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The Effects of Optimism and the Five-Factor Model of Personality on Stress and Performance in the Work Place

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To the Graduate Council:

I am submitting herewith a dissertation written by Fung Ming Chan entitled "The Effects of Optimism and the Five-Factor Model of Personality on Stress and Performance in the Work Place." 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.

Debra Baldwin, Major Professor

We have read this dissertation and recommend its acceptance:

John Lounsbury, Richard Saudargas, Mary Ziegler

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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We have read this dissertation
and recommend its acceptance:

John Lounsbury

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Mary Ziegler

Accepted for the Council:

Anne Mayhew

Vice Provost and Dean
of Graduate Studies

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

The Effects of Optimism and the Five-Factor Model of Personality on
Stress and Performance in the Work Place

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Fung Ming Chan

May 2004

DEDICATION

This dissertation is dedicated to my parents

Mrs. Shu Hsian Chan

Mr. Yih Chi Chan

Who always sacrificed themselves to provide the best for their children
and taught me what is really important in life.

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Abstract

Occupational stress is an ever-increasing public health hazard and occupational risk factor. There are growing concerns around the world; people work harder and longer while injury and illness rates associated with occupational stress continues to grow. This field study explores the relationship among optimism, the Five-Factor Model (FFM) of personality (conscientiousness, openness, emotional stability, agreeableness, and extraversion), stress (perceived stress), and job performance variables (dedication, teamwork, self-responsibility, winning attitude, fit, quality of operations, guest promises/service) in employees of the service industry. It is hypothesized that the variable of optimism will be a better predictor than the FFM personality constructs for predicting stress and job performance. More specifically, it is hypothesized that individuals who score high on optimism will report lower levels of stress and receive better job performance evaluations compared with their counterparts.

Questionnaires and surveys were administered and collected in a pen and paper format through mailings to the participants. Participants (N=201) were asked to complete questionnaires on measures of personality and stress while supervisors provided job performance ratings for each participant. Results indicated that optimism demonstrated an increase in incremental validity over the FFM in the model to predict stress. Optimism also yielded a higher correlational relationship with job performance than the FFM. The current study provides additional support in demonstrating the validity and practicability of using

optimism as a predictive variable of stress and job performance in a working population.

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1. Introduction

Today's global workplace is characterized by an unprecedented level of change (Gowing, Kraft, & Quick, 1998). American workers are working harder and longer than they have in the past two decades just to maintain the same standard of living. The National Institute for Occupational Safety and Health reports that 25% to 30% of workers have high levels of occupational stress and are drained and used up at the end of the day (2002). It is estimated that stress-related symptoms and illness are costing the industry 150 billion dollars per year in absenteeism, company medical expenses, and lost productivity (Brodsky, 1989).

In two nationwide surveys of American workers conducted by Northwestern National Life insurance Company (1991, 1992), the proportion of workers who reported feeling highly stressed on the job more than doubled from 1985 to 1990. Of those surveyed, 69% reported that their productivity was reduced by high levels of stress and 14% indicated that stress had caused them to quit or change jobs during the preceding two-year period. Along with these same changes, the number of workers reporting multiple stress-related illnesses nearly doubled, increasing from 13%-25%. More than twice the people who reported that their jobs were highly stressful reported experiencing burnout as compared with less stressed employees.

The cost of stress on organizations is staggering. The California Department of Mental Health and Kaiser-Permanente health organization

conducted large-scale long-term studies that demonstrated that 60% to 90% of all visits to health care providers (Pelletier & Lutz, 1988) and 60% of work absenteeism were caused by stress-related disorders (Cooper & Payne, 1988). According to the National Council on Compensation Insurance, stress-related claims account for nearly one-fifth of all occupational diseases (Brodsky, 1989). Even with the general agreement that job related stress is destructive for individuals and organizations, it is unclear as how to fix this problem (Sauter, Murphy, & Hurrell, 1990).

With regard to stress, much of the research has examined the types of environmental situations which may produce the feelings of stress. However, with the development of more clearly defined personality characteristics, recent research has begun to show that individual characteristics can influence one's perception of stress. In particular, the personality trait of optimism has been acknowledged as a buffer for stress (e.g., Baldwin, Chambliss, and Towler, 2003; Makikangas and Uinnunen, 2003). The present study analyzes whether optimism modifies the impact of stress within the workplace. More specifically, this research study examined the role of personality on the perception of stress and job performance.

Conceptualization of Stress

Recent changes in today's economy have seen large companies downsize their workforce and outsource all but core functions. Organizations are

also adopting new and flat management structures that result in a downward transfer of management responsibilities and decentralized control. These rapid changes have resulted in a variety of potentially stressful circumstances, such as reduced job stability, role ambiguity, role conflict, and increased workload. These new stressors experienced by workers today have outpaced our understanding of their implications for work quality, safety, and health in the new environments. The following section examines documented changes in the work place which have resulted in an increase in occupational stress.

Occupational stress has been recognized as one of the most significant workplace health hazards for employees in the United States and other developed countries (e.g., Hurrell, Nelson, & Simmons, 1998; Makikangas & Kinnunen, 2003; Sauter, Murphy, & Hurrell, 1990; World Health Organization, 1994). Cartwright and Cooper (1997) pointed out that in the short term, stress can lead to emotional distress, stomach disorders, headaches, sleeplessness, and energy loss. In the long term, stress can contribute to serious illness and even premature death (e.g., Belkić, Schnall, Savic, & Landsbergis, 2000; Brisson, 2000; Schnall, Landsbergis, & Baker, 1994).

The term stress, as is defined by Merriam-Webster, is “a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation.” According to Lazarus and Folkman (1984), stress is a relationship between person and environment that is appraised by the person as taxing or exceeding his or her resources and threatening the person’s well

being. This definition emphasizes two aspects of the phenomenon of stress. The cognitive appraisal of danger and the ability to cope with the danger are both parts of the stress phenomenon. This definition is often used to explain individual variability with regard to stress.

Hans Selye (1956) conceptualized stress as a nonspecific demand that was placed upon the body and took the body out of homeostasis. Thus, stress is viewed as an external condition (stimuli) that tends to evoke aversive physiological changes and symptoms (Kahn and Byosiere, 1992; Selye, 1976). This perspective of stress does not address issues of individual variability. More specifically, Selye (1976) argues that the same demand will produce similar stress responses across all organisms.

Although most researchers have identified stress as a negative component of life, not all stress is undesirable (Kobassa, 1979). Hans Selye may have been the first to use the term *eustress* and *distress* in his writings on human stress (Nelson and Simmons, 2003). Selye (1982) described eustress as desirable and associated with positive effects of an antecedent response and as the stress of fulfillment. Quick, Quick, Nelson, and Hurrell (1997) further defined eustress as a necessary component for good health and high performance in individuals. Eustress was the effect of the stress response being channeled into positive and constructive outcomes. The physical and mental demands of stress are similar for eustress and distress. However, the difference lies in that without challenging one's existing capacities, mental abilities will diminish (Selye, 1982).

The idea is not to avoid the stresses of life, for that would be impossible, but to maximize the eustress component.

