “a major problem with most theories of workplace stress resides in how occupational stress and strain are defined and measured” (p. 295). The almost total reliance on subject self-report data on both stressors and outcomes makes definitive conclusions difficult. What is certainly well established is that perceptions of the work environment are correlated with self-reported outcomes. However, a major concern is the issue of what the job incumbent's perceptions of job conditions actually represent and what other variables cause them. Most stress research using subject self-reports is based on an implicit assumption that the self-reports are valid indicators of environmental conditions.

Because of different methods of measuring job stress, varying results using self-report measures of job stress, and the use of simple occupational group indices to rate stressful jobs, Rau (2004) recommends using job analysis experts to measure the stress aspects of jobs. Using judgments by experts to analyze jobs based on job characteristics, the problems of what to measure, self-rater bias by job incumbents, and difficulties associated with job-title methods are eliminated (Rau, 2004). The main interest of this method is to identify the objective, person-independent, stress elements of the job by using job analysis professionals measuring jobs on defined scales (Voskuijl & van Sliedregt, 2002; Rau, 2004). Job stress can be measured by looking at three types of stressors that make up job stress: emotional stressors, physical stressors, and mental stressors (Peeters, de Jonge, Janssen, & van der Linden, (2004). Emotional stressors include those emotionally demanding aspects of the job including interpersonal conflict or demands, potential for confrontations with others, dealing with difficult people, or being exposed to emotionally traumatic events at work like death or suffering. Physical stressors include those physically demanding aspects of the job such as being required to do heavy work, having to stand in one place, carrying heavy loads, or do other physically taxing activities. Mental stressors include those cognitively demanding aspects of the job such as having to do highly detailed work, work that requires a great deal of mathematical calculations, or work that requires a high level of specialized knowledge.

Occupational Stress and Personality

In organizational settings, employees are exposed to a variety of conditions and events that may cause stress. The subjective experience of stress, however, may differ in individuals exposed to the same stressors because of differences in personality, coping

style, or values (Mikkelsen & Gundersen, 2003). Motowidlo, Packard, and Manning (1986) posit that individuals with certain characteristics are more likely than others to behave in ways that increase/decrease the likelihood of stressful events and that affect the individuals reactions to such events. Occupational stress is often viewed as an interaction between external circumstances (stressors at work) and personal characteristics (personality); this determines the individual's experience of stress (Newman & Beehr, 1979; Rodney & Salovey, 1989). As such, several theories of stress have evolved that include personality as a determinant of how one experiences and deals with stress.

According to the "dynamic equilibrium" theory of stress, "stress results from a broad system of variables that include personality characteristics, environmental characteristics, coping processes, positive and negative experiences, and various indexes of psychological well being," (Hart, 1999, p. 565). The theory posits that stress is not found in any one of these variables, but results when there is disequilibrium within the system of variables that relates one to one's environment, provided that this state of disequilibrium brings about a change in one's normal psychological well-being (Hart, 1999).

Another theory of workplace stress, that of Osipow and Spokane (1987) speculates that the work environment places individuals in roles that create the perception of stress, based on the intensity of the perceived stressor and the personal characteristics through which the individual interprets the stress. Occupational stress is the result of perceived stress in relation to the individual's coping resources that allow him/her to deal with the stress. If the demands (stressors) exceed the individual's resources for coping, the individual cannot effectively manage the stress.

The most studied personality type with regard to occupational stress is the “Type A” personality (Friedman, 1996). Type A personality is typically characterized by a sense of time urgency, aggressive striving, and a high level of hostility (Ross & Altmaier, 1994). It has been theorized that individuals with Type A personalities are more likely to experience occupational stress and are less likely to deal appropriately with that stress due to the very nature of their personalities (Ross & Altmaier, 1994).

Additionally, recent research shows that other personality characteristics, like Emotional Stability, are also part of the stress process (Costa & McCrae, 1990; Lazarus, 1993). Enduring personality characteristics such as Emotional Stability participate in determining the meaning that one ascribes to an event (Brief, Butcher, George, & Link, 1993). Emotional Stability has been related to negative life experiences, emotion-focused coping mechanisms, and psychological distress (Hart, 1999). Latack (1986) states that “the level of stress a person experiences, and perhaps the extent to which deleterious effects occur, depends on how and how well the person copes in stressful situations” (p. 377). Such findings indicate that Emotional Stability could be an informative and important part of the process that allows one to interpret and respond to environmental stressors.

Bhagat, et. al. (1985) found that negative stress events were significantly correlated with three separate measures of feelings of distress and negative affect. The first measure was based on a 22-item scale and demonstrated a .33 correlation with stress ($p < .01$). The second measure was based on a self-rating from an interview and demonstrated a .42 correlation with stress ($p < .01$). The final measure was based on a peer rating and demonstrated a .20 correlation with stress ($p < .01$). Al-Mashaan (2001)

examined job stress and job satisfaction and their relation to measures of personality, including Neuroticism in a sample of Kuwaiti employees. Analysis yielded significant and positive correlations of job stress with Neuroticism. Knussen and Niven (1999) sought to determine the extent to which Neuroticism explained stressor-work outcome relationships in a sample of health care workers. Their analysis indicated that Neuroticism explained between 53% and 5% of the sources of stress-health relationships and between 57% and 1% of the sources of stress-job dissatisfaction relationships. Gunthert, Cohen, and Armeli (1999) examined the influence of Neuroticism on the occurrence of different types of stress events, using a sample of college students. When reporting their most stressful event of each day, high Neuroticism individuals reported more interpersonal stressors, had more negative appraisals, and reacted with more distress than low Neuroticism individuals.

Emotional Stability has been defined as one's resilience to stress (Hogan & Holland, 2003). It follows that an individual low in Emotional Stability has less ability to manage or tolerate stress, and as such, will less successfully manage workplace stress. This would lead to lower levels of job performance and satisfaction. Despite what appears to be a logical link between Emotional Stability, job stress, and the result on performance and satisfaction, Emotional Stability has been largely ignored in twenty-five years of stress research and has rarely been measured in studies of occupational stress (Payne, 1988).

Occupational Stress and Job Performance

Several major hypotheses have been proposed to explain the relationship between occupational stress and job performance. The first hypothesis, the "inverted U"

relationship between stress and performance, suggests that at low levels of stress, individuals are not stimulated enough to bring about high performance. Likewise, at very high stress levels, individuals are required to expend energy coping with stressors rather than directing efforts towards job performance. As a result, job performance is at its best when a moderate amount of stress is present. Another hypothesis suggests that occupational stress and job performance have a positive, linear relationship. When stress levels are low, the individual isn't likely to perform due to a lack of challenge. At moderate levels of stress, the individual will have average performance due to some challenge being present. However, when stress levels are high, the result is heightened challenge and job performance. A third hypothesis suggests that stress and performance have a negative, linear relationship. From this perspective, stress is seen as negative to both individuals and organizations. When faced with stressors, the individual will expend time and energy on coping strategies or in undesirable activities like wasting time. A final hypothesis posits that there is no relationship between job stress and performance. From this perspective, individuals are viewed as being concerned with performance because they are paid for performing and they will ignore organizational stressors that would hinder their productivity (Jamal, 1985; Sullivan & Baghat, 1992). The most "popular" theory is that of the inverted-U, however each theory has received some support in the literature, and findings are relatively inconsistent (Sullivan & Baghat, 1992).

Occupational stress has been widely studied with regard to work outcomes, however, most of this research has focused on job stress as it relates to health (Cooper & Marshall, 1976; Theorell & Karasek, 1995). There is less available research, however, on

the relationship of job stress and job performance. However, as noted by Ryland and Greenfield (1991),

“Numerous studies have linked stress to impaired performance in the workplace due to such factors as health problems, absenteeism, turnover, industrial accidents, the use of drugs and alcohol on the job, and counterproductive behaviors such as spreading rumors, doing inferior work on purpose, stealing from employers, purposely damaging property, equipment and products, and various kinds of white collar crime” (p. 43).

In their study on the effects of job stress on job performance in a sample of nurses, Motowidlo, Packard, and Manning (1986) found that job performance correlated significantly with stress. Frequency of stressful events was correlated with composure ($r = -.22, p < .01$), warmth toward other nurses ($r = -.17, p < .05$), and tolerance with nurses and doctors ($r = -.27, p < .01$). Intensity of stressful events was correlated with composure ($r = -.22, p < .01$). Subjective stress was correlated with composure ($r = -.30, p < .01$), quality of patient care ($r = -.24, p < .01$), tolerance with patients ($r = -.19, p < .05$), warmth toward other nurses ($r = -.18, p < .05$), tolerance with doctors and nurses ($r = -.21, p < .01$), and interpersonal effectiveness ($r = .21, p < .01$). Similarly, Jones (1981a) found that job stress was correlated to poor job performance in nurses. Nurses who reported higher levels of stress also reported more counterproductive work behaviors (correlations ranged from .20 to .30, $p < .05$). Hsieh, Huang, and Su (2004) investigated the relationship of work stress and job performance among hi-tech employees and found a significant negative correlation between work stress and job performance. They concluded that job performance could be predicted by work stress levels.

Occupational Stress and Job/Career Satisfaction

A variety of variables have been studied as potential mediators of the personality-job satisfaction relationship: identity, variety, feedback, autonomy, significance, job complexity, (Judge, Bono, & Locke, 2000). Occupational stress has also been widely researched as a variable linked to job satisfaction. Brief and Atieh (1987) reported that one of the most frequently used indexes of job stress is job satisfaction. A review by Jackson and Schuler (1985) cited more than thirty studies in which job satisfaction was used in relation to job stress. This relationship should not be surprising when one considers the commonalities in the conceptual definitions of job stress and job satisfaction. Much of the research on organizational stress has focused on its relationship with job satisfaction. These studies generally indicate that job stress and satisfaction are inversely related (e.g., Miles, 1976).

Within the domain of work, an individual's level of satisfaction results from the experience and reaction to positive and negative events. More stressful work environments that involve more "hassles," that is, daily experiences that an individual would appraise as potentially harmful to well-being such as interpersonal conflict, heavy workloads, strict deadlines, or high levels of accountability or responsibility, would likely place more strain on an individual and require greater coping. An individual with lower Emotional Stability is less likely to cope effectively, is more likely to perceive the added stress as negative, and is more likely to translate this into lower satisfaction with one's job (Hart, 1999). The relationship between personality and satisfaction may be mediated through experience of stressful or non-stressful events (Hart, 1999).

In support of this, Hart (1999) found that Neuroticism was moderately correlated with job satisfaction in a sample of police officers. The results also indicated that the relationship between personality and satisfaction may have been mediated through the police officers' daily experiences of stressful and non-stressful events.

In a study that examined the relationships between workplace stress, Emotional Stability, and satisfaction, Decker and Borgen (1993) found that higher job stress was related to lower job satisfaction and that lower Emotional Stability was also related to lower job satisfaction. While this study did not look at stress as a moderator of the Emotional Stability – satisfaction relationship, the findings lend support that these variables are related. Sarason and Johnson (1979) found that negative stress events were significantly related to lower levels of job satisfaction with regard to supervision, pay, and the work itself.

Bhagat, et. al. (1985), in a study that examined the effects of life stress on organizational outcomes found that negative job stress was negatively correlated with job satisfaction ($r = -.39, p < .01$) and organizational commitment ($r = -.32, p < .01$) and was positively correlated with job strain ($r = .42, p < .01$), job alienation ($r = .30, p < .01$), and turnover ($r = .19, p < .01$). Using 370 employees, (e.g., faculty, administrators, staff), from a large southeastern university, Kemery, Mossholder, and Bedeian (1987) found that job stress as a result of role conflict and ambiguity exert a direct influence on job satisfaction, leading to physical symptoms and turnover intentions. In a similar study, Kemery, Bedian, Mossholder, and Touliatos (1985) used three samples of accountants, and a sample of hospital employees to examine the relationship between role ambiguity and conflict, job stress, satisfaction, and intention to leave. They found that stress exerted

an indirect influence on turnover intentions through job satisfaction. They also found that stress exerted a direct influence not only on job-related stress and job satisfaction, but on the propensity to leave the organization.

Summary and Conclusions

The Five-Factor Model is viewed by many current researchers as the best available framework for representing normal personality traits in vocational research. Its stability and robustness allows for many potential research applications including application to important job outcomes such as job performance and satisfaction. Recent investigations have indicated that the model is useful in predicting job performance (Barrick & Mount, 1991; Barrick et al. 2001; Tett et al. 1991). There exists ample evidence to justify the use of personality measurement in predicting job performance. The research cited in this paper indicates that the relationship between personality assessment and job performance is modest, ranging from .12 to .25, depending on the personality measure used and the criterion of job performance to be predicted.

It is still unclear exactly which personality traits are the most predictive of job performance. For example, Barrick and Mount (1991) reported that Conscientiousness was the only trait to correlate with job performance across occupational group and job performance criteria; however, Tett et al. (1991) found that Agreeableness was most strongly related to job performance. A more recent review by Barrick, et. al., (2001) also supported Conscientiousness as the fundamental personality variable in studies of workplace behavior. Despite contradictions with respect to which personality measure or which dimension of personality is most predictive, the current consensus is that personality is predictive of job performance.