It is important to note that there is individual variability with regard to the stress response and the interpretation of stress (Lazarus and Folkman, 1984; Ptacek, Smith, and Dodge, 1994). More specifically, the same life event may be viewed as a stressor for one person but an invigorating challenge for another person. For example, Grey-Toft & Anderson (1981) found that the most significant sources of stress for hospital nurses are the deaths of patients. However, a similar study later found that the death-dying variable had a significant positive relationship with eustress and a nonsignificant, negative relationship with distress (Simmons, 2000). The interpretation was that when the nurses were faced with a patient dying, they become more engaged in their work.

In this sense, individual differences play an important role in stress research. Individual differences are especially obvious in the domain of organizational practice, where the extensive use of tests for selection and placement can be seen as a strategy for placing individuals in jobs that will not exceed their ability to function without undue strain (Kahn & Byosiere, 1992). Therefore, by examining individual differences (e.g., genetic endowment, previous experience, personality characteristics) researchers and/or employers may gain insight into the attributes that influence “host resistance” to a stressor (Kahn & Byosiere, 1992). In other words, attributes which help an individual to function in the face of a stressor.

Stress resistance factors (also termed “resistance resources”) refer to external assets or internal characteristics that are drawn upon to facilitate the management of, or adaptation to stress (Lazarus & Folkman, 1984; Pearlin & Schooler, 1978; Sarason & Sarason, 1984). The conceptual framework of resistance resources categorizes the resources as material (Hobfoll, 1989), social (Sarason & Sarason, 1984), and personal (Pearlin & Schooler, 1978, Sarason & Sarason, 1984). Material resources are valued because of some aspect of their physical nature or because of their acquiring secondary status value based on their rarity and expense (Hobfoll, 1989). Although objects have seldom been considered in stress research, they are linked to socioeconomic status, which has been shown to be an important factor in stress resistance (Dohrenwend, 1978). Social resources refer to an individual’s perception that he/she is loved, valued, and esteemed by others. Research has shown that the perception of support may be a stronger resistance factor than actual received support (e.g. Sarason, Pierce, & Sarason, 1990; Sarason, Shearin, Pierce, & Sarason, 1987). Personal resources are defined as characteristics that reside within the individual, including the ways individuals cognitively prove events in their environment (Pearlin & Schooler, 1978). Antonovsky (1979) coined the term *general resistance resources* and suggested that one’s personal orientation toward the world is the key; specifically, this means seeing events as predictable and generally occurring in one’s best interest.

Cognitive processes have been known to exacerbate the effects of stress in several ways. First, they may alter the meaning or appraisal of stressful events (Chang, 1998; Kobasa, 1979; Lazarus & Folkman, 1984). That is, cognitive processes can either protect or impair psychological well being by allowing an individual to appraise a problematic event as irrelevant, threatening, harmful, or challenging. If an individual interprets an event as harmful, the individual will then instigate either effective or maladaptive coping activities to moderate the effects of the problematic event (Kobasa, Maddi, & Kahn, 1982; Lazarus & Folkman, 1984). Along those same lines, individuals may interpret pleasant events with positive or negative cognitive processes that lead to effective or maladaptive thinking.

According to Lazarus (1990), individuals engage in both primary and secondary appraisals of a stressful situation. Primary appraisals involve judgments about (a) whether an event is stressful (vs. irrelevant or benign); (b) the centrality of the event (i.e., how important or meaningful); and (c) what is at stake or threatened in the situation (Lazarus & Folkman, 1984). Research shows that when employees appraise a potential stressor as highly upsetting, important, or their sense of competence in their work is threatened, they respond with increased distress (Long, Kahn, & Schutz, 1992).

Secondary appraisals involve the judgment of what can be done to manage or cope with the situation (Lazarus & Folkman, 1984). When individuals are exposed to situations that they have perceived control over the stressor, the

impact of the stressor is reduced (e.g., Long et al., 1992; Parkes, 1986). In other words, the belief that one's stressors are controllable helps to alleviate distress. One outcome of an individual's inability to cope with work related stress is that of job burnout (Chang, Rand, & Strunk, 2000; Venninga, 1981).

Occupational Stress and Health

The most common factors of stress reported by individuals are stressors found at work. Work demands and responsibilities such as having more work than one can handle, job deprivations (e.g., lack of rewards, low income, lack of control), aversive or dangerous work conditions, and interpersonal difficulties at work (Bromet, Dew, Parkinson, Cohen, & Schwartz, 1992; Scharlach & Fredricksen, 1994) are some of the most common causes of stress in the work place.

Cooper (1983) identified six major sources of occupational stress: factors intrinsic to the job; role in the organization; career development; relationship at work; organizational structure and climate; and home: work interface. Factors intrinsic to the job include poor working conditions, shift work, work overload, work underload, physical danger, personal-environment fit, and job satisfaction. Role in the organization as a main source of occupational stress involves role ambiguity, role conflict, and organizational boundaries. The next major source of occupational stress is career development. Career development can be a major stressor when there is an impact from overpromotion, underpromotion, status

incongruence, lack of job security, and thwarted ambition. Occupational stress has also been related to relationships at work, whether it is with one's colleagues, boss, and/or subordinates. Organizational structure and climate such as office politics, lack of effective consultation, lack of participation in the decision-making process, and restrictions on behaviors can also be a source for occupational stress. Lastly, home/work pressures can be a major source of occupational stress as individuals try to balance the demands of family and office.

The negative effects of occupational stress, such as low job satisfaction, poor work performance, physical and psychological ailments are well documented (e.g. Bromet et. al., 1992; Cooper and Cartwright, 1997). Prolonged exposure to stressful working conditions can be particularly detrimental to individuals (Belkié et. al., 2000). Although stress is not the sole or necessarily primary causal agent, stress is implicated in over half of human morbidity and mortality (Fry, 1995; Quick, 1998; Sapolsky, 1998). Stress is directly implicated (heart disease, strokes, injuries, suicide and homicide) and indirectly implicated (cancer, chronic liver disease, emphysema and chronic bronchitis) in various physiological disorders (Fry, 1995; Quick, 1998; Sapolsky, 1998).

Job stressors of various kinds – cyclic overload, threat of job loss, role conflict and ambiguity, for example – are associated with such risk factors as elevated cholesterol levels (Friedman, Rosenman, & Carroll, 1958), elevated blood pressure (Kasl & Cobb, 1970), and increased heart rates (French &

Caplan, 1970). Higher heart rates have been reported under conditions of role conflict, role ambiguity, ambiguity regarding future developments on the job, poor fit between person and job, and overall reported stress at work (Kahn & Byosiere, 1992). Fatigue, insomnia, headaches, and gastrointestinal disturbances are also some of the physical problems that have been associated with occupational stress and burnout (Kahill, 1988).

Indirectly, stress may precipitate behaviors that are harmful to the individual. For example, research shows an increase in the amount of self-damaging behaviors such as drug and alcohol abuse (Davidson & Cooper, 1986, Mangione & Quinn, 1975), smoking rate (Howard, Cunningham, & Rechnitzer, 1986), and increased caffeine consumption (Caplan, Cobb, & French 1975).

With regard to the psychological effects of occupational stress, a great deal of research has emerged. There is evidence which shows a positive relationship between work-related stress and reported increases in anxiety and depression (Arsenault, Dolan, Van Ameringern, 1991; Baba, Galperin & Lituchy, 1999; Bene, 1994; Blazer, Huges, & George, 1987). For example, Wang and Patten (2001) investigated the association between work stress and depression. The study examined 7,344 employed participants between the ages of 20 and 49 years old. Occupational stress was measured with the Job Content Questionnaire (JCQ) developed by R. Karasek (1985). The JCQ is a 12-item scale evaluating work stress in six dimensions: skill discretion, decision authority, psychological demands, job insecurity, physical exertion, and social support from

superiors and coworkers. Respondents answered the JCQ on a 5-point likert scale, with 0 = strongly agree, and 4 = strongly disagree. A higher score indicated greater work stress. Results in this study showed that participants who reported high levels of stress in psychological demands were found to have an elevated risk of major depression compared with those who reported low levels of stress.

According to Baba et al. (1999), the positive relationship between work-related stress and depression can be explained via the imbalance theory of stress. This theory states that an imbalance between the demands one faces at work and the resources available to meet the demand results in stress; and that constraints may enhance the stress and support may mitigate it. More specifically, role conflicts contribute to this imbalance and over time may lead to deterioration in mental health and withdrawal behaviors (e.g., absenteeism and turnover, Karasek and Theorell, 1990).

In a recent longitudinal study, Makikangas & Kinnunen (2003) examined the relationship between self-esteem and optimism in psychosocial work stressors and well-being. The results from the one-year study revealed that self-esteem and optimism has a moderator effect on well-being. More importantly, the study examined gender differences in the way self-esteem and optimism moderated the work stressors. Among the sample, it was found that men and women handle stressful situations differently from a psychological point of view (Makikangas & Kinnunen, 2003). Low levels of self-esteem and optimism had a

direct negative effect on emotional exhaustion and mental distress among men while optimism moderated the relationships between time pressures at work, job insecurity, and poor organizational climate on mental distress in women. The findings are important in that it explains possible rationales for why some previous research has failed to show a moderating property (e.g., Janssen, Schaufeli, & Houkes, 1999). The evidence in the present study strongly suggests that optimism and high self-esteem are always preferred and desired over pessimism and low self-esteem (Makikangas & Kinnunen, 2003).

Job-Related Burnout

When occupational stress overwhelms an individual, that individual may be faced with a debilitating reaction called job-related burnout. Job burnout involves the chronic strain that results from an incongruence, or misfit, between the worker and the job (Maslach, 2003). Specifically, burnout is the gradual depletion over time of individuals' intrinsic energetic resources, including the expression of emotional exhaustion, physical fatigue, and cognitive weariness (Shirom, 1989). Although burnout has been researched in a variety of fields such as in athletes (Dale & Weinberg, 1990), or among marital partners (e.g., Pines, 1996; Westman & Etzion, 1995), due to the complexity of this construct, burnout will be discussed only as it interrelates to stress at work.

Job burnout continues to be an important topic for employees and organizations (Schaufeli, Maslach, & Marek, 1993). Burnout has been

emphasized in working individuals who have extensive exposure to constant stress (Low, Cravens, Grant, & Moncrief, 2001). People-oriented professionals typically work under norms that expect them to continuously invest emotional, cognitive, and physical energy in service recipients (Shirom, 2003). Working in this type of condition for an extended period of time is likely to create a process of emotional exhaustion, mental weariness, and physical fatigue (Shirom, 2003).

Freudenberger (1974, 1980) was the first researcher to coin the term burnout. However, it was Veniga (1981) who first conducted a detailed study of job burnout. Veniga (1981) defined burnout as “a debilitating psychological condition brought about by unrelieving work stress, which results in: depleted energy reserves, lowered resistance to illness, increased dissatisfaction, pessimism, and increased absenteeism and inefficiency at work.” (pp.6-7).

It took over two decades before the first scientifically validated burnout measurement instrument was constructed by Maslach and her colleagues (The Maslach Burnout Inventory, MBI; Maslach, Jackson, Leiter, 1996). According to Maslach (1982), burnout consists of three major dimensions: emotional exhaustion, depersonalization, and diminished personal accomplishment. Research using the MBI has found that individuals who are likely to experience burnout tend to report greater physical exhaustion, taking more breaks, greater expressions of emotional depletion and more complaints to one’s family (Maslach & Jackson, 1981; Jackson & Maslach, 1982).

The first component of burnout, emotional exhaustion, is characterized by a feeling of exhaustion to continue in the duties that are required by the job. This feeling of a lack of energy may exist due to the compiling of emotional stressors that are routine in many work environments. This dimension was regarded as the basic individual stress component of the syndrome (Maslach, Schaufeli, & Leiter, 2000).

The second component, depersonalization, is characterized by the objectification of people. Workers who suffer from this component are often characterized by detachment towards customers and co-workers. Depersonalization can be a major problem in any work environment, especially in a sales environment, because the majority of interactions in the workplace rely on an individual's capability to relate and gain the trust of the customer. An individual who depersonalizes will go strictly "by the book" to deal with his/her co-workers or customers rather than becoming personally involved enough to tailor a solution or an approach to make the client feel unique and valued (Daley, 1979). Depersonalization can be a major source of problems as it not only makes the burnt-out individual unproductive, but it also makes the work environment less pleasant for everyone around them.

The final component of burnout, diminished personal accomplishments, is perhaps the most costly for the individual and the organization. Individuals who have a sense of diminishing personal accomplishment tend to have a negative self-evaluation (Maslach, 1982). One feels that he or she is unable to

competently accomplish the tasks that are required by the job. This leads to a vicious cycle of lowered goal orientation and underachievement that leads to helplessness. Individuals with learned helplessness will exhibit a loss of motivation, lowered self-confidence, and a lost sense of control (Schulman, 1999). These psychological consequences of burnout can be detrimental for any individual, especially those who are faced with constant rejections and failures.

Another theoretical view of the relationship between stress and burnout is based on Hobfoll's Conservation of Resources (COR) theory (Hobfoll, 1989). According to the COR theory, people are motivated to obtain, retain, and protect that which they value. This in turn is interpreted as resources. When an individual experiences loss of resources, they respond by attempting to limit the loss and maximize the gain of resources (Hobfoll, 1989). In the work environment, COR theory states that stress occurs under one of these conditions: a) when an individual's resources are threatened, b) when an individual loses resources, and c) when individuals invest resources and do not reap the anticipated rate of return (Hobfoll, 1989).

One of the major points of the COR theory is that stress does not occur as a single event, but rather represents an unfolding process, wherein those who lack a strong resource pool are more likely to experience cycles of resource loss (Hobfoll, 1988, 1998). The affective state of burnout is likely to exist when individuals experience a cycle of resource loss over a period of time at work (Hobfoll & Freedy, 1993). Without the ability to replenish one's resources or

have personality traits that may buffer (e.g., optimism, extraversion, etc.) against the development of burnout, one is likely to cycle into a forceful spiral of resource loss (Hobfoll & Shirom, 1993, 2000). This feeling of ongoing net loss of any combination of individuals' physical vigorousness, emotional robustness, and cognitive agility represents an emotional response to the experienced stressor, which results in an individual feeling burnt-out (Hobfoll, 1989).