The research cited in this paper demonstrates a consistent link between the Five-Factor Model and job performance, with the strongest predictors being Conscientiousness, Extraversion, and Emotional Stability. Additionally, research clearly establishes that the Five-Factor Model is correlated with overall levels of job satisfaction experienced by employees.

With regard to the Big Five factor of Emotional Stability, it appears to be a relatively stable individual difference variable that affects important job outcomes. A number of studies indicate that it is a valid predictor of job performance and job satisfaction. Low Emotional Stability can manifest itself as anxiety, nervousness, propensity for negative experiences, negative affect, lack of motivation, low confidence, and the tendency to experience distress in the absence of stressors. These qualities can affect one's ability to perform successfully on the job and lead to lower job satisfaction. In general, more emotionally stable workers are likely to perform better on the job and experience greater job satisfaction. More satisfied employees are more likely to remain in a position and to avoid absences than are dissatisfied employees, leading to greater overall work adjustment.

Many researchers propose explanations as to why Emotional Stability leads to poor work outcomes. For example, individuals who experience more negativity in general will feel more negative about their jobs (Spector, 1997). Another theory is that emotionally unstable individuals perceive more situations as stressful and work to avoid those stressful situations; the result being that the avoidant behavior interferes with job performance (Magnus, et. al., 1993; Costa & McCrae, 1988). It is possible that individuals with low Emotional Stability actually self-select into situations that foster

negative affect (Emmons, Diener, & Larsen, 1985), actually choosing jobs at which they are likely to be unsuccessful and dissatisfied. It may simply be because low Emotional Stability is characterized by dissatisfaction in general and this dissatisfaction spills over into the realm of work (Clark & Watson, 1991). While many theories abound as to why Emotional Stability is a predictor of work outcomes, this remains an unanswered question and an area for future research possibilities.

Additionally, research has demonstrated that job stress is related to personality (Mikkelsen & Gundersen, 2003; Motowidlo, Packard, & Manning, 1986; Newman & Beehr, 1979) and can be predictive of job performance (Ryland & Greenfield, 1991; Motowidlo, Packard, & Manning, 1986; Hsieh, Huang, Su, 2004) and satisfaction (Brief & Atieh, 1987; Jackson & Schuler, 1985).

The research seems reasonably clear that the Big Five dimension of Emotional Stability is a predictor of various job outcomes including Job performance, Job satisfaction, and Career satisfaction. There is also support for Emotional Stability as a predictor of performance and satisfaction in jobs that require higher levels of stress tolerance.

Chapter 2

The Present Research

Emotional Stability as a Predictor

Current research demonstrates that the Five-Factor Model, Conscientiousness and Emotional Stability in particular, is a fruitful basis to examine dispositional sources of job performance, job satisfaction, and career satisfaction. While Conscientiousness has received a great deal of research attention, Emotional Stability has not. In view of results demonstrating that Emotional Stability has good predictive ability with regard to work and career success, this study will attempt to strengthen this link by examining the Emotional Stability-job performance relationship in particular, and by establishing that Emotional Stability adds incremental validity to the prediction of job performance. The current research will also attempt to more clearly establish a link between Emotional Stability and both job and career satisfaction. While research with regard to Emotional Stability is more plentiful in the area of satisfaction, the Emotional Stability-satisfaction relationship could be strengthened by further research.

Emotional Stability also holds promise with regard to particular job contexts. It seems logical that Emotional Stability might be a greater predictor in job contexts that have some emotional or strain-related element, such as jobs that require more resilience to stress. Since Emotional Stability has at its core one's ability to endure stressful situations, cope with strain, adjust to difficult circumstances, and perceive situations in a less negative light, it seems reasonable that an individual high in Emotional Stability would have greater resilience to job stress and would therefore have greater job performance in jobs that are considered more stressful. Likewise, an individual high in

Emotional Stability will have a more positive outlook, be less prone to anxiety or distress, and as such, should demonstrate greater job and career satisfaction in jobs that are considered more stressful. The current research seeks to examine the extent to which Emotional Stability is a predictor of job performance and satisfaction in jobs that are considered more stressful.

In light of the lack of research exploring the relationship between Emotional Stability and job outcomes, the present study examined the Big Five dimension of Emotional Stability and explored its relationship to Job performance, Job satisfaction, and Career satisfaction.

Hypotheses

The present study examined the relationship between Emotional Stability and Job performance, Job satisfaction, and Career satisfaction. Ten hypotheses were formulated regarding the potential relationships between Emotional Stability and job performance/satisfaction:

1. There is a positive correlation between Emotional Stability and job performance.
2. When the other Big Five dimensions are held constant, Emotional Stability will still be significantly, positively correlated with job performance.
3. Emotional Stability will be more highly related to job performance in occupations that require more resilience to stress.
4. There is a positive correlation between Emotional Stability and job satisfaction.

5. When the other Big Five dimensions are held constant, Emotional Stability will still be significantly, positively correlated with job satisfaction.
6. Emotional Stability will be more highly related to job satisfaction in occupations that require more resilience to stress.
7. There is a positive correlation between Emotional Stability and career satisfaction.
8. When the other Big Five dimensions are held constant, Emotional Stability will still be significantly, positively correlated with career satisfaction.
9. Emotional Stability will more highly related to career satisfaction in occupations that are more stressful.
10. Individuals in occupations that are more stressful will have higher mean scores on Emotional Stability than individuals in occupations that are less stressful.

Methods

The data for this study came from several archival sources maintained by Resource Associates, Inc.

Personality/Performance Samples

Participants. Data sources representing personality and job performance data were derived from several samples that were originally collected in the process of concurrent validation studies conducted in five organizational settings by an industrial-organizational employment testing firm: (1) 325 workers in a statewide (southeastern U.S. state) agricultural extension service; (2) 103 entry-level skilled manufacturing workers in a tire production plant, (3) 164 employees of Southeastern U.S. bank –

including tellers, financial service representatives, and loan officers, (4) 235 candidates for customer service representative positions for an international telecommunications company; and (5) 250 managerial candidates for a national fuel distribution and convenience store company. No other demographic data for these samples was available.

Personality Measures. In all five personality/performance samples, the personality scales were part of a work-based personality inventory developed Lounsbury and Gibson (2004) and used in a variety of studies (e.g., Lounsbury, Loveland, Sundstrom, Gibson, Drost, & Hamrick, 2003; Williamson, Pemberton, & Lounsbury, In Press; Lounsbury, Park, Sundstrom, Williamson, & Pemberton, 2004; Lounsbury, Gibson, & Hamrick, 2004; Lounsbury, Gibson, Steel, Sundstrom, & Loveland, 2004; Lounsbury, Gibson, Sundstrom, Wilburn, & Loveland, 2003; Lounsbury, Loveland, & Gibson, 2003). The Big Five constructs of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness were all measured in the agricultural extension, the fuel distribution, and the tire production samples. In the bank sample, the preliminary job analysis did not indicate that Openness was important for successful job performance and it was not included; all others were included. A brief description of each of the personality constructs examined in the proposed research is given below along with the number of items in the scale.

Conscientiousness—refers to a person's dependability, dutifulness, reliability, trustworthiness, and readiness to internalize company norms and values. (8 items).

Emotional Stability--overall level of adjustment and emotional resilience in the face of job stress and pressure. This can be conceptualized as the inverse of Neuroticism. (6 items).

Extraversion—tendency to be sociable, outgoing, gregarious, warmhearted, and talkative. (7 items).

Openness—receptivity and openness to change, innovation, new experience, and learning. (9 items).

Agreeableness— being amiable, participative, helpful, cooperative, and inclined to interact with others harmoniously, especially as part of a team at work. (7 items).

These scales demonstrate internal consistency. Cronbach's coefficient alpha (Nunnally & Berstein, 1994) coefficients for the five personality measures are .74 for Conscientiousness, .82 for Emotional Stability, .80 for Openness, .84 for Extraversion, and .83 for Agreeableness.

In the customer service representative sample, the complete 16 PF Fifth Edition inventory (Cattell & Cattell, 1995) was administered. The 16 PF measures the following traits:

Factor A Warmth (Reserved vs. Warm)

Factor B Reasoning (Concrete vs. Abstract)

Factor C Emotional Stability (Reactive vs. Emotionally Stable)

Factor E Dominance (Deferential vs. Dominant)

Factor F Liveliness (Serious vs. Lively)

Factor G Rule-Consciousness (Expedient vs. Rule-Conscious)

Factor H Social Boldness (Shy vs. Socially Bold)

Factor I Sensitivity (Utilitarian vs. Sensitive)

Factor L Vigilance (Trusting vs. Vigilant)

Factor M Abstractedness (Grounded vs. Abstracted)

Factor N Privatness (Forthright vs. Private)

Factor O Apprehension (Self-Assured vs. Apprehensive)

Factor Q1 Openness to Change (Traditional vs. Open to Change)

Factor Q2 Self-Reliance (Group-Oriented vs. Self-Reliant)

Factor Q3 Perfectionism (Tolerates Disorder vs. Perfectionistic)

Factor Q4 Tension (Relaxed vs. Tense)

The 16PF has demonstrated internal consistency of .76 and validity studies presented in the 16PF Fifth Edition Technical Manual provide considerable evidence of the construct validity of the primary and global scales (Cattell & Cattell, 1995).

Job Performance Measures. In each of the five samples, supervisor ratings of job performance served as the performance measure. In each of the five validation samples, overall job performance was assessed by forming a unit-weighted linear composite of individual performance ratings made by the immediate supervisor. The individual performance ratings were determined by job analysis and included such dimensions as productivity, quality, teamwork, and attendance. In all samples, each rating was made on an 8-point scale ranging from 1 "Performance does not meet, or rarely meets, minimum job standards" to 8 "Single best performance I have ever observed".

Personality/Satisfaction Sample

Participants. Data representing personality and career and job satisfaction was collected via the Internet, through eCareerFit.com, on 5932 individuals who were receiving career transition services from an international human resources company. Of the total sample, 59% were male; 41% were female. Frequencies by age group were: Under 30 – 9%; age 30-39 – 28%; age 40-49 – 37%; age 50 and over – 26%.

Personality Measures. The personality measure used in these data sources was the same measure used in the personality/performance data set that was developed by Lounsbury and Gibson (2004).

Satisfaction Measures. Following Judge, Cable, Boudreau, and Bretz (1995), overall career satisfaction in this sample was defined as a combination of satisfaction with present job and career as a whole. Scarpello and Campbell (1983) found that such broad measures of satisfaction can be more valid than more narrowly defined measures. Owing to limitations of the data archive, only two satisfaction items were available. These are presented in Figure 1.

Job satisfaction Item:

I am (was) fully satisfied with my current (or most recent) job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I am (was) not fully satisfied with my current (or most recent) job.
	1	2	3	4	5	

Career satisfaction Item:

I am fully satisfied with my career to date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I am not very satisfied with my career to date.
	1	2	3	4	5	

Figure 1. Satisfaction Items

For each of the above items, respondents were asked to choose one of the five boxes.

Job Stress Measurement

Job categories for the basis of stress measurement were derived from the Occupational Information Network (O*NET), an occupational database that was developed to replace the Dictionary of Occupational Titles (DOT). O*NET groups jobs into 23 job families based upon work performed, skills, education, training, and credentials. O*NET job families are: Architecture and Engineering; Arts, Design, Entertainment, Sports, and Media; Building and Grounds Cleaning and Maintenance; Business and Financial Operations; Community and Social Services; Computer and Mathematical; Construction and Extraction; Education, Training, and Library; Farming, Fishing, and Forestry; Food Preparation and Serving; Healthcare Practitioner; Healthcare Support; Installation, Maintenance, and Repair; Legal; Life, Physical, and Social Science; Management; Military; Office and Administrative Support; Personal Care and Service; Production; Protective Service; Sales and Related; and Transportation and Material Moving.

Each of the five samples representing the personality/performance data were placed into one of these O*NET categories by job analysis experts, based upon job category descriptions provided by O*NET. For these five data sets, the frequencies in each O*NET category were as follows: Business and Financial Operations – 164; Farming, Fishing, and Forestry – 325; Office and Administrative Support – 235; Management – 250; and Production – 103.

The sample representing personality/satisfaction data were also sorted by job analysis experts based on the O*NET categories. Those job categories in the data set that

had a sample size > 100 were retained. For this data set, the frequencies for each job category were as follows: Business and Financial Operations – 1148; Office and Administrative Support – 122; Sales and Related – 724; Architecture and Engineering – 379; Management – 800; Computer and Mathematical – 565; and Production – 342.

Following Rau (2004), job stress for the corresponding job categories was measured using three job analysis experts who rated each job category on physical, emotional, and mental stress on a nine-point scale, ranging from 9 – “Extremely High” to 1 – “Extremely Low.” Overall ratings for stress were also obtained using an average of the three ratings (physical, emotional, and mental). Raters were provided with descriptions of each job category taken from the O*NET database. Raters were trained and inter-rater reliability was assessed using average measure intraclass correlation coefficients (ICC’s). Intraclass correlations were used because they are particularly suited to the analysis of reliability and work well with small sample sizes (Shrout & Fleiss, 1979). The inter-rater ICC was .86 (95% CI: .74 - .93). Occupational stress measures were then computed by averaging ratings for each job category, resulting in a measure of emotional stress, physical stress, mental stress, and overall stress for each job category.

Results

SPSS (Statistical Package for the Social Sciences, 1996) was used to analyze all data. In order to examine the relationship between Emotional Stability and Job performance, analyses using Pearson's correlation coefficients were calculated for each of the five personality-performance samples. Tables 1 – 5 show the means, standard deviations, and intercorrelations among the variables for each sample.

Table 1

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Performance, Agriculture Sample

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
1. Agreeableness	3.88	0.64						
2. Performance	5.07	1.15	0.26					
3. Conscientiousness	3.42	0.67	0.60	0.18				
4. Emotional Stability	3.44	0.65	0.69	0.14	0.48			
5. Extraversion	3.78	0.69	0.63	0.25	0.46	0.59		
6. Openness	3.43	0.67	0.38	0.25	0.31	0.40	0.60	--

All correlations significant $p < .01$

Table 2

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Performance, Financial Sample

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)
1. Emotional Stability	3.64	0.71					
2. Performance	67.93	15.25	0.47				
3. Agreeableness	4.01	0.65	0.73	0.42			
4. Conscientiousness	3.81	0.72	0.60	0.29	0.64		
5. Extraversion	4.06	0.73	0.65	0.36	0.74	0.56	--

All correlations significant $p < .01$

Note: Performance in this data set was presented as a sum rather than an average

Table 3

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Performance, Production Sample

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
1. Agreeableness	3.64	0.45						
2. Performance	63.76	12.02	-0.06					
3. Conscientiousness	3.61	0.57	0.41**	0.17*				
4. Emotional Stability	3.44	0.60	0.50**	0.30**	0.51**			
5. Extraversion	3.50	0.58	0.38**	-0.07	0.12	0.32**		
6. Openness	3.43	0.50	0.44**	0.07	0.34**	0.52**	0.49**	--

* $p < .10$ ** $p < .01$

Note: Performance in this data set was presented as a sum rather than an average

Table 4

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Performance, Managerial Sample

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
1. Agreeableness	3.93	0.48						
2. Performance	3.59	0.91	0.19*					
3. Conscientiousness	4.07	0.53	0.51**	0.23*				
4. Emotional Stability	3.88	0.51	0.50**	0.34**	0.59**			
5. Extraversion	4.21	0.50	0.52**	0.21*	0.48**	0.55**		
6. Openness	4.05	0.49	0.37**	0.10	0.56**	0.48**	0.58**	--

* $p < .05$ ** $p < .01$

Table 5

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Performance, CS Sample

Var	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1.Perf	4.2	.99																
2. A	5.7	1.98	-.02															
3. B	5.7	1.76	.31**	-.06														
4. C	6.0	1.97	.23*	.19	-.02													
5. E	6.2	1.77	.15	-.04	.20*	.05												
6. F	6.4	2.12	-.02	.25*	-.04	.23*	.30**											
7. G	6.1	1.71	.19	-.07	.05	.12	.06	.03										
8. H	6.5	2.09	.02	.29**	-.05	.37**	.38**	.44**	.16									
9. I	5.2	1.64	.15	-.06	.10	.17	-.14	.17	.25*	.16								
10. L	6.1	1.74	-.08	-.08	.04	-.25*	.05	.05	.17	-.06	0							
11. M	4.3	1.76	.08	.05	.32**	.17	.24*	-.05	-.02	.01	-.15	-.14						
12. N	5.5	2.11	-.13	.12	-.24*	-.09	-.25	-.27**	.10	-.03	-.01	-.03	-.02					
13. O	5.8	2.16	.03	.11	-.11	.43**	.15	.28**	.19	.49**	.09	-.23*	-.03	-.07				
14.Q1	6.2	1.82	.13	.07	.02	.09	.12	-.16	.25*	.12	.14	.06	.07	.10	-.02			
15.Q2	5.5	1.97	.19	-.19	.27**	-.11	.30**	-.21*	.04	-.18	-.18	.08	.40**	.12	-.13	.01		
16.Q3	6.5	1.90	-.03	.14	-.063	.34**	.09	.05	.35**	.35**	.13	-.07	.04	.07	.29**	.14	.01	
17.Q4	4.9	1.90	-.03	-.32**	.12	-.48**	-.11	-.28**	-.21*	-.48**	-.17	.30**	-.07	-.06	-.55**	-.20*	.24*	-.45**

* $p < .05$ ** $p < .01$

In all five samples, Emotional Stability demonstrated a significant, positive correlation with job performance, $r = .14 - .48$ ($p < .01 - .05$), supporting hypothesis 1. Further, the Big Five traits demonstrated a fair amount of multi-collinearity, with intercorrelations ranging in magnitude from .26 to .74 ($p < .01 - .05$).

Of particular interest for the present study are the unique relationships between Emotional Stability and the other four Big Five traits. In order to estimate the unique relationship between Emotional Stability and job performance, a part correlation between Emotional Stability job performance was performed, controlling for Agreeableness, Extraversion, Conscientiousness, and Openness in the first four samples (agriculture, financial, production, and managerial) and controlling for all 16 PF dimensions except dimension PFC in the customer service sample. Tables 6 – 10 show the means, standard deviations, and part correlation coefficients for each of the five samples.

Table 6

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Performance, Agricultural Sample

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	3.43	0.66	---	-.10
2. Performance	5.07	1.15		

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

Table 7

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Performance, Financial Sample

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	3.63	0.72	---	.27
2. Job Performance	67.99	15.49		

$p < .01$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

Table 8

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Performance, Production Sample

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	3.46	0.59	---	.33
2. Performance	63.76	12.02		

$p < .01$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

Table 9

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Performance, Managerial Sample

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	3.86	0.50	---	.22
2. Performance	3.48	0.86		

$p < .01$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

Table 10

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Performance, Customer Service Sample

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	6.03	1.93	---	.26
2. Performance	4.17	0.94		

$p < .05$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

All samples, except the agricultural sample, demonstrated positive significant correlations between Emotional Stability and Performance, even when all four of the other Big Five personality variables were controlled for ($r = .23 - .34, p < .01 - .05$). In the agricultural sample, no significant relationship was found. Thus, overall, hypothesis 2 was supported in four out of the five samples.

In order to assess whether Emotional Stability is more highly related to job performance in occupations that require more resilience to stress, each sample was placed into an O*NET job category by a job analysis expert. Owing to the small sample size, a Spearman's rank-order correlation was then computed between the stress scores for each occupation and the correlation between Emotional Stability-job performance. Table 11 presents the correlations between the variables.

Table 11

Correlations between Stress Scores and the Emotional Stability/Job Performance Correlation

Variable	(1)	(2)	(3)	(4)	(5)
1. Overall Stress					
2. Emotional Stress	0.10				
3. Physical Stress	0.27	-0.78			
4. Mental Stress	0.10	0.87**	-0.87**		
5. Emotional Stability/Job performance	-0.05	0.66	-0.82*	0.6	--

* $p < .10$ ** $p < .05$

There was a significant, negative relationship between physical job stress level and the Emotional Stability/job performance relationship ($r = -.82, p < .10$), however no other significant relationships were found between the Emotional Stability/job performance relationship and stress levels: therefore, hypothesis 3 was not supported.

In order to examine the relationship between Emotional Stability and job satisfaction, a zero-order Pearson correlation coefficient was computed between the Big Five personality variables and job satisfaction. Table 12 shows the means, standard deviations, and intercorrelations among variables. A significant, positive correlation was found between Emotional Stability and job satisfaction ($r = .29, p < .01$), supporting hypothesis 4.

Table 12

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Job Satisfaction

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
1. Conscientiousness	3.24	0.70						
2. Emotional Stability	3.46	0.71	0.19*					
3. Extraversion	3.83	0.76	0.06*	0.35*				
4. Job satisfaction	3.47	1.31	0.12*	0.28*	0.14*			
5. Openness	3.86	0.65	-0.12*	0.25*	0.38*	0.05*		
6. Agreeableness	3.56	0.78	0.00	0.21*	0.41*	0.09*	0.31*	--

* $p < .01$

Table 13

Means, Standard Deviations, and Part Correlations, Emotional Stability and Job Satisfaction

Variable	Mean	S.D.	(1)	(2)
1. Emotional Stability	3.46	0.71	----	.24
2. Job satisfaction	3.47	1.31		

$p < .01$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

In order to estimate the unique relationship, or validity coefficient, between Emotional Stability and job satisfaction, a part correlation between Emotional Stability and job satisfaction was performed, controlling for Agreeableness, Extraversion, Conscientiousness, and Openness. Table 13 shows the means, standard deviations, and part correlation coefficients. When all other Big Five dimensions were held constant, Emotional Stability still demonstrated a significant, positive relationship with job satisfaction ($r = .24, p < .01$), supporting hypothesis 5.

In order to assess whether Emotional Stability is more highly related to job satisfaction in occupations that require more resilience to stress, each sample was placed into an O*NET job category by a job analysis expert. Due to the small sample size, a Spearman's rank-order correlation was then computed between the stress scores for each occupation and the correlation between Emotional Stability-job satisfaction. Table 14 presents the correlations between stress scores (overall, emotional, physical, and mental) and the Emotional Stability/Job Satisfaction correlation.

Table 14
Correlations between Stress Scores and the Emotional Stability/Job Satisfaction Correlation

Variable	(1)	(2)	(3)	(4)	(5)
1. Overall Stress					
2. Emotional Stress	0.52				
3. Physical Stress	0.21	-0.48			
4. Mental Stress	0.77*	0.50	-0.21		
5. Emotional Stability/Job satisfaction	0.16	0.39	-0.48	0.38	--

* $p < .05$ $N = 7$

No significant relationships were found between the Emotional Stability/job satisfaction relationship and stress scores, therefore, hypothesis 6 was not supported.

In order to examine the relationship between Emotional Stability and career satisfaction, a zero-order Pearson correlation coefficient was computed between the Big Five personality variables and career satisfaction. Table 15 shows the means, standard deviations, and intercorrelations among variables. A significant, positive correlation was found between Emotional Stability and career satisfaction ($r = .38, p < .01$), supporting hypothesis 7.

In order to estimate the unique relationship, or validity coefficient, between Emotional Stability and career satisfaction, a part correlation between Emotional Stability and career satisfaction was performed, controlling for Agreeableness, Extraversion, Conscientiousness, and Openness. Table 16 show the means, standard deviations, and part correlation coefficients.

Table 15

Means, Standard Deviations, and Intercorrelations among Variables, Emotional Stability and Career Satisfaction

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
1. Career satisfaction	3.64	1.12						
2. Conscientiousness	3.24	0.70	0.11*					
3. Emotional Stability	3.46	0.71	0.37*	0.19*				
4. Extraversion	3.83	0.76	0.22*	0.06*	0.35*			
5. Openness	3.86	0.65	0.14*	-0.12*	0.25*	0.38*		
6. Agreeableness	3.561	0.78	0.17*	0.00*	0.21*	0.41*	0.31*	--

* $p < .01$

Table 16

Means, Standard Deviations, and Part Correlations, Emotional Stability and Career Satisfaction

Variable	Mean	S.D.	(1)	(2)
1. Career satisfaction	3.64	1.12	---	.30
2. Emotional Stability	3.46	0.71		

$p < .01$

Note: For the part correlation, the correlation between job performance and Emotional Stability controlled for Agreeableness, Conscientiousness, Extraversion, and Openness.

When all other Big Five dimensions were held constant, Emotional Stability still demonstrated a significant, positive relationship with career satisfaction ($r = .30, p < .01$), supporting hypothesis 8.

In order to assess whether Emotional Stability is more highly related to career satisfaction in occupations that require more resilience to stress, each sample was placed into an O*NET job category by a job analysis expert. Due to the small sample size, a Spearman's rank-order correlation was then computed between the stress scores for each occupation and the correlation between Emotional Stability-career satisfaction. Table 17 presents the correlations between stress scores (overall, emotional, physical, and mental) and the Emotional Stability/Career Satisfaction correlation. No significant relationships were found between the Emotional Stability/Career satisfaction relationship and stress scores, therefore, hypothesis 9 was not supported.