The significance of burnout is not so much the end-state as it is a mediator of other important outcomes (Maslach and Leiter, 1999). The problems experienced by burnt-out individuals translate to substantial costs for both the organization and the individual in terms of absenteeism, turnover, and human considerations (Jackson & Maslach, 1982; Leiter & Maslach, 1988). Burnout components have been linked with a variety of psychological problems such as decreases in self-esteem, depression, irritability, helplessness and anxiety (Burke & Deszca, 1986; Jackson & Maslach, 1982; Maslach & Pines, 1977).

Individuals suffering from burnout will also experience negative interpersonal effects. Maslach and Jackson (1985) found that there are links between burnout and the deterioration of social and family relationships. In their study, individuals experiencing burnout tended to withdraw from their friends and reduced their level of socializing (Jackson and Maslach, 1982). Similarly, Burke and Deszca (1986) found that individuals who reported higher levels of burnout also reported a greater negative impact of the job demands on their personal, home, and family lives.

Symptoms experienced by individuals are directly related to problems that are experienced by an organization. Individuals who experience burnout are more likely to report intentions to leave (Burke & Deszca, 1986), absenteeism (Firth & Britton, 1989) as well as major decreases in the quality and quantity of job performance (Maslach & Jackson, 1985). These types of problems are extremely costly for the organization, and without intervention, could undermine the organization's productivity levels. The consequences of burnout have very real physical and psychological implications. Job burnout is a problem that affects not only the individual, but the individual's family, friends, the organization, and anyone that interacts with the burnt-out individual.

Employers need to understand the benefits of having good social relationships within the workplace. Research in the field shows that not only does good social interactions in the workplace provide support to lower self-esteem and pessimistic individuals, but it also helps mitigate the effects of job strain (Makikangas & Kinnunen, 2003).

Given the data and research provided on the prevalence of job burnout in highly stressed industrial economies, improving our understanding of the complex effects of stress on individuals is critical in developing prevention and intervention efforts that will help the lives of individuals as well as organizations. Stress is likely to represent a pressing social and economical problem in the years to come as people are pushed to work longer and harder. Competitive pressures in the global market, uncertainties about the economy, and the rise of

service industries are all factors that will likely ensure the growing trend of increased stress in individuals.

Workplace Stress Prevention Programs

The effects of stress prevention programs were investigated by three studies conducted by the St. Paul Fire and Marine Insurance Company (Jones et al., 1988). In one hospital where stress prevention programs were established, records showed the frequency of medication error declined by 50%. In a second study of 22 hospitals where the stress prevention program was established, there was a 70% reduction in malpractice claims as compared to a matched group of 22 hospitals that did not implement stress prevention activities (Jones et al., 1988). These studies support the implementation of stress prevention programs as a factor in cutting cost.

There are a number of options to consider when designing a stress prevention program for the workplace. These can be termed as primary, secondary, and tertiary levels of intervention. Primary prevention is concerned with taking action to reduce or eliminate stressors (i.e., sources of stress) and to promote a supportive and healthy work environment (Cooper, Dewe, & O'Driscoll, 2002). Organizations normally use stress audits to identify what the stressors within the work place are in order to take some type of action. Stress audits typically use self-report questionnaires such as the JCQ, Perceived Stress

Scale (PSS; Cohen, Kamarck, Mermelstein, 1983) or the Occupational Stress Indicator (OSI; Cooper, Sloan, & Williams, 1988).

Secondary prevention is concerned with the prompt detection and management of mental concerns such as depression and anxiety by increasing individual and collective awareness of stress and improving stress management skills (Cooper, Dewe, & O'Driscoll, 2002). Stress education and stress management courses can serve as a useful function in helping individuals recognize and deal with symptoms of stress. Education about stress over the long term can also help an individual develop his/her coping skills and stress resilience.

Tertiary prevention is concerned with the rehabilitation and recovery process of those individuals who have suffered, or are suffering from, mental or physical illness as a result of stress (Cooper & Cartwright, 1986). One example of a workplace-based professional counseling is the employee assistance program (EAP). EAPs are the most common form of stress management because they can be easily introduced to deal with employee distress.

EAPs were originally introduced to help with alcohol-related problems at work, but have since assumed a significantly wider focus. Berridge and Cooper recently defined EAPs as:

A programmatic intervention associated with the work context, usually at the level of the individual employee, using behavioral science knowledge and methods for the control of certain work-related problems (alcoholism, drug abuse,

and mental health) that adversely affect job performance, with the objective of enabling the individual to return to making her or his full contribution and re-attaining fully functioning in personal life. (1993, p.89)

Services such as EAPs usually provide employees with a confidential 24-hour telephone contact line. EAPs provide counseling, information and/or referral to appropriate counseling treatment and support services. These programs help to facilitate and monitor employees who have suffered a stress-related illness. Like other stress management programs, counseling services can be particularly effective in helping employees deal with workplace stressors that cannot be changed and non-work related stress (i.e., bereavement, marital breakdown, etc.), but which nevertheless tends to spill over into work life (Cooper & Cartwright, 1997).

Even though EAPs are gaining popularity within the work environment, recent research suggests that such plans will have little impact if the individual is allowed to return to the same type of work environment and its indigenous stressors that he/she faced in the beginning (Cooper & Cartwright, 1997). Treatment plans that call for lifestyle and health promotion activities appears to be effective in the short-term, but does not appear to be effective in moderating the stressor-strain linkage. According to Ivancevich and Matteson (1988), after a few years, 70% of individuals who attend such programs revert to their previous lifestyle habits.

There are some big challenges facing the role of EAPs in today's organization. One of the challenges facing most organizations is to increase the awareness to work stress in general and stress prevention in particular. It is important to educate the organization and individuals that stress prevention is beneficial to both parties, and that failure to acknowledge the existence of stress in the workplace can be detrimental to both sides. A second challenge facing EAPs in the future is the development of a program that is theoretically based. Too many EAPs are established without theory or assumptions about the relationship between work and stress and therefore the extent to which stress interventions can reasonably be expected to be successful (Briner & Reynolds, 1999). EAPs must pay careful attention to the theories of stress in order to develop a sound evaluative process and factors that will contribute to a successful approach in dealing with stress in the work place.

Secondary and tertiary level interventions have a useful role to play in stress prevention, but as "stand alone" initiatives, they are not complete (Cooper & Cartwright, 1997). Although there has been little research that evaluated the impact of primary level interventions on employee health and well-being, what does exist has been consistently positive, particularly in showing the long term beneficial effects (e.g., Jackson, 1983; Quick, 1979; Seligman, 1991). Treatment for the most part, may be more visible and easier than prevention, but it may only be an effective short-term strategy (Cooper & Cartwright, 1997). Relying on

secondary and tertiary level interventions is likely to be insufficient in maintaining employee health due to the reactive and recuperative nature.