Table 17

Correlations between Stress Scores and the Emotional Stability/Career Satisfaction Correlation

Variable	(1)	(2)	(3)	(4)	(5)
1. Overall Stress					
2. Emotional Stress	0.52				
3. Physical Stress	0.21	-0.48			
4. Mental Stress	0.77*	0.50	-0.21		
5. Emotional Stability/Career satisfaction	-0.00	-0.26	-0.01	0.23	--

To assess whether individuals in occupations that are more stressful will have higher mean scores on Emotional Stability than individuals in occupations that are less stressful, occupations were grouped into High (6.1 – 9), Medium (3.1 – 6) and Low (.1 – 3) average stress categories based on their stress scores. Then, the average Emotional Stability scores in these three groups were compared. For overall stress scores, only two categories emerged: Medium ($M = 3.45$, $SD = .71$) and High ($M = 3.55$, $SD = .72$); no occupations fell into the Low category. The difference between the two groups on overall stress scores was tested using an independent groups t test, and was shown to be significant, ($t = -4.09$, $p = .001$) Similarly, only two categories emerged for mental stress scores: Medium ($M = 3.43$, $SD = .65$) and High ($M = 3.49$, $SD = .73$); no occupations fell into the Low Category. The difference between the two groups on mental stress scores was tested using an independent groups t test, and was shown to be significant, ($t = -2.32$, $p = .02$). For emotional stress scores, all three categories were used: Low ($M = 3.44$, $SD = .64$), Medium ($M = 3.45$, $SD = .73$), and High ($M = 3.61$, $SD = .68$). A one way between-subjects (emotional stress(low vs. medium vs. high)) ANOVA on Emotional Stability scores was significant, $F(2,4790) = 20.82$, $p < .001$. For physical stress scores, all three categories were also used: Low ($M = 3.45$, $SD = .74$), Medium ($M = 3.52$, $SD = .71$), and High ($M = 3.42$, $SD = .68$). A one way between-subjects (physical stress(low vs. medium vs. high)) ANOVA on Emotional Stability scores was significant, $F(2,4790) = 9.25$, $p < .001$. Hypothesis 10 was supported.

Summary

The Big Five personality dimensions of Agreeableness, Openness, Extraversion, Conscientiousness, and Emotional Stability were positively, significantly correlated with job performance, job satisfaction, and career satisfaction. Additionally, when the Big Five dimensions of Agreeableness, Openness, Extraversion, and Conscientiousness were controlled for, Emotional Stability contributed uniquely, displaying a positive, significant correlation with job performance, job satisfaction, and career satisfaction.

With regard to occupational stress, job stress did not appear to have any significant effect on the relationships between Emotional Stability and job performance, job satisfaction, or career satisfaction. However, job stress did contribute unique information with regard to mean scores on Emotional Stability. The data demonstrated that individuals in higher stress jobs had significantly higher mean scores on Emotional Stability than individuals in lower stress jobs.

Chapter 3

Discussion and Conclusions

Personality and Job Performance, Job Satisfaction, and Career Satisfaction

The Big Five

The data supported prior research by demonstrating that all dimensions of the Big Five predict job performance, to some degree. Although Conscientiousness generally emerges as the strongest predictor, Emotional Stability actually demonstrated the highest, significant correlations: in the agricultural sample ($r = .14, p < .01$), financial sample ($r = .47, p < .01$), production sample ($r = .30, p < .01$), managerial sample ($r = .35, p < .01$), and customer service sample ($r = .23, p < .05$). Conscientiousness was the second most consistent predictor, yielding significant correlations in four of the five samples ($r = .19, .30, .17, \text{ and } .24$); no significant results were found for the customer service sample. Extraversion and Agreeableness demonstrated significant correlations with job performance in three of the samples; no significant results were found in the production sample or the customer service sample. Finally, Openness demonstrated a significant correlation with job performance only in the agriculture sample ($r = .25$). Thus, it appears that the Big Five personality dimensions are predictors of job performance. In particular, Emotional Stability is a consistently valid predictor of job performance.

The data are also clear that the Big Five dimensions of personality are predictive of job satisfaction. All Big Five dimensions were positively, significantly correlated with job satisfaction. Again, Emotional Stability yielded the highest correlation with job satisfaction ($r = .29, p < .01$). Extraversion ($r = .14, p < .01$) and Conscientiousness ($r = .13, p < .01$) also demonstrated significant correlations with job satisfaction, although they

were not as high as Emotional Stability. Agreeableness ($r = .09, p < .01$) and Openness ($r = .06, p < .01$) yielded statistically significant, although low, correlations with job satisfaction. These findings are consistent with prior research that has shown Emotional Stability to be the Big Five dimension that most consistently predicts job performance, has demonstrated mixed results with regard to the predictive capabilities of Extraversion and Conscientiousness, and has found limited or no results with regard to Openness and Agreeableness (Judge, Heller, & Mount, 2002; Day & Bedian, 1995).

Consistent with these findings, the data also demonstrated that the Big Five dimensions of personality can be useful in predicting satisfaction with one's career. As with job performance and job satisfaction, Emotional Stability demonstrated the highest correlation coefficient with career satisfaction of the Big Five dimensions ($r = .38, p < .01$). Extraversion demonstrated a slightly lower correlation with career satisfaction ($r = .23, p < .01$), followed by Agreeableness ($r = .18, p < .01$), Openness ($r = .14, p < .01$), and Conscientiousness ($r = .11, p < .01$). Again, these results are consistent with previous research findings that have found Emotional Stability to yield higher correlations with career satisfaction than the other Big Five dimensions (Seibert & Kramer, 2001; Boudreau, et. al., 2001).

Emotional Stability

Emotional Stability emerged as the most consistent predictor of job performance, job satisfaction, and career satisfaction, yielding higher correlations than the other Big Five dimensions and demonstrating more significant correlations with the criterion variables than the other Big Five dimensions. Additionally, when the other Big Five dimensions are held constant, Emotional Stability is still correlated with job performance,

job satisfaction, and career satisfaction, contributing unique information to the prediction of these work outcomes.

The part correlations that demonstrated that Emotional Stability was a significant predictor of job outcomes even when the other Big Five were controlled for was a particularly noteworthy result, because no other study could be located that demonstrated similar results. In the literature, the Big Five are highly intercorrelated. Further, the correlations found were not low, but were between .22 and .33 ($p < .01$). In four of the five personality/job performance samples, Emotional Stability yielded significant results: in the financial sample ($r = .27, p < .01$), production sample ($r = .33, p < .01$), managerial sample ($r = .22, p < .01$), and the customer service sample ($r = .26, p < .01$). Similar results were found in the personality/satisfaction sample, with Emotional Stability demonstrating a correlation of .24 ($p < .01$) with job satisfaction and a correlation of .30 ($p < .01$) with career satisfaction. This means that Emotional Stability does contribute unique information, above and beyond the other Big Five dimensions, to the prediction of job performance, job satisfaction, and career satisfaction.

There are many potential explanations for why Emotional Stability may be predictive of job outcomes. Emotional Stability appears to be a stable individual difference that determines the way in which individuals react to life and work situations, so one can expect it to influence job outcomes.

The extant research seems to indicate that Emotional Stability provides one's outlook on the world, the base from which one approaches his/her environment. An individual with low Emotional Stability approaches the world with fear, anxiety, and pessimism. This applies to the world of work as well. An emotionally unstable worker is

going to have less success at work because 1) he/she tends to view situations more negatively and will likely have a more negative view of work, 2) he/she tends to be fearful or anxious and this can cause avoidance of work situations, or 3) he/she is simply debilitated by the anxiety and distress and can't function effectively. Disruptive emotions tend to interfere with adaptation to the workplace, and, because of this, individuals with low Emotional Stability do not cope as well as others do with work situations. There are several ways that low Emotional Stability appears to affect work outcomes.

First, individuals with low Emotional Stability may be less successful and may experience less satisfaction because they tend to have more negative perceptions, skewing their view of the workplace. It has been said that personality dimensions reflecting Neuroticism tend to predict more negative perceptions of occupational stressors and strain or distress and even appear to inflate the relation between stress and strain on the job (Tokar, et. al., 1998). Individuals high in Neuroticism are more likely to evaluate their jobs more negatively as a result of a tendency toward negative affective reactions (Seibert & Kraimer, 2001). Emotional Stability, Neuroticism, and negative affectivity have been linked in research to higher recall of negative job-related information (Necowitz & Roznowski, 1994), excessive focus on work failures (Watson & Slack, 1993), and behavior that estranges one from co-workers (Brief, Butcher, & Roberson, 1995). Likewise, in their 1993 research, Decker and Borgen assert that Emotional Stability may influence self-reports of occupational stressors and subsequent perceptions of stress or dissatisfaction. It seems clear that low Emotional Stability, or Neuroticism, could influence an individual's perception of the workplace.

Heady and Wearing (1989) found that individuals low in Emotional Stability experienced more adverse events. Similarly, Ormel and Wohlfarth (1991) found that individuals higher in Neuroticism experienced more distress. Brief and Atieh (1987) state that, “if an individual reports the existence of unfavorable job conditions and also that he or she is distressed, it is possible that both of these responses may be indicative of this underlying personality disposition” (p.122). It is interesting to note that neurotic individuals have the tendency to report more negative life events, but not fewer positive life events. So, it does not seem that neurotics are seeking-out negative events, but rather, that neurotics seemed to react to a wider variety of events in a negative way. Further, the negative emotions of neurotics lead them to create more negative events for themselves (Magnus, et. al., 1993).

This relationship between Neuroticism and negative job outcomes is likely may be due to the negative cognitive processes associated with high Neuroticism (Judge, Higgins, Thoresen, & Barrick, 1999). These individuals are likely to remember the negative events at work, focus on negative events, and view benign events as negative. This may affect the person’s ability to succeed and to be satisfied. The more negatively he/she views the workplace, the more it will interfere with performance and the less satisfied he/she is likely to be.

A second explanation for the link between Emotional Stability and work outcomes is that individuals who have low Emotional Stability experience less success and satisfaction at work because they tend to avoid work situations more than more stable individuals (George, 1989). Individuals low in Emotional Stability may 1) avoid certain work tasks that they perceive as stressful or anxiety producing, 2) exert less effort, and 3)

be more likely to withdraw when work situations become stressful or anxiety producing. Such individuals may have a higher tendency to expect failure or difficulty creating less confidence, and resulting in greater likelihood of withdrawal from tasks necessary for job success (Kammeyer-Mueller & Wanberg, 2003). A neurotic individual may seek to avoid certain situations because the situations cause anxiety, and the avoidance may cause negative events. For example, the neurotic individual avoids situations at work that cause anxiety or stress, the result is that he/she performs poorly at work. (Magnus, et. al., 1993).

Piedmont (1995) indicated that Emotional Stability underlies all types of performance inhibition, stating that, "Indeed, inhibition of one's performance in any achievement setting may be a function of one's level of Neuroticism" (p. 143). Persons lower in Emotional Stability are more anxious, depressive, and fearful, and may self-select into situations that foster failure, may withdraw from activities at work that bring about anxiety, and may perform poorly because of this withdrawal or avoidance.

Based on Bandura's theories (1997) it can be noted that, "people avoid activities and environments they believe exceed their capabilities...." (p.160). Individuals with higher levels of Neuroticism are going to be less likely to believe in their ability to succeed and will thus avoid tasks that they believe will lead to failure, anxiety, or stress. Neuroticism has been shown to correlate (negatively) with beliefs about the importance of working hard, risking, and persisting when faced with obstacles (Holland, et. al., 1993). Thus, individuals with lower Emotional Stability may be more likely to demonstrate voluntary absenteeism, tardiness, voluntary turnover, and retirement; all acts that can be seen as attempts to put physical and psychological distance between themselves and the work environment.

This avoidance also affects job satisfaction. Neurotic individuals, due to their fear of failure and desire to avoid stressful situations, may select into jobs that are less satisfying. In their 1995 study, Spector, Jex, and Chen demonstrated that individuals high in anxiety and pessimism (low in Emotional Stability) tended to be in jobs characterized by low autonomy, variety, identity, significance, and complexity. Neuroticism seems related to a person's choice of routine, less complex, and less independent work. In other research, Holland, Johnston, Asama, and Polys (1993) found that Neuroticism correlated negatively with beliefs about the importance of risk taking, working hard, and persisting in the face of obstacles. Neuroticism also correlated negatively with beliefs about the importance of achievement and Openness.

A third reason that may explain the link between Emotional Stability and job outcomes is that individuals low in Emotional Stability may simply be debilitated by their distress and anxiety to the point that they are not effective on the job. They cannot handle the normal stress and strain of the workplace. Neuroticism can be conceptualized as emotional distress. This distress may be so intense that it interferes with one's ability to perform well. Low Emotional Stability has been shown to correlate with emotion-focused coping and indexes of psychological distress. As such, Emotional Stability is an important part of the process that enables individuals to understand and react to their work environment (Judge & Bono, 2001). Individuals low on Emotional Stability (or high on Neuroticism) have been described as rigid, unadaptable, timid, insecure, submissive, indecisive, and lethargic (Judge & Cable, 1997). This indicates an overall tendency to experience maladaptive emotions. Individuals low in Emotional Stability are likely to experience emotions that may be disruptive, thereby further impairing their

ability to succeed. When faced with stressful situations or pressure, individuals who are not emotionally stable may not be able to function effectively on the job.

In summary, low Emotional Stability may cause individuals withdraw from successful work behaviors because of fear, perceive the workplace more negatively, and are less tolerant of stress or pressure. Additionally, emotionally stable individuals tend to be more confident and positive, which appears to contribute to behaviors that lead to successful job performance and greater job satisfaction.

Job Stress

Individuals in job categories that were deemed “high stress” jobs demonstrated higher mean scores in Emotional Stability than individuals in job categories that were deemed “low stress” jobs. However, a statistically significant relationship was not found between job stress and the correlations between Emotional Stability and job performance, job satisfaction, and career satisfaction. However, several limitations to the study existed, including the small sample size, the fact that the job categories represented were all fairly “average” in stress level, and the fact that the data were archival and a proper stress measure could not be included in the data measurement; these limitations will be discussed in more detail below. While it is not clear whether job stress affects the relationship between performance and satisfaction, it is clear that individuals in higher stress jobs tend to have higher levels of Emotional Stability.

It is possible that individuals who remain in high stress jobs require a higher level of Emotional Stability to succeed. Individuals lower in Emotional Stability may self-select into lower stress jobs or may not succeed and remain in higher stress jobs. It is possible that individuals low in Emotional Stability cannot adequately tolerate stress and

adjust as the job requires. If this is the case, then work stress might be more debilitating to these individuals than it is to others (Hollenbeck, et. al., 2002). Further, this experience of disruptive emotion or excessive feelings of stress may lead emotionally unstable individuals to choose lower stress occupations. Conversely, individuals who are higher in Emotional Stability are likely to feel more assured, relaxed, and confident at work, resulting in behaviors that contribute to selecting and remaining in high stress occupations. Traits associated with Emotional Stability have been positively correlated with managerial advancement, occupation level, executive pay, and job success (Howard & Bray, 1988; Goldberg, 1990; Ghiselli, 1963, 1969; Siegel & Ghiselli, 1971; Harrell, 1969; Harrell & Alpert, 1989).

Limitations of Current Research

There were several limitations to the current research that may have affected results and could be improved in future research efforts. First, job satisfaction and career satisfaction were each measured with only one item. Results could be more meaningful if they could be replicated with a larger satisfaction scale.

There were also several limitations that may have affected the occupational stress results. First, the archival data sets only presented a small number of job categories, yielding a small sample size for the data analysis. Although the Spearman Rank Order Correlations did not yield significant results, the magnitudes were large enough in some cases to yield more significant results if larger samples sizes had been available.

Also, since archival data were used, there was limited information available about the particular jobs included in the data sets. In placing the jobs into meaningful job categories, job analysis experts had only a limited job title to inform them about the job.

No additional information was available. So, it is possible that jobs were not grouped into categories in such a way that optimizes the opportunity to evaluate hypotheses 3, 6, and 9. Further, the O*NET job categories were very broad. These were used in order to arrive at a consistent and established standard, however, each category encompassed so many different jobs that could represent varying stress levels if they were organized differently. For example, the Business and Financial category included human resources, bank tellers, accountants, and financial managers – all very different jobs with regard to stress levels. These results would be more meaningful if they could be replicated using a data set that provides clear job information. If occupational descriptors and stress ratings could be collected at the same time that the other data are collected, one could be assured of more meaningful and accurate job stress ratings and categories.

Additionally, all of the job categories included in the available data sets were “average” with regard to job stress. Mean overall stress scores only ranged from 4.89 to 6.44 on a 9-point scale. This range restriction likely affected results. The results would be more meaningful if data were collected from occupations representing very low stress as well as very high stress in order to gather more useful and varied data.

Implications for Future Research

Conscientiousness has often been suggested as the primary personality predictor of job outcomes (1998). While Emotional Stability has been included in many Big Five studies and meta-analyses, it has not often been investigated as an independent contributor and has not been a direct target of meta-analytic research. However, the evidence suggests that Emotional Stability has great merit as a predictor of the Emotional Stability-Job Performance-Satisfaction relationship (Judge & Bono, 2001; Judge, Erez,

Bono, & Thoresen, 2003; Bono & Judge, 2003). Judge and Bono (2001) suggest that Emotional Stability is one of the best dispositional predictors of both job satisfaction and job performance. The current research findings lend further support to this proposition, indicating that Emotional Stability contributes unique information above and beyond the other Big Five to the prediction of job performance and satisfaction, and justify its inclusion as one of the Big Five predictors of work outcomes.

It is a unique proposition that Emotional Stability be examined as a factor in the job performance-job satisfaction relationship. Few researchers have examined the direct relationship between job performance and job satisfaction. Those that do find that job satisfaction and job performance are weakly related (Muchinsky & Iaffaldano, 1985; Argyle, 1989). The current research demonstrates that they are both related to Emotional Stability. On the basis of the current research, an integrative conceptual model could be proposed that seeks to explain why Emotional Stability may be a potent variable offering predictive information about the job performance-job satisfaction relationship.

One such model is that Emotional Stability leads to negative work behaviors. These negative work behaviors result in poor work performance that, in turn, lessen the rewards associated with good job performance. This leads to diminished satisfaction with the job. Figure 2 illustrates this model.

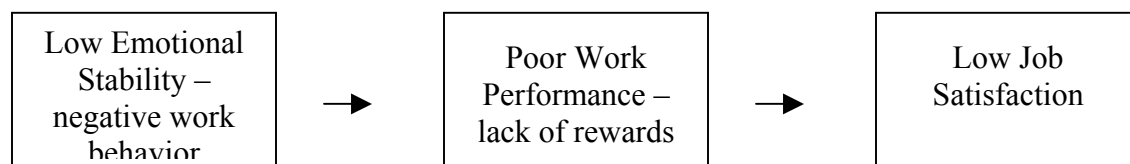


Figure 2. Emotional Stability – Performance – Satisfaction Model

An emotionally unstable employee will have more work difficulties because 1) he/she is likely to have a more negative view of work, 2) he/she is more likely to be depressive or anxious, and because 3) he/she may be unable to function appropriately due to disruptive emotions and reactions. Disruptive emotions tend to interfere with adaptation to the workplace, and, because of this, individuals with low Emotional Stability do not cope as well as others do with work situations. Because of this, a worker who is less emotionally stable is more prone to behaviors that lead to lower job performance. For example, such an individual is more likely to choose work situations in which they experience negative outcomes (Diener, Larsen, & Emmons, 1984; Magnus, Diener, Fujita, & Pavot, 1993); is less likely to respond positively in work situations (Larsen & Ketelaar, 1991); is going to be more reactive in stressful situations (Judge, Locke, Durham, and Kluger, 1998); are even more likely to cause negative events to happen to themselves at work (Magnus, Diener, Fujita, & Pavot, 1993); and are more likely to demonstrate withdrawal, absenteeism, or turnover as a faulty coping mechanism. It is possible that these behaviors lead to poor performance, which then leads to lessened work rewards that results in less satisfaction with the job.

An alternative model suggests that low Emotional Stability causes the employee to perceive work situations more negatively, to experience distress more often, and to have greater negative affect in general on the job. This negative outlook causes the individual to feel less job satisfaction. Lessened job satisfaction inhibits the individuals desire to perform well on the job, leading to diminished work performance. Figure 3 illustrates this model.

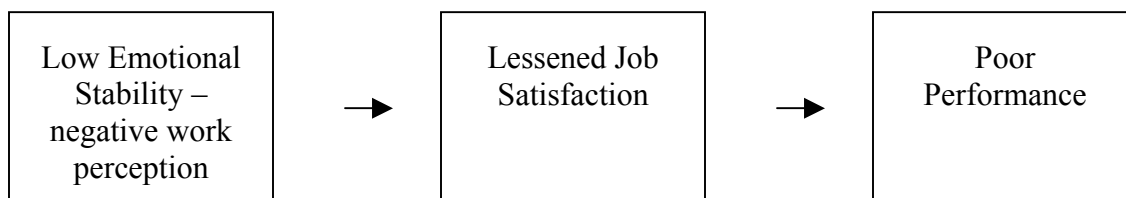


Figure 3. Emotional Stability – Satisfaction – Performance Model

It may be that emotionally unstable workers are more likely to evaluate their jobs more negatively (Seibert & Kraimer, 2001); are more likely to recall negative job-related information (Necowitz & Roznowski, 1994); are more likely to focus on work failures (Watson & Slack, 1993); and may report more occupational stressors and perceptions of stress or dissatisfaction (Decker & Borgen, 1993). This negative view of the job and workplace, along with diminished satisfaction with the job leads to poor performance behaviors such as withdrawal, absenteeism, and turnover (Bellani, et. al., 1996; Magnus, et. al., 1993).

A final model suggests that Emotional Stability contributes equally to job performance and job satisfaction. Low Emotional Stability leads to both diminished job performance and diminished job satisfaction. Figure 4 illustrates this model.

In this model, the perceptions and behaviors associated with low Emotional Stability contribute equally and/or simultaneously to both poor work performance and low job satisfaction.

The idea of a conceptual model of how Emotional Stability affects the job performance - satisfaction relationship should be examined in greater depth because it has many practical implications for the workplace.

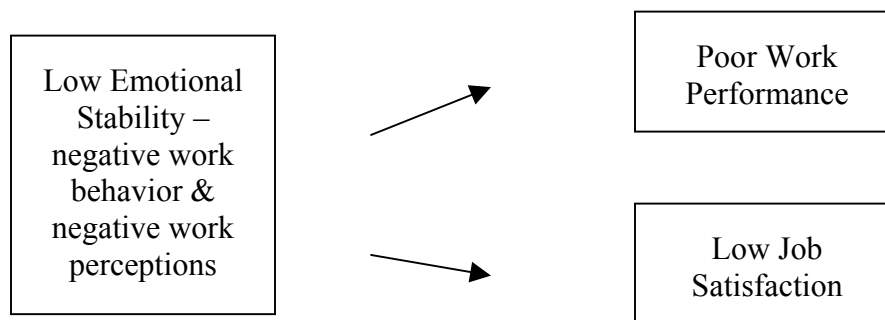


Figure 4. Emotional Stability – Performance/Satisfaction Model

With Emotional Stability contributing to the performance and satisfaction of a worker, such a relationship could have implications with regard to employee selection, counseling and career planning programs, employee wellness, and Employee Assistance Programs (EAP).

This relationship carries implications for the hiring process. Job analysis techniques can be used to identify the potential strain elements of the job. Emotional Stability can be measured in prospective employees by simple paper and pencil tests. By knowing the stressors and emotional demands of the job and matching the potential employee's level of Emotional Stability to those demands, there is greater potential for an adequate person-job fit. This has positive implications for both the organization and the employee (Hogan, Hogan, & Roberts, 1996).

Similarly, once individuals are in a job, measures of Emotional Stability can be assessed and matched to the level needed for that job or other jobs the employee may be interested in. Most organizations participate in some type of career planning for employees. Knowing that lower Emotional Stability can lead to diminished performance and lessened satisfaction, career counselors or planners could use personality measures

that are typically included in a career planning battery to assess the level of Emotional Stability that an individual possesses and use that information to determine suitability with the current job and future job directions that would be appropriate for the individual. Individuals could be matched with jobs that are more suited to their particular levels of Emotional Stability, and this could lead to greater worker satisfaction as well as increased productivity.

Additionally, many companies today are focusing heavily on employee wellness programs, particularly with the rise in health care costs. The American Institute of Stress estimates that illnesses related to stress, anxiety, and coping skills cost \$150 billion per year in terms of lost productivity and health costs for organizations (Minter, 1991). Mental health care costs are a real expense for organizations. If Emotional Stability can be linked to job satisfaction and performance, employees who have lower levels of Emotional Stability may be among those employees who experience more emotional and mental distress on the job and are using more of the organization's mental health resources. Programs to assist employees with reduced coping skills or who are emotionally unstable could have implications with regard to organizational wellness programs. This could be useful in developing primary interventions (identifying and reducing organizational-level elements that are debilitating to the less emotionally stable employee such as unnecessary work hassles, difficult communications, role ambiguity, poor leader relationships, etc.), secondary interventions (equipping the individuals to better cope through techniques like relaxation training, meditation, biofeedback, cognitive restructuring, and exercise), and tertiary interventions (directly assisting individuals who have illnesses related to poor coping, limited stress resistance, or

increased anxiety or depression as a result of low Emotional Stability through Employee Assistance Programs and wellness programs). Maintaining the health and well-being of employees is critical to productivity and employee satisfaction. Given the costs associated with this problem, both in terms of financial and human capital, employers must be pro-active in dealing with these issues.

Finally, Employee Assistance Programs could be of particular benefit to emotionally unstable employees who are experiencing more anxiety, more depression, or more stress, and as a result are less satisfied in their jobs and are performing more poorly than their more emotionally stable co-workers. EAP programs could examine the Emotional Stability-Work relationship and provide testing, counseling, and assistance to affected employees.

The results with regard to the contribution of job stress to the relationship between Emotional Stability and performance and satisfaction were inconclusive. These hypotheses should be retested using original data that provide accurate and meaningful measures of job categories and job stress.