Personality Differences

Five Factor Model of Personality

Since the emergence of psychology in the work place after WWI, psychologists have incessantly tried to categorize people, and using those categorizations, predict behaviors in various situations at work. However, all the efforts in using personality variables to predict behaviors at work and job performance have shown weak and/or mixed results from 1965 through the 1980s (e.g., Ghiselli, 1973; Guion & Gottier, 1965; Schmitt, Gooding, Noe, & Kirsch, 1984). In the 1990s, a resurgence of personality as a predictor for job performance began to reemerge. Hollenbeck and Whitener (1988) attributed the low validity of earlier research to theoretical inadequacies and methodological problems. More specifically, with the lack of a generally accepted taxonomy of personality, researchers were measuring different things using similar labels. It is possible that a few of the researchers were indeed measuring the same variables. Therefore, research using personality variables were causing immense amounts of inconsistencies and low levels of predictability in the literature. In the early 1990s, the five-factor model (FFM) of personality has emerged as a robust taxonomy of personality and gained acceptance as a

general framework for personality research (Barrick & Mount, 1991; Costa & McCrae, 1988; Digman, 1990).

Theoretical Background

The rise of the FFM began to emerge after McDougall (1932) stated that, “Personality may be broadly analyzed into five distinguishable but separate factors...” (p. 15). It was shortly after McDougall’s statement in 1934 when Thurstone described a study in which raters were provided a list of 60 trait adjectives “in common use for describing people”. What he found was that 5 common factors accounted for most of the inter-correlations. About 10 years later, Cattell (1943, 1948) came out with a relatively complex taxonomy of individual differences that consisted of 16 primary factors and 8 second-order factors. However, later researchers were unsuccessful in repeating those findings by Cattell, but instead found that the 5 factor model accounted for the data quite well (Fiske, 1949; Tupes, 1957; Tupes & Christal, 1961). Over the years, researchers (Goldberg, 1981; Norman, 1963) used similar lists of adjectives and found supporting evidence for the results found by Thurstone (1934).

Recently, McCrae and Costa (1987) and Costa and McCrae (1992) demonstrated that the FFM accounted for most of the variance in both self-ratings and personality inventory responses. Most literature and researchers have labeled the five factors as the FFM, or more specifically: Extraversion (Positive Affectivity or Surgency), Emotional Stability (Neuroticism or Negative

Affectivity), Agreeableness, Conscientiousness (Constraint), and Openness to Experience (Culture or Intellectual). The FFM is fairly consistent within adult populations and is associated with predicted behavior. Furthermore, researchers have found this construct to be fairly stable throughout the life span (Costa & McCrae, 1994; McCrae & Costa, 1987).

The FFM of personality was developed primarily from an empirical rather than a theoretical perspective. The FFM was developed using two primary methods - the lexical tradition, where thousands of personality descriptions were chosen from the dictionary and factor analyzed; and secondly, the factor analysis of existing personality measures. The existence of the FFM of personality has been shown in many of the dominant personality inventories, including the Eysenck Personality Inventory, the California Personality Inventory, the Myers-Briggs Type Indicator, the Minnesota Multiphasic Personality Inventory, and in the 16PF (Digman, 1990; Gerbing & Tuley, 1991).

Meta-analysis of the FFM has consistently found criterion-related validity of the five personality traits with individual performance (Barrick & Mount, 1991; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Tett, Jackson, & Rothstein, 1991; Wiggins & Pincus, 1992). The FFM provides a comprehensive framework from which to examine personality and its relationship to individual performance. The results from the studies supports Hogan, Hogan, and Roberts' (1996) argument that competently developed personality measures can serve as valid

predictors of work performance and particularly in making employment decisions. Each dimension of the FFM is briefly described in the following sections:

Agreeableness. Agreeableness, or Likeability, has also been referred to as Friendliness or Social Conformity by researchers. Individuals with high levels of agreeableness tend to be soft-hearted, trusting, courteous, flexible, good-natured, and cooperative. Agreeableness has been found to be a valid predictor for occupations involving interpersonal skills (Barrick & Mount, 1991).

Agreeableness has also been associated with interpersonal dimensions of performance in several settings: adapting to changing work environments (Piedmont & Weinstein, 1994); performance ratings among astronauts (Rose, Fogg, Helmreich, & McFadden, 1994); and customer service orientation (Frei & McDaniel, 1998).

Conscientiousness. One trait consistently associated with individual performance is conscientiousness, defined as a person who is dependable, scrupulous, careful, and meticulous. In addition, this trait reflects volitional variables such as hardworking, achievement-oriented, and persevering (Digman, 1990). Research has linked conscientiousness with several job performance criteria: problem-solving orientation to coping with stress (Vickers, Kolar, & Hervig, 1989); sales performance (Barrick, Mount, & Strauss, 1994); volume of sales and supervisor rating of sales success (Barrick, Mount, & Strauss, 1993); and voluntary turnover among truck drivers (Barrick & Mount, 1996).

Extraversion. Extraversion is a person's tendency to be more externally and objectively focused toward the world around them. They are more concerned with other people and the world around them, and are usually more active, outgoing, and sociable. Traits frequently associated with extraversion include being sociable, gregarious, verbally fluent, assertive, skilled in play and humor, congenial, affiliative, being active, and be energized by being around people.

Emotional Stability (Neuroticism). Emotional stability refers to an individual's chronic level of emotional adjustment and instability; high neuroticism identifies individuals prone to psychological distress (Costa and Widiger, 1994). Traits commonly associated with this factor includes being anxious, depressed, worried, and may be indicative of the individual's ability to function effectively under conditions of job pressure and stress. Emotional stability is correlated with the tendency to engage in various healthy and unhealthy behaviors and may contribute to the development of physical and mental illnesses (Costa and McCrae, 1987).

Openness to Experience. Sometimes interpreted as intellect or culture, this trait is commonly associated with being imaginative, cultured, curious, original, broad-minded, and intelligent. Individuals high in this trait are characterized as having a broad and deep awareness and a need to explore experiences for deeper meanings (McCrae & Costa, 1991). Openness is the most controversial of the FFM factors due to the difficulty in defining the

construct. However there is abundant empirical support for the construct (i.e. Barrick & Mount, 1991; McCrae & Costa, 1985,1994; and Digman, 1990). Openness has been shown to predict training proficiency criterion relatively well (Barrick & Mount, 1991). The openness factor also shows consistent benefit in customer service jobs (Hurtz & Donovan, 2000) as well as job performance in unique and unfamiliar work settings where being accepting of new ideas, behaviors, and learning would prove advantageous, such as a US-based Japanese manufacturing plant in the Appalachian southeast (Bing & Lounsbury, 2000).

Five Factor Model of Personality and Stress

By far, the most research on occupational stress has focused on the environmental conditions by which job burnout is produced. More specifically, many studies (e.g., Cordes & Dougherty, Perlman & Hartman, Schaufeli and Enzmann, 1998) have identified the impact of job-burnout to a range of job characteristics (e.g., role ambiguity, role conflict, chronically difficult job, high demands, low resources).

The question remains however, why two individuals in very similar jobs and environments would report different levels of stress, exhaustion, and achievements. Researchers proposed that stress and symptoms of burnout are caused by a combination of environmental as well as individual factors (Savicki and Cooley, 1983).