Conclusions

Emotional Stability is a generally consistent predictor of job performance, job satisfaction, and career satisfaction across multiple job sites and organizations. It is also suggested that individuals in higher stress jobs tend to have higher mean scores in Emotional Stability. There appear to be three mechanisms by which Emotional Stability might related to these job outcomes: 1) Emotional Stability may affect selection and placement into certain jobs or tasks, 2) Emotional Stability might affect behavior that in turn affects the work environment, and 3) Emotional Stability might affect perceptions of

the work environment that then affect behavior. In the first two models, Emotional Stability may actually determines, to some extent, the job settings and situations on the job into which individuals are selected, either by employers or by themselves. Individuals lower in Emotional Stability may not be chosen by employers to do certain jobs or to do certain tasks within a job, due to their tendencies to be overly anxious, moody, depressive, or less resilient to stress. Likewise, individuals low in Emotional Stability may exhibit certain behaviors like avoiding certain situations due to fear of failure, avoidance of stress inducing situations, or behaving in a negative, moody, or emotional manner. Having a reduced ability to perform in certain jobs or to perform certain tasks in a particular job leads to lower levels of job performance. An individual who avoids difficult projects, is not selected for challenging tasks, or reacts negatively to stress is not likely to be rated as a high performer. Further, an individual who does not receive the rewards of performance, does not receive opportunities, and who spends time and energy avoiding or fearing situations at work is not likely to report a high level of job or career satisfaction. Additionally, individuals lower in Emotional Stability self select out of, or be selected by employers out of, high stress jobs. The third mechanism hypothesizes that Emotional Stability colors the way in which the individual perceives his/her job and this, in turn, affects behavior on the job. An individual who is low in Emotional Stability may be more likely to perceive neutral situations as negative, may experience more stress than an emotionally stable individual, and may experience more distress in neutral/non-threatening situations. This negative perception of the job may affect behavior and may lead to diminished work performance. Likewise, an individual who is more prone to perceive work as negative is more likely to experience less satisfaction with that job.

Further, individuals lower in Emotional Stability are more likely to perceive stressful jobs as negative, and gravitate to lower stress occupations. The data suggest future research should explore these potential models that explain the link between Emotional Stability-performance and Emotional Stability-satisfaction and explore the contribution of job stress to these relationships.

In summary, the present study has contributed new information concerning the construct of Emotional Stability in employment research. This study found Emotional Stability to be the most consistent predictor of job performance, job satisfaction, and career satisfaction of the Big Five dimensions, yielding higher correlations than the other dimensions and yielding significant results in more samples than the other dimensions. Further, when the other Big Five were controlled for, Emotional Stability still revealed significant correlations with performance and satisfaction, establishing that Emotional Stability contributes unique information to the prediction of job performance and work related satisfaction. The present study also demonstrated that individuals who are in more stressful jobs have higher levels of Emotional Stability. Hopefully, future research will confirm and extend the present findings.

References

References

- Abraham, J.D., & Morrison, J.D. (2003). Relationship between the Performance Perspectives Inventory's Implementing Scale and job performance of incumbents in a dual security/service role. *Applied HRM Research, 8*(2), 73-76.
- Al-Mashaan, O. (2001). Job stress and job satisfaction and their relation to Neuroticism, type A behavior, and locus of control among Kuwaiti personnel. *Psychological Reports, 88*(3), 1145-1152.
- Alpass, F., Long, N., Chamberlain, K., & MacDonald, C. (1997). Job satisfaction differences between military and ex-military personnel: The role of demographic and organizational variables. *Military Psychology, 9*(3), 227-249.
- Ardelt, M. (2000). Still stable after all these years? Personality stability theory revisited. *Social Psychology Quarterly, 63*(4), 392-405.
- Argyle, M. (1989). *How Harmful is Happiness?* Universitaire Pers Rotterdam: The Netherlands.
- Arvey, R.D., Bouchard, T.J., & Segal, N.L. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology, 74*(2), 187-192.
- Ashton, M.C. (1998). Personality and job performance: the importance of narrow traits. *Journal of Organizational Behavior, 19*, 289-303.
- Ashton, M.C., Jackson, D.N., Helmes, E., & Paunonen, S.V. (1998). Joint factor analysis of the Personality Research Form and the Jackson Personality Inventory: Comparisons with the Big Five. *Journal of Research in Personality, 32*(2), 243-250.

- Ashton, M.C., Jackson, D.N., Paunonen, S.V., & Helmes, E. (1995). The criterion validity of broad factor scales versus specific facet scales. *Journal of Research in Personality, 29*(4), 432-442.
- Avis, J.M., Kudisch, J.D., & Fortunato, V.J. (2002). Examining the incremental validity and adverse impact of cognitive ability and Conscientiousness on job performance. *Journal of Business and Psychology, 17*(1), 87-105.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Barrick, M.R., & Mount, M.K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1-26.
- Barrick, M.R., & Mount, M.K. (1996). Effects of impression management and self-deception on the predictive validity of personality constructs. *Journal of Applied Psychology, 81*(3), 261-272.
- Barrick, M.R., Mount, M.K., & Judge, T.A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment, 9*(1-2), 9-30.
- Barrick, M.R., Stewart, G.L., Neubert, M.J., & Mount, M.K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology, 83*(3), 377-391.
- Beehr, T.A., & Newman, J.E. (1978). Job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review. *Personnel Psychology, 31*(4), 665-699.
- Bellani, M.L., Furlani, F., Gnechchi, M., & Pezzotta, P., et. al. (1996). Burnout and related factors among HIV/AIDS health care workers. *AIDS Care, 8*(2), 207-221.

- Benet, M.V., & John, O.P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*(3), 729-750.
- Betz, N.E., & Serling, D.A. (1993). Construct validity of fear of commitment as an indicator of career indecisiveness. *Journal of Career Assessment, 1*(1), 21-34.
- Bhagat, R.S., McQuaid, S.J., Lindholm, H., & Segovis, J. (1985). Total life stress: A multimethod validation of the construct and its effects on organizationally valued outcomes and withdrawal behaviors. *Journal of Applied Psychology, 70*(1), 202-214.
- Black, J. (2000). Personality testing and police selection: utility of the Big Five. *New Zealand Journal of Psychology, 29*(1), 2-9.
- Blake, R.J., Potter, E.H., & Slimak, R.E. (1993). Validation of the structural scales of the CPI for predicting performance of junior officers in the U.S. Coast Guard. *Journal of Business and Psychology, 7*(4), 431-448.
- Bono, J.E., & Judge, T.A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality, 17*(Suppl1), S5-S18.
- Borman, W.C., Hanson, M.A., & Hedge, J.W. (1997). Personnel selection. *Annual Review of Psychology, 48*, 299-337.
- Boudreau, J.W., Boswell, W.R., & Judge, T.A. (2000). Effects of personality on executive career success in the United States and Europe. *Journal of Vocational Behavior, 58*, 53-81.

- Boudreau, J.W., Boswell, W.R., Judge, T.A., & Bretz, R.D. (2001). Personality and cognitive ability as predictors of job search among employed managers. *Personnel Psychology, 54*(1), 25-50.
- Brief, A.P., & Atieh, J.M. (1987). Studying job stress: Are we making mountains out of molehills? *Journal of Occupational Behaviour, 8*(2), 115-126.
- Brief, A.P., Burke, M.J., George, J.M., Robinson, B.S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress? *Journal of Applied Psychology, 73*(2), 193-198.
- Brief, A.P., Butcher, A.H., George, J.M., & Link, K.E. (1993). Integrating bottom-up and top-down theories of subjective well-being: The case of health. *Journal of Personality and Social Psychology, 64*(4), 646-653.
- Brief, A.P., Butcher, A.H., & Roberson, L. (1995). Cookies, disposition, and job attitudes: The effects of positive mood-inducing events and negative affectivity on job satisfaction in a field experiment. *Organizational Behavior and Human Decision Processes, 62*(1), 55-62.
- Brief, A.P., & Weiss, H.M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology, 53*(1), 279-307.
- Byravan, A. & Ramanaiah, N.V. (1995). Structure of the 16 PF fifth edition from the perspective of the five-factor model. *Psychological Reports, 76*(2): 555-560.
- Cattell, H.E. (1995). Some comments on a factor analysis of the 16 PF and the NEO Personality Inventory. *Psychological Reports 77*(3), 1307-1311.
- Cattell, R.B., & Cattell, H. (1995). Personality structure and the new fifth edition of the 16PF. *Educational and Psychological Measurement, 55*(6), 926-937.

- Cattell, R.B., Eber, H.W., & Delhees, K.H. (1968). A large sample cross validation of the personality trait structure of the 16PF with some clinical implications. *Multivariate Behavioral Research, Spec Iss*, 107-131.
- Chartrand, J.M., Rose, M.L., Elliott, T.R., Marmarosh, C., et. al. (1993). Peeling back the onion: Personality, problem solving, and career decision-making style correlates of career indecision. *Journal of Career Assessment, 1*(1), 66-82.
- Chemers, M.M., Hays, R.B., Rhodewalt, F., & Wsocki, J. (1985). A person-environment analysis of job stress: A contingency model explanation. *Journal of Personality and Social Psychology, 49*(3), 628-635.
- Clark, L.A., & Watson, D. (1991). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology, 100* (3), 316-336.
- Comrey, A.L., & Backer, T.E. (1970). Construct validation of the Comrey Personality Scales. *Multivariate Behavioral Research, 5*(4), 469-477.
- Cooper, C.L., & Marshall, J. (1976). Occupational sources of stress: A review of the literature relating to coronary heart disease and mental ill health. *Journal of Occupational Psychology, 49*(1), 11-28.
- Costa, P.T., & McCrae, R.R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology, 54*(5), 853-863.
- Costa, P.T., & McCrae, R.R. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of Personality and Social Psychology, 55*(2), 258-265.

- Costa, P.T., & McCrae, R.R. (1990). Personality: Another "hidden factor" in stress research. *Psychological Inquiry, 1*(1), 22-24.
- Costa, P.T., & McCrae, R.R. (1992). Four ways five factors are basic. *Personality and Individual Differences, 13*(6), 653-665.
- Costa, P.T., & McCrae, R.R. (1992). "Four ways five factors are not basic": Reply. *Personality and Individual Differences, 13*(8), 861-865.
- Costa, P.T., & McCrae, R.R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of Personality Assessment, 64*(1), 21-50.
- Costa, P.T., McCrae, R.R., & Norris, A.H. Personal adjustment to aging: Longitudinal prediction from Neuroticism and Extraversion. *Journals of Gerontology, 36*(1), 78-85.
- Costa, P.T., Zonderman, A.B., McCrae, R.R., & Williams, R.B. (1985). Content and comprehensiveness in the MMPI: An item factor analysis in a normal adult sample. *Journal of Personality and Social Psychology, 48*(4), 925-933.
- Crant, J.M. (1995). The Proactive Personality Scale and objective job performance among real estate agents. *Journal of Applied Psychology, 80*(4), 532-537.
- Cropanzano, R., James, K., & Konovsky, M.A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior, 14*(6), 595-606.
- Day, D.V., & Bedeian, A.G. (1995). Personality similarity and work-related outcomes among African-American nursing personnel: A test of the supplementary model of person-environment congruence. *Journal of Vocational Behavior, 46*(1), 55-70.

- de Croon, E.M., Sluiter, J.K., Blonk, R., Broersen, J., Frings-Dresen, M. (2004). Stressful work, psychological job strain, and turnover: A 2-year prospective cohort study of truck drivers. *Journal of Applied Psychology, 89*(3), 442-454.
- Decker, P.J., & Borgen, F.H. (1993). Dimensions of work appraisal: Stress, strain, coping, job satisfaction, and negative affectivity. *Journal of Counseling Psychology, 40*(4), 470-478.
- Detwiler, F.R.J. (1996). The Jackson Personality Inventory and the five-factor model of personality. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 57*(6B), 4084.
- Diener, E., Larsen, R.J., & Emmons, R.A. (1984). Person x Situation interactions: Choice of situations and congruence response models. *Journal of Personality and Social Psychology, 47*(3), 580-592.
- Digman, J.M. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality, 57*(2), 195-214.
- Digman, J.M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*, 417-440.
- Dunn, W.S., Mount, M.K., Barrick, M.R., & Ones, D.S. (1995). Relative importance of personality and general mental ability in managers' judgments of applicant qualifications. *Journal of Applied Psychology, 80*(4), 500-509.
- Edwards, J.R., & Cooper, C.L. (1990). The person-environment fit approach to stress: Recurring problems and some suggested solutions. *Journal of Organizational Behavior, 11*(4), 293-307.

- Emmons, R.A., Diener, E., & Larsen, R.J. (1985). Choice of situations and congruence models of interactionism. *Personality and Individual Differences*, 6(6), 693-702.
- Eysenck, H.J. (1991). Dimensions of personality: 16, 5 or 3? Criteria for a taxonomic paradigm. *Personality and Individual Differences*, 12(8), 773-790.
- Fisher, V.E., & Hanna, J.V. (1931). *The dissatisfied worker*. Oxford, England: Macmillan.
- Friedman, M. (1996). *Type A behavior: Its diagnosis and treatment*. New York, NY: Plenum Press.
- Furnham, A. & Zacherl, M. (1986). Personality and job satisfaction. *Personality and Individual Differences*, 7(4), 453-459.
- Furnham, A. (1996). The Big Five versus the big four: The relationship between the Myers-Briggs Type Indicator (MBTI) and NEO-PI five factor model of personality. *Personality and Individual Differences*, 21(2), 303-307.
- Ganster, D.C., Fusilier, M.R., & Mayes, B.T. (1986). Role of social support in the experience of stress at work. *Journal of Applied Psychology*, 71(1), 102-110.
- George, J.M., (1989). Mood and absence. *Journal of Applied Psychology*, 74(2), 317-324.
- George, J.M. (1990). Personality, affect, and behavior in groups. *Journal of Applied Psychology*, 75(2), 107-116.
- Gerhart, B. (1987). How important are dispositional factors as determinants of job satisfaction? Implications for job design and other personnel programs. *Journal of Applied Psychology*, 72(3), 366-373.
- Ghiselli E.E. (1963). The validity of management traits in relation to occupational level. *Personnel Psychology*, 16(2), 109-113.