Kahill (1988) reviewed the literature on stress and burnout concluded that the influence of individual characteristics has largely been ignored. More than a decade after Kahill's (1988) review, this same gap still exists in the literature (Zellars, Perrewe, & Hochwarter, 2000). From previous research in psychology, as well as common sense, it can be argued that individuals appear to respond differently to their environments. Still, the role of personality differences and its effect on the environment has been largely ignored (Kahill, 1988).

The few studies that have examined the relationship of personality to stress and burnout have been incomplete, using only a few traits. Brookings et al., (1985) found that female workers in the human services field experience a higher level of burnout when mixed with an external locus of control and lower self-esteem. In a study of 105 elementary school teachers and 122 junior high school teachers, high workaholism, and Type A personality was found to correlate with burnout factors (e.g., high depersonalization, high emotional exhaustion, Nagy & Davis, 1985). In a similar study, Langemo (1990) found that hardiness was positively correlated with personal accomplishment and negatively correlated with exhaustion and depersonalization in 287 female nurse educators. The weak and inconsistent findings of these few studies may be partially due to the failure to employ a comprehensive model of personality such as the FFM.

In a recent field study, Zellars et al. (2000) examined the extent to which dimensions of an individual's personality have differential effects on the 3 components of burnout (emotional exhaustion, depersonalization, and diminished

personal accomplishment). The study examined job stressors such as role conflict, role ambiguity, and role overload. Personality dimensions were measured using the NEO Five-Factor Inventory (NEO-FFI) developed by Costa and McCrae (1992). The three components of job burnout were measured using the Maslach Burnout Inventory (Maslach & Jackson, 1981). The participants in the study included 169 nurses (24-64 yrs old) working in a metropolitan hospital in the southeastern United States.

Results from this study suggested that personality explains additional variance in job burnout after considering for the job stressors that previously was the focus of studies on stress and burnout. Another important finding of the study is that the dimensions of personality appear to be differentially related to the three components of burnout; neuroticism was significantly associated with emotional exhaustion. While high levels of agreeableness were negatively associated with depersonalization of one's patients, extraversion was associated with expecting less depersonalization and perceiving fewer personal accomplishments. However, openness and conscientiousness were not significantly associated with the components of burnout. The authors suggest that methodological concerns were to blame. Most importantly, this study suggests that research is warranted to examine the antecedents of burnout using personality variables.

Although studies have been done in the examination of stress and personality, the relationship has largely been ignored. One cause may be due to

conventional wisdom that burnout is a problem of the individual. People would argue that the person who burns out is trying too hard and doing too much, whereas others believe that the weak and incompetent burn out (Maslach, 2003). In general, research has not been able to consistently demonstrate the link between personality and burnout (Makikangas & Kinnunen, 2003). The direction of the research has been largely focused on the argument that burnout is more a function of the situation than the person (e.g., Schaufeli & Enzmann, 1998).

The current study seeks to add to the body of literature that examines the effects of personality on stress. This study will also introduce optimism as a personality variable that can add variance to the prediction of stress. Theoretically, optimism can help an individual buffer and reduce the amount of stress in one's life. Therefore, an individual's chances of job burnout can be greatly reduced.

Optimism

The concept of optimism as part of human nature can be found as far back as the early 17th century with the philosophical writings of Rene Descartes (Domino & Conway, 2001). However, it wasn't until the latter part of the 20th century that optimism was treated as a personality trait. Optimism can be considered as a cornerstone of human advancement and development because optimism gives us not only a goal we can strive for, but also the imagination to dream of goals that may otherwise seem improbable.

Recent years have seen the growth of interest in optimism as a personality characteristic with important implications for physical and emotional health (Seligman & Csikszentmihalyi, 2000). Dispositional optimism, defined as generalized expectancies of positive versus negative outcomes, has been proposed as a factor that may buffer (or reduce) the debilitating effects of stress (Scheier & Carver, 1985, 1992). They believe that a person's level of optimism/pessimism either leads to continued efforts to attain goals or leads to giving up.

Optimism, construed as a stable personality characteristic, has important implications for the manner in which people regulate their actions (Scheier & Carver, 1985). Optimistic style is described as having the propensity to make specific, unstable, and external attributions for negative outcomes and global, stable, and internal attributions for positive events (Abramson, Seligman, & Teasdale, 1978; Peterson & Seligman, 1984). Along those points, optimistic individuals exhibit an illusion of control, or the belief that they affect outcomes over which they may have no true control (Golin, Terrell, & Johnson, 1977). However, this sense of control allows the individual to be more confident and self-assured when going into a situation.

Based on Scheier and Carver's (1985) model, various studies have found optimism to be related to greater psychological and physical adjustments (Peterson, 2000). The qualities of optimism make it attractive to examine as a buffer for stress because optimism is a direct representation of the motivation,

drive, and perception of a person and his/her work (Scheier, Carver, & Bridges 2001). Although researchers have focused on dispositional explanations for stress outcomes, there is relatively little research exploring the relationship between stable personality differences and stress and how this relationship influences the individual at work (Long 1993). As noted above, optimism may be an important predictor for occupational stress and burnout in individuals.

Theoretical Background

In the past, psychology has examined various types of behaviors from a treatment perspective. More specifically, the focus has often been on fixing existing problems and examining pathology. However, there is a growing interest in the “positive” aspects of behaviors as potential barriers to stressors.

According to Folkman and Moskowitz (2000), researchers are examining the positive outcomes of stress and the antecedents that predispose individuals to evaluate a stressful event more as a challenge. One personality variable that has received attention as a positive component of psychology is optimism.

Throughout history, optimism has been a particularly debatable area in psychology and can be approached from two opposing viewpoints. One view approaches optimism as a fundamental part of human nature, to be either praised or condemned. In 1928, Freud proposed that optimism helps make civilization possible, but that optimism is illusory and results in the denial of reality. Aaron Beck (1967) developed his approach to and treatment of

depression asserting that depression was a cognitive disorder characterized by pessimism and hopelessness. He described people with depression as illogical. Therefore, people who are not depressed are logical. These approaches eventually gave way to views of positive illusions and people's tendency to view themselves in the best possible light as a sign of well-being (Taylor, 1989). Lionel Tiger (1979) proposed that optimism is one of our most defining and adaptive characteristics that may have actually driven human evolution.

The second and opposing viewpoint treats optimism as an individual difference. At the same time optimism was being discussed as human nature, other psychologists were addressing optimism as a characteristic people possess to varying degrees. One major precursor in leading to psychology's interest in optimism as an individual difference was Julian Rotter's (1966) social learning theory and especially his theory on generalized expectations (locus of control and trust) which legitimized an approach to personality in terms of broad expectancies about the future. Michael Scheier and Charles Carver (1992) identified a popular approach to optimism as an individual difference and referred to it as *dispositional optimism*. Dispositional optimism is defined as the global expectation that good things will be plentiful in the future and bad things scarce (Scheier & Carver, 1992). Dispositional optimism describes all realms of human activity in terms of goals, and people's behavior entails the identification and adoption of goals and the regulation of action to reach these goals (Scheier, Carver, & Bridges 2001). Scheier & Carver (1985) measure dispositional

optimism with a brief self-report questionnaire called the Life Orientation test (LOT). Results from the LOT show that dispositional optimism is linked to desirable outcomes and in particular to active and effective coping (Scheier, Weintraub, & Carver, 1986).