- Ghiselli, E.E. (1969). Prediction of success of stockbrokers. *Personnel Psychology*, 22(2), 125-130.
- Goffin, R.D., Rothstein, M.G., & Johnston, N.G. (1996). Personality testing and the assessment center: Incremental validity for managerial selection. *Journal of Applied Psychology*, 81(6), 746-756.
- Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of Personality and Social Psychology: Vol. 2* (pp. 141-165). Beverly Hills, CA: Sage.
- Goldberg, L.R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216-1229.
- Goldberg, L.R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48(1), 26-34.
- Goldberg, L.R., & Saucier, G. (1995). So what do you propose we use instead? A reply to Block. *Psychological Bulletin*, 117(2), 221-225.
- Guha, T.N. (1965). Personality factors and job satisfaction among shoe factory workers. *Indian Psychological Review*, 2(1), 59-64.
- Guion, R.M., & Gottier, R.F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, 18(2), 135-164.
- Gunthert, K.C., Cohen, L.H., & Armeli, S. (1999). The role of Neuroticism in daily stress and coping. *Journal of Personality and Social Psychology*, 77(5), 1087-1100.
- Gustafson, S.B., & Mumford, M.D. (1995). Personal style and person-environment fit: A pattern approach. *Journal of Vocational Behavior*, 46(2), 163-188.

- Harrell, T. W., & Alpert, B. (1989). Attributes of successful MBAs: A 20 year longitudinal study. *Human Performance, 2*, 301-322.
- Harrell, T.W. (1969). The personality of high earning MBA's in big business. *Personnel Psychology, 22*(4), 457-463.
- Hart, P.M. (1999). Predicting employee life satisfaction: A coherent model of personality, work and non-work experiences, and domain satisfactions. *Journal of Applied Psychology, 84*(4), 564-584.
- Heady, B. & Wearing, A. (1989). Personality, life events, and subjective well-being: toward a dynamic equilibrium model. *Journal of Personality and Social Psychology, 57*, 731-739.
- Hersey, R.B. (1932). Rates of production and emotional state. *Personnel Journal, 10*, 355-364.
- Hofstee, W.K., de Raad, B., & Goldberg, L.R. (1992). Integration of the Big Five and circumplex approaches to trait structure. *Journal of Personality and Social Psychology, 63*(1), 146-163.
- Hogan, R. (1992). Hogan Personality Inventory. *Psychological Test Bulletin, 5*(2), 130-136.
- Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology, 88*(1), 100-112.
- Hogan, J., Hogan, R., & Busch, C.M. (1984). How to measure service orientation. *Journal of Applied Psychology, 69*(1), 167-173.

- Hogan, R., Hogan, J., & Roberts, B.W. (1996). Personality measurement and employment decisions: Questions and answers. *American-Psychologist*, 51(5), 469-477.
- Hogan, Robert (Ed); Johnson, John A. (Ed); et-al. (1986). *Handbook of personality psychology*.
- Holland, J. L., Johnston, J. A., Asama, N. F., Polys, S. M. (1993). Validating and using the career beliefs inventory. *Journal of Career Development*, 9(4), 233-244.
- Hollenbeck, J.R., Moon, H., Ellis, A., West, B.J., Ilgen, D.R., Sheppard, L., Porter, O., & Wagner, J.A. (2002). Structural contingency theory and individual differences: Examination of external and internal person-team fit. *Journal of Applied Psychology*, 87(3), 599-606.
- Holmes, T.H., & Rahe, R.H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11(2), 213-218.
- Hoppock, R. (1935). *Job satisfaction*. New York: Harper.
- Hormann, H.J. & Maschke, P. (1996). On the relation between personality and job performance of airline pilots. *International Journal of Aviation Psychology*. 6(2), 171-178.
- Hough, L.M. (1992). The “Big Five” personality variables – construct confusion: Description versus prediction. *Human Performance*, 5, 139.
- Howard, A. & Bray, D.W. (1988). *Managerial Lives in Transition: Advancing Age and Changing Times*. New York: Guilford Press.

- Hsieh, H., Huang, L. & Su, K. (2004). Work stress and job performance in the hi-tech industry: a closer view for vocational education. *World Transactions on Engineering and Technology Education*, 3(1), 147-150.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology*, 85, 869–879.
- Irving, P.G. (1993). On the use of personality measures in personnel selection. *Canadian-Psychology*, 34(2), 208-214.
- Jackson, D.N. (1977). Reliability of the Jackson Personality Inventory. *Psychological Reports*, 40(2), 613-614.
- Jackson, S.E., & Schuler, R.S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36(1), 16-78.
- Jamal, M. (1985). Relationship of job stress to job performance: A study of managers and blue-collar workers. *Human Relations*, 5, 409-424.
- Johnson, J.H., Null, C., Butcher, J.N., & Johnson, K.N. (1984). Replicated item level factor analysis of the full MMPI. *Journal of Personality and Social Psychology*, 47(1), 105-114.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluation traits--self-esteem, generalized self-efficacy, locus of control, and Emotional Stability--with job satisfaction and performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80-92.
- Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237-249.

- Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organizational attraction. *Personnel Psychology*, *50*, 359-394.
- Judge, T.A., Cable, D.M., Boudreau, J.W., & Bretz, R.D. (1995). An empirical investigation of the predictors of executive career success. *Personnel Psychology*, *48*(3), 485-519.
- Judge, T.A., Erez, A., Bono, J.E., and Thoresen, C.J. (2003). The Core Self-Evaluations Scale: Development of a measure. *Personnel Psychology*, *56*(2), 303-331.
- Judge, T.A.; Heller, D; Mount, M.K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*. *87*(3) 530-541.
- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The Big Five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, *52*, 621-649.
- Judge, T.A., & Ilies, R. (2002). Relationship of personality to performance motivation: a meta-analytic review. *Journal of Applied Psychology*, *87*(4), 797-807.
- Judge, T.A., & Larsen, R.J. (2001). Dispositional affect and job satisfaction: A review and theoretical extension. *Organizational Behavior and Human Decision Processes*, *86*(1), 67-98.
- Judge, T.A., & Locke, E.A. (1993). Effect of dysfunctional thought processes on subjective well-being and job satisfaction. *Journal of Applied Psychology*, *78*, 475-490.
- Judge, T.A., Locke, E.A., Durham, C.C., & Kluger, A.N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*(1), 17-34.

- Kammeyer-Mueller, J.D., & Wanberg, C.R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology, 5*, 779-794.
- Karasek, R. (1990). Lower health risk with increased job control among white-collar workers. *Journal of Organizational Behavior, 11*(3), 171-185.
- Kemery, E.R., Bedeian, A.G., Mossholder, K.W., & Touliatos, J. (1985). Outcomes of role stress: A multisample constructive replication. *Academy of Management Journal, 28*, 363-375.
- Kemery, E.R., Mossholder, K.W., & Bedeian, A. (1985). Role stress, physical symptomatology, and turnover intentions: A causal analysis of three alternative specifications. *Journal of Occupational Behavior, 8*, 11-23.
- Kircaldy, B.; Thome, E.; & Thomas, W. (1989). Job satisfaction among psychosocial workers. *Personality and Individual Differences, 10*, 191-196.
- Knussen, C. & Niven, C.A. (1999). Neuroticism and work-related stress in a sample of health care workers. *Psychology and Health, 14*(5), 897-911.
- Kohli, A.K. (1985). Some unexplored supervisory behaviors and their influence on salespeople's role clarity, specific self-esteem, job satisfaction, and motivation. *Journal of Marketing Research, 22*(4), 424-433.
- Krumboltz, J.D. (1994). The Career Beliefs Inventory. *Journal of Counseling and Development, 72*(4), 424-428.
- Larsen & Ketelaar (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology, 61*, 132-140.

- Latack, J.C. (1986). Coping with job stress: Measures and future directions for scale development. *Journal of Applied Psychology, 71*(3), 377-385.
- Lazarus, R.S. (1993). From psychological stress to the emotions: A history of changing outlooks. *Annual Review of Psychology, 44*, 1-21.
- Leong, F., & Boyle, K.A. (1997). An individual differences approach to midlife career adjustment: An exploratory study. James, J. & Lachman, M. (Eds.), *Studies on successful midlife development: The John D. and Catherine T. MacArthur Foundation series on mental health and development*. Chicago, IL: University of Chicago Press.
- Levin, Ira & Joseph Stokes 1989. Dispositional approach to job satisfaction: Role of negative affectivity. *Journal of Applied Psychology, 74*, 752-758.
- Lounsbury, J. W., Gibson, L. W., & Hamrick, F. L. (2004). The development of a personological measure of work drive. *Journal of Business and Psychology, 18*(4), 347-371.
- Lounsbury, J. W., Gibson, L. W., Steel, R. P., Sundstrom, E. D. & Loveland, J. L. (2004). An Investigation of intelligence and personality in relation to career satisfaction. *Personality and Individual Differences, 37*(1), 181-189.
- Lounsbury, J. W., Gibson, L. W., Sundstrom, E., Wilburn, D., & Loveland, J. (2003). An empirical investigation of the proposition that "School Is Work". A comparison of personality -performance correlations in school and work settings. *Journal of Education and Work, 17*, 119-131.
- Lounsbury, J. W., Loveland, J. L. & Gibson, L. W. (2003). An investigation of Big Five

personality traits in relation to psychological sense of community. *Journal of Community Psychology*, 31(5), 531-541.

Lounsbury, J.W., Loveland, J.M., Sundstrom, E.D., Gibson, L.W., Drost, A.W., & Hamrick, F.L. (2003). An investigation of personality traits in relation to career satisfaction. *Journal of Career Assessment*, 11(3), 287-307.

Lounsbury, J. W., Park, S. H., Sundstrom, E., Williamson, J., & Pemberton, A. (2004). Personality, career satisfaction, and life satisfaction: Test of a directional model. *Journal of Career Assessment*, 12, 395-406.

Lounsbury, J.W., Tatum, H.E., Chambers, W., Owens, K.S., & Gibson, L.W. (1999). An investigation of career decidedness in relation to "Big Five" personality constructs and life satisfaction. *College Student Journal*, 33(4), 646-652.

Lucas, J.L., & Wanberg, C.R. (1995). Personality correlates of Jones' three-dimensional model of career indecision. *Journal of Career Assessment*, 3(3), 315-329.

Mabon, H. (1998). Utility aspects of personality and performance. *Human Performance*, 11(2-3): 289-304.

Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and Neuroticism as predictors of objective life events: A longitudinal analysis. *Journal of Personality and Social Psychology*, 65(5), 1046-1053.

McCrae, R.R., & Costa, P.T. (1985). Updating Norman's "adequacy taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, 49(3), 710-721.

- McCrae R.R., & Costa P.T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 81-90.
- McCrae R.R., & Costa P.T. (1990). *Personality in adulthood*. New York: Guilford.
- McCrae, R.R., & Costa, P.T. (1991). The NEO Personality Inventory: Using the Five-Factor Model in counseling. *Journal of Counseling and Development*, 69(4), 367-372.
- McCrae, R.R., & Costa, P.T. (1994). The stability of personality: Observation and evaluations. *Current Directions in Psychological Science*, 3(6), 173-175.
- McCrae, R.R., & Costa, P.T. (1989). More reasons to adopt the five-factor model. *American Psychologist*, 44(2), 451-452.
- McCrae, R.R., & Costa, P.T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52(5), 509-516.
- McCrae R.R., & John O.P. (1992). An introduction to the five-factor model and its applications. Special Issue: The five-factor model: Issues and applications. *Journal of Personality*, 60, 175-215.
- Meir, E.I., Melamed, S., & Dinur, C. (1995). The benefits of congruence. *Career-Development-Quarterly*, 43(3), 257
- Meldahl, J.M., & Muchinsky, P.M. (1997). The neurotic dimension of vocational indecision: Gender comparability? *Journal of Career Assessment*, 5(3), 317-331.
- Mershon, B., & Gorsuch, R.L. (1988). Number of factors in the personality sphere: Does increase in factors increase predictability of real-life criteria? *Journal of Personality and Social Psychology*, 55(4), 675-680.