A third popular approach to optimism as an individual difference comes from Martin Seligman and colleagues. Seligman and his colleagues approach optimism in terms of how a person explains the causes of bad events, what they termed “*explanatory style*” (Abramson, Seligman, & Teasdale, 1978; Seligman, Abramson, Semmel, & von Baeyer, 1979; Buchanan & Seligman, 1995). Seligman (1991) claimed that each person has a style seeing causes, and will usually apply it to their current situation. An optimistic person will explain bad events in a circumscribed way, with external, unstable, and specific causes, whereas pessimistic persons will explain unfavorable events as internal, stable, and global. Explanatory style is typically measured with a self-report questionnaire called the Attributional Style Questionnaire (ASQ; Peterson, et. al. 1982). This notion of explanatory style emerged from attributional reformulation of the learned helplessness model (Abramson, et. al., 1978).

Learned helplessness, or extreme pessimism, is a learned behavior that leads a person to think that present actions will have no effect on future results. The original model of learned helplessness proposed that after experiencing uncontrollable aversive events, animals and people become helpless – passive and unresponsive – presumably because they have “learned” that there is no

contingency between actions and outcomes (Maier & Seligman, 1976). This type of learning develops the scheme in an individual that future outcomes will be unrelated to present actions. This type of generalized expectation later produces helplessness. On the other hand, optimism implies the opposite. While pessimism is associated with and leads to incurring of negative outcomes, optimism is associated with and leads to securing of positive outcomes (Scheier & Carver, 1985, 1992).

Another approach to the possibility that optimism has important behavioral consequences derives in a straightforward manner from a rather general model of behavioral self-regulation (Carver & Scheier, 1981; Scheier & Carver, 1982). The control theory of self-regulation focuses on both negative and positive components of cognitive expectancies (Carver & Scheier, 1981). Specifically, the theory proposes that difficult or stressful situations can produce negative emotions when negative outcome expectancies are present (Carver & Scheier, 1981, 1990; Scheier & Carver, 1982). The theory also proposes that individuals who display positive outcome expectancies are better able to adapt to the negative consequences of stress (Carver & Scheier, 1990).

An individual's model of behavioral self-regulation is relatively stable, and the generalized expectancies that one will experience either positive or negative outcomes in life may also be consistent (Scheier & Carver, 1992). The control theory views optimism and pessimism as separate poles, so the absence or abundance in one pole does not translate to the opposite of the other.

The concept of dispositional optimism is also partly rooted in the expectancy-value theory (Scheier and Carver, 1985; Seligman, 1991). The motivational effect of optimism on behavior is coupled with an impact on affect. Anticipation of continued effort results in positive mood, while giving up is associated with emotions such as anger, frustration, and shame. Optimists tend to continue to strive towards a goal when faced with adversity, while pessimists will cease from striving when faced with adversity.

Recently, Peterson (2000) introduced a distinction between two types of optimism. Peterson (2000) differentiates between big optimism, large and less specific expectations, and little optimism, specific expectations about positive outcomes. The big versus little distinction formulates a model of optimism that has several levels of distinction. Big optimism may be a biological tendency that produces a general state of vigor and resilience. On the other hand, little optimism may be the product of idiosyncratic learning that predisposes specific actions that are adaptive in concrete situations (Peterson, 2000). The two types of optimism are no doubt correlated, but it is important to distinguish the difference between the two. The reason for this is that the determinants of the two may be different, and ways of encouraging them may therefore require different strategies (Peterson, 2000).

Trying to compromise all these approaches and theories might lead one to a muddled understanding of optimism and its future in research. Lionel Tiger (1979) proposed one of the most useful definitions of optimism: “a mood or

attitude associated with an expectation about the social or material future-one which the evaluator regards as socially desirable, to his advantage, or for his pleasure” (p.18).

Optimism has long been linked with several correlates such as good health (Peterson, 1988; Peterson, Seligman, & Vaillant, 1988), immunological robustness (Kamen-Seigel, Rodin, Seligman, & Dwyer, 1991; Scheier et al., 1999), health-promoting behavior (Peterson, Seligman, Yurko, Martin, & Friedman, 1998), and ability to cope with stress (Jex & Spector, 1996; Khoo & Bishop, 1997; Peacock & Wong, 1996).

Research has suggested that dispositional optimism has implications for the way individuals deal with stress (Scheier & Carver, 1985; Scheier, Weintraub, & Carver, 1986). Cross-sectional research examining the effect of optimism on events generally considered to be stressful have found that higher levels of dispositional optimism were associated with higher levels of well-being among individuals who provided care to spouses with Alzheimer’s disease (Hooker, Monahan, Shifren, & Hutchinson, 1992), provided care to cancer patients (Kurtz, Kurtz, Given, & Given, 1995), or were at risk for Acquired Immunodeficiency Syndrome (AIDS; Taylor et. al., 1992).

Recent research suggests that the risk for occupational stress and burnout may be largely a function of individual differences in workers’ dispositional characteristics (e.g., optimism) (Chang, Rand, & Strunk, 2000). There is reason to believe that optimism may influence an individual’s risk for job burnout via the

influence of expected positive outcomes which leads to reduced stress (Chang, Maydeu-Olivares, & D'Zurilla 1997).

Optimism in the Work Place

Optimism has been conceptualized and measured in several ways. Optimism has been linked to effective problem solving, and to academic, athletic, military, and occupational success (Peterson, 2000). On the other hand, pessimism foreshadows depression, passivity, failure, and apathy. These qualities are surprisingly polar, and lead us to believe that optimism can play a large role in determining the success/failure of an employee in an organization.

Along those same lines, research has recognized the importance of optimism as a dimension of individual difference that influences the behavior of individuals in terms of productivity and other work variables (e.g. Chemers, Watson, & May, 2000; Helton, Dember, Warm, & Matthews, 1999; Radhakrishnan, Arrow, & Sniezek, 1996). For example, Strutton and Lumpkin (1993), in a study of optimism in relation to coping strategies, surveyed 101 salespeople from three firms in the textile (n =41) and communication technology (n = 60) industries using Scheier & Carver's (1985) LOT. Results showed optimists to be more likely to use problem-focused coping tactics, while pessimists used more emotion-focused coping. The research speculated that optimistic sales persons were more likely to perceive a given goal as attainable, and when faced with sales stressors, optimists were more likely to engage in

Careful analysis and to strengthen their efforts aimed at removing the stressor. Results were interpreted as suggesting that pessimistic salespeople are more likely to pull back from the stressful situation and shut down in a manner that would be harmful to their performance and the organization.