- Meyer, B.W., & Winer, J.L. (1993). The Career Decision Scale and Neuroticism. *Journal of Career Assessment, 1*(2), 171-180.
- Mikkelsen, A., & Gundersen, M. (2003). The effect of a participatory organizational intervention on work environment, job stress, and subjective health complaints. *International Journal of Stress Management, 10*(2), 91-110.
- Miles, R.H. (1976). Role requirements as sources of organizational stress. *Journal of Applied Psychology, 61*(2), 172-179.
- Minter, S. G. (1991). Relieving workplace stress. *Occupational Hazards, 53*, 38 - 42.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Motowidlo, S.J., Packard, J.S., & Manning, M.R. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology, 71*(4), 618-629.
- Mount, M.K., & Barrick, M.R. (1998). Five reasons why the “Big Five” article has been frequently cited. *Personnel Psychology, 51*(4), 849-857.
- Mount, M.K., Barrick, M.R., & Stewart, G.L. (1998). Five-Factor Model of personality and performance in jobs involving interpersonal interactions. *Human Performance, 11*(2-3), 145-165.
- Iaffaldano, M.T., & Muchinsky, P.M. (1985). Job satisfaction and job performance: a meta-analysis. *Psychological Bulletin, 97*, 251-73.
- Mughal, S., Walsh, J. & Wilding, J. (1996). Stress and work performance. *Personality and Individual Differences, 20*, 685-691.

- Multon, K.D., Heppner, M.J., and Lapan, R.T. (1995). An empirical derivation of career decision subtypes in a high school sample. *Journal of Vocational Behavior*, 47(1), 76-92.
- Murphy, K.R., Lee, S.L. (1994). Personality variables related to integrity test scores: The role of Conscientiousness. *Journal of Business and Psychology*, 8(4), 413-424.
- Murray, H.A. (1938). *Explorations in personality*. Oxford, England: Oxford University Press.
- Necowitz, L. B., & Roznowski, M. (1994). Negative affectivity and job satisfaction: Cognitive processes underlying the relationship and effects on employee behaviors. *Journal of Vocational Behavior*, 45, 270-294.
- Newman, J.E., & Beehr, T.A. (1979) Personal and organizational strategies for handling job stress: A review of research and opinion. *Personnel Psychology*, 32(1), 1-43.
- Noor, N.M. (1997). Work and family roles in relation to women's well-being: The role of negative affectivity. *Personality and Individual Differences*, 23(3), 487-499.
- Norman, W.T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology*, 66(6), 574-583.
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory*. McGraw-Hill, Inc.
- O'Connor, E.J., Peters, L.H., Rudolf, C.J., & Pooyan, A. (1982). Situational constraints and employee affective reactions: A partial field replication. *Group and Organizational Studies*, 7(4), 418-428.

- Ones, D.S., Viswesvaran, C. (1996). Bandwidth-fidelity dilemma in personality measurement for personnel selection. *Journal-of-Organizational-Behavior*, 17(6), 609-626.
- Ormel, J., & Wohlfarth, T. (1991). How Neuroticism, long-term difficulties, and life situation change influence psychological distress: A longitudinal model. *Journal of Personality and Social Psychology*, 60, 744-755.
- Osipow, S.H. (1991). Developing instruments for use in counseling. *Journal of Counseling and Development*, 70(2), 322-326.
- Osipow, S.H., & Spokane, A.R. (1987). Measuring occupational stress, strain, and coping.. *Applied Social Psychology Annual*, 5, 67-86.
- Ostendorf, F., & Angleitner, A. (1994). The five-factor taxonomy: Robust dimensions of personality description. *Psychologica Belgica*, 34(4), 175-194.
- Parkes, K.R., Mendham, C.A., & von Rabenau, C. (1994). Social support and the demand-discretion model of job stress: Tests of additive and interactive effects in two samples. *Journal of Vocational Behavior*, 44(1), 91-113.
- Paunonen, S.V. (1993). *Sense, nonsense and the Big Five factors of personality*. Paper presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- Paunonen, S.V. & Ashton, M.C. (1998). The structured assessment of personality across cultures. *Journal of Cross Cultural Psychology*, 29(1): 150-170.
- Paunonen, S.V., Keinonen, M., Trzebinski, J. & Forsterling, F. (1996). The structure of personality in six cultures. *Journal of Cross Cultural Psychology*, 27(3): 339-353.

- Payne, R. (1988). A longitudinal study of the psychological well-being of unemployed men and the mediating effect of Neuroticism. *Human Relations*, *41*(2), 119-138.
- Peabody, D., & Goldberg, L.R. (1989). Some determinants of factor structures from personality-trait descriptors. *Journal of Personality and Social Psychology*, *57*(3), 552-567.
- Peeters, M., de Jonge, J., Janssen, P., & van der Linden, S. (2004). Work-Home Interference, Job Stressors, and Employee Health in a Longitudinal Perspective. *International Journal of Stress Management*, *11*(4), 305-322.
- Piedmont, R.L. (1995). Another look at fear of success, fear of failure, and test anxiety: A motivational analysis using the five-factor model. *Sex-Roles*, *32*(3-4), 139-158.
- Piedmont, R. L., McCrae, R. R., & Costa, P. T. (1991). Adjective check list scales and the five-factor model. *Journal of Personality and Social Psychology*, *60*, 630-637.
- Piedmont, R.L., & Weinstein, H.P. (1994). Predicting supervisor ratings of job performance using the NEO Personality Inventory. *Journal-of-Psychology*, *128*(3), 255-265.
- Rau, R. (2004). Job Strain or Healthy Work: A Question of Task Design. *Journal of Occupational Health Psychology*, *9*(4), 322-338.
- Reilly, R. R. & Warech, M. A. (1993). The validity and fairness of alternatives to cognitive tests. In L.C. Wing & B.R. Gifford (Eds.), *Policy issues in employment testing*, (pp. 131-224). Boston: Kluwer.
- Roberts, B. W., & Hogan, R. (2001). *Personality Psychology in the Workplace*. Washington, DC: American Psychological Association.

- Robertson, I.T. (1993). Personality assessment and personnel selection. *European-Review-of-Applied-Psychology*, 43(3), 187-194.
- Rolland, J.P. (2002). The cross cultural generalizability of the five factor model of personality. In Allik, J. & McCrae R. (Eds.), *The five factor model of personality across cultures*, (p 7-28). New York: Kluwer Academic/Plenum Publishers.
- Ross, R.R. & Altmaier, E.M. (1994). *Intervention in occupational stress: A handbook of counseling for stress at work*. Thousand Oaks, CA: Sage.
- Ryland, E., & Greenfield, S. (1991) . Work stress and well being: An investigation of Antonovsk's sense of coherence model. *Journal of Social Behavior and Personality*, 6(7), 39-54.
- Salgado, J.F. (1997). The five factor model of personality and job performance in the European Community. *Journal-of-Applied-Psychology*, 82(1), 30-43.
- Salgado, J. (2002). The Big Five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, 10(1-2), 117-125.
- Salgado, J.F., Viswesvaran, C., & Ones, D.S. (2002). Predictors used for personnel selection: an overview of constructs, methods, and techniques. In Ones, D.S. & Anderson, N. (Eds), *Handbook of industrial work and organizational psychology, Volume 1: Personnel psychology*, (pp. 165-199).
- Sarason, I.G., & Johnson, J.H. (1979). Life stress, organizational stress, and job satisfaction. *Psychological Reports*, 44(1), 75-79.
- Sauter, S.L., Hurrell, J. J., Jr., & Cooper, C.L. (Eds.). (1989). *Job control and worker health*. New York: John Wiley & Sons.

- Scarpello, V., & Campbell, J.P. (1983). Job satisfaction and the fit between individual needs and organizational rewards. *Journal of Occupational Psychology*, 56(4), 315-328.
- Schneider, R. J. & Hough, L. M. (1995). Personality and industrial/organizational psychology. *International Review of Industrial and Organizational Psychology*, 10, 77-129.
- Schneider, R.J., Hough, L.M., & Dunnette, M.D. (1996). Broadsided by broad traits: how to sink science in five dimensions or less. *Journal of Organizational Behavior*, 17(6): 639-655.
- Seibert, S. E., & Kraimer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behavior*, 58, 1-21.
- Siegel, J. P., & Ghiselli, E. E. (1971). Managerial talent, pay, and age. *Journal of Vocational Behavior*, 1, 129-135.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1), 27-41.
- Smith, C. A., Organ, D., & Near, J. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 6, 653
- Soldz, S. & Vaillant G.E. (1999). The Big Five personality traits and the life course: a 45 year longitudinal study. *Journal of Research in Personality*, 33(2), 208-232.
- Spector, P.E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39 (11), 1005-1016.

- Spector, P.E. (1987). Interactive effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work and Stress, 1*(2), 155-162.
- Spector, P.E. (1997). Method variance as an artifact in self-reported affect and perceptions at work: Myth or significant problem? *Journal of Applied Psychology, 72*(3), 438-443.
- Spector, P.E., Jex, S.M., & Chen, P.Y. (1995). Relations of incumbent affect-related personality traits with incumbent and objective measures of characteristics of jobs. *Journal of Organizational Behavior, 16*(1), 59-65.
- Spector, P.E., & Jex, S.M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology, 3*(4), 356-367.
- Staw, B., Bell, N., & Clausen, J. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly, 31*, 56-77.
- Staw, B., & Ross, J. (1985). Stability in the midst of change: The dispositional approach to job attitudes. *Journal of Applied Psychology, 70*, 469-480
- Stewart, G.L., Carson, K.P. (1995). Personality dimensions and domains of service performance: A field investigation. *Journal-of-Business-and-Psychology, 9*(4), 365-378.
- Stewart, G.L., Carson, K.P., & Cardy, R.L. (1996). The joint effects of Conscientiousness and self-leadership training on employee self-directed behavior in a service setting. *Personnel Psychology, 49*, 143-164.

- Strazdins, L., D'Souza, R.M., Lim, L., Broom, D.H., & Rodgers, B. (2004). Job Strain, Job Insecurity, and Health: Rethinking the Relationship. *Journal of Occupational Health Psychology, 9*(4), 296-305.
- Sullivan, S.E. & Bhagat, R.S. (1992). Organizational stress, job satisfaction, and job performance: Where do we go from here? *Journal of Management, 18*, 353-374.
- Suls, J., Green, P., & Hills, S. (1998). Emotional reactivity to everyday problems, affective inertia, and Neuroticism. *Personality and Social Psychology Bulletin, 24*, 127-136.
- Tett, R.P., Jackson, D.N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology, 44*(4), 703-742.
- Theorell, T., & Karasek, R. (1995). Should heart attack patients return to stressful jobs? *Stress Medicine, 11*(4), 219-220.
- Thoms, P., Moore, K.S., & Scott, K.S. (1996). The relationship between self-efficacy for participating in self-managed work groups and the Big Five personality dimensions. *Journal of Organizational Behavior, 17*(4), 349-362.
- Tokar, D.M., Fischer, A.R. & Subich, L.M. (1998). Personality and Vocational behavior: A selective review of the literature, 1993-1997. *Journal of Vocational Behavior, 53*, 115-153.
- Tokar, D.M. & Subich, L.M. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behavior, 50*, 482-491.

- Tsaousis, I., & Nikolaou, I.E. (2001). The stability of the five factor model of personality in personnel selection and assessment in Greece. *International Journal of Selection and Assessment*, 9(4), 290-301.
- Tupes, E.C. & Christal, R.E. (1961, May). Recurrent Personality Factors Based on Trait Ratings (ASD-TR-61-97). Lackland Air Force Base, TX: Aeronautical Systems Division, Personnel Laboratory.
- Turban, D.B. & Dougherty, T.W., (1994). The role of protege personality in receipt of mentoring and career success. *Academy of Management Journal*, 37, 688-702.
- Vagg, P.R., & Spielberger, C.D. (1998). Occupational stress: Measuring job pressure and organizational support in the workplace. *Journal of Occupational Health Psychology*, 3(4), 294-305.
- Vaidya, J.G., Gray, E.K., Haig, J., & Watson, D. (2002). On the temporal stability of personality: Evidence for differential stability and the role of life experiences. *Journal of Personality and Social Psychology*, 83(6), 1469-1484.
- Voskuijl O.F., & van Sliedregt, T. (2002). Determinants of interrater reliability of job analysis: A meta-analysis. *European Journal of Psychological Assessment*, 18(1), 52-62.
- Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In R. Hogan, J. Johnson, & S. Briggs, (Eds.), *Handbook of personality psychology* (pp. 767-793). NY: Academic Press.
- Watson, D., & Slack, A. K. (1993). General factors of affective temperament and their relation to job satisfaction over time. *Organizational Behavior and Human Decision Processes*, 54, 181-202.

Watson, D., & Clark, L.A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological-Bulletin*, *96*(3), 465-490.

Wiggins, J.S., Phillips, N., & Trapnell, P. (1989). Circular reasoning about interpersonal behavior: Evidence concerning some untested assumptions underlying diagnostic classification. *Journal of Personality and Social Psychology*, *56*, 296-305.

Williamson, J. W., Pemberton, A. E., & Lounsbury, J. W. (In Press) An investigation of career and job satisfaction in relation to personality traits of information professionals. Accepted pending revision. *Library Quarterly*.

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, *83*, 486-493.

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