Seligman & Schulman (1986) examined the relationship of optimism and work performance in a study of 104 insurance sales agents. Optimism was operationalized as a person's explanatory style – how he or she explained the causes of bad events. Those who explained bad events with external, unstable, and specific causes are described as optimistic, whereas those who favored internal, stable, and global causes are described as pessimistic. Results showed that sales agents with low levels of optimism made fewer sales attempts, were less persistent, and had a higher level of quitting. Salesmen with high levels of optimism sold more insurance than those less optimistic and remained in their job at twice the rate. The better performance by optimists may reflect their ability to cope with stressors (Scheier, Weintraub, & Carver, 1986).

In a study of military cadets ($n = 96$), Chemers, Watson, and May (2000) examined optimism as a predictor of leadership efficacy. Chemers (1997) argued earlier that a major aspect of effective leadership is the ability to project a positive image (also Lord & Maher, 1991). All Cadets participated in an evaluated group task, the Squad Tactical Reaction Assessment Course (STRAC). Each person in an 8 to 12 person squad acted as the squad leader for two separate missions. Cadets were evaluated using the Army's Leadership

Assessment Program. Optimism was measured via the LOT (Scheier & Carver, 1987). Results showed that optimism to be strongly positively correlated with ratings of leadership efficacy by instructors, peers, and trained observers.

The effects of optimism have also been examined as related to risk for job burnout. In a study by Chang, Rand & Struck (2000), working students were used to examine the relationship between optimism and risk for job burnout. Optimism was measured via the LOT (Scheier & Carver, 1987). The General form of the Maslach Burnout Inventory was used to measure the risk for job burnout (MBI-GS: Maslach et. al., 1996). Results showed that optimism and stress were significantly correlated in a negative way with emotional exhaustion (feelings of being depleted of one's emotional resources) and cynicism (negative attitudes involving frustration from, disillusionment and distrust of organizations, persons, groups, or objects). Meanwhile, optimism was positively correlated with personal efficacy.

In most jobs today, there is a high degree of competition. Optimism can help an individual through this environment. Whether it is trying to sell a product to a customer, an idea to a manager, or trying to compete for resources against peers, we face competition everyday from every direction. The optimistic person makes the most of his/her talents because optimism helps the person to persevere. Meanwhile, a pessimistic person will let his/her own perception of inadequacies dictate their behavior and surrender to everyday setbacks.

The Present Study

Objectives of this Study

This study attempts to examine the validity of personality variables (optimism, FFM) as a predictor on perceived stress and job performance. Stress is the primary cause for burnout, and therefore the reduction of stress can theoretically reduce the rate of burnout. Results from this study will strengthen the argument on the existing literature by considering positive personality variables as an important factor to examine when discussing stress and job performance issues. In addition, this study seeks to provide preliminary evidence on the robust effects optimism can have on an individual's level of stress even after accounting for the personality traits in the FFM.

Hypotheses

The hypotheses proposed in the study are as follows:

- 1) Perceived stress will have a significant negative relationship with job performance.
- 2) The personality construct referred to as the FFM of personality will be associated with perceived stress and job performance. More specifically, individuals who score high on extraversion, agreeableness, conscientiousness, and openness will report less perceived stress and receive better job performance evaluations than their counterparts. Individuals who score low on emotional stability will report greater

perceived stress and receive poorer job performance evaluations than their counterpart.

- 3) Optimism will be significantly associated with perceived stress and job performance. More specifically, individuals who score high on levels of optimism will report less perceived stress and receive better performance evaluations than their counterpart.
- 4) Optimism will be a better predictor of perceived stress than the FFM variables. In addition, optimism will add incremental validity to predicting perceived stress after accounting for the variables in the FFM.
- 5) Optimism will be a better predictor of job performance than the variables in the FFM. In addition, optimism will add incremental validity to predicting job performance after accounting for the variables in the FFM.

Research Design

A field study of restaurant employees was conducted throughout the United States. Individuals completed a battery of questionnaires as part of a validation study being conducted by DeCotiisErhard Inc. The battery consisted of a personality measure that included the FFM of personality and optimism as well as scales measuring perceived stress. Supervisor ratings of performance were also gathered for each participant. Statistical analyses were then used on the data to determine the validity of the proposed hypotheses.

2. Method

Participants

Participants in this study consisted of employees from the restaurant industry. Specifically, individuals who work as servers, hosts, and bartenders were asked to participate in this study. Out of 450 validation packets sent out, 250 questionnaire packets (56%) were returned. After matching the questionnaire packets with performance evaluations, the final number of participants included in the study was two hundred and one restaurant employees.

The 201 participants included had completed the assessment questionnaires fully and had matching performance evaluations. The demographics of the participants consisted of 1% African Americans (N = 2), 6.3% Asian Americans (N = 12), 70.8% Caucasian (N = 136), 15.5% Hispanic (N = 24), 1% Native American (N = 2) and the remaining either indicated other, or did not indicate their race (N = 25). The total population consisted of 34.3% females (N = 68) and 65.7% males (N = 130). Of those who participated in the study, 87% were under the age of 40 (N = 174) and 10% were above the age of 40 (N = 19) with the rest not indicating their age (N = 8).

Participation in this study was strictly voluntary, and participants were able to withdraw at anytime from this study without penalty. To enhance confidentiality, all identifiers were removed from the data prior to analysis. An introduction/information letter preceded every packet that included the purpose,

process, and contact information for the validation study. Participants returned the validation package in a sealed envelope. Filling out the validation package was considered as consent to participate in the study. In analyzing and reporting of the data, only group data will be presented.

Measures

Demographics – All individuals participating in this study were asked to fill out specific demographic information (Gender, Age (above 40, under 40), and Race (African-American, Asian, Caucasian, Hispanic, Native American, and Other). Due to Equal Employment Office regulations, this information is strictly voluntary. Demographic information will only be used for research purposes and to ensure adverse impact guidelines are being followed.

Personality – FFM – Individual personality variables included in the FFM of personality will be assessed using the Employee Quality Inventory (EQI, see Appendix A). The EQI is a personality scale theoretically based on the FFM with items contextualized specifically to the service and restaurant industry. The EQI has been used for several years as a measure of personality in selecting quality employees in the service and hospitality industry.

The EQI was developed using a sorting process for each item. Industrial psychologists familiar with personality testing and the theoretical underlining of the FFM of personality (sorters) were given slips of paper, each slip containing one item. The sorters were then given the names and definitions of each of the

five factors. The sorters grouped the items into the factors where they felt the items best fit. The sorter also had the option to place any item into an 'Other' category, signifying that the item didn't fit into any of the factors. Items that were not sorted with two-thirds agreement among sorters were deleted or rewritten.

The factors and its description are listed below:

1. *Extraversion*. The tendency to seek or desire social interaction and attention. This measure consisted of 12 items. The measure was scored by averaging the sum all 12 items. Please see Table 1 for descriptive statistics (please note: All tables are located in Appendix A).
2. *Agreeableness*. The tendency to seek or desire pleasant, harmonious relationships, and to get along with others. This measure consisted of 19 items. The measure was scored by averaging the sum all 19 items. Please see Table 1 for descriptive statistics.
3. *Conscientiousness*. The tendency or willingness to comply with policies, rules, standards, and norms. This measure consisted of 19 items. The measure was scored by averaging the sum all 19 items. Please see Table 1 for descriptive statistics.
4. *Emotional Stability*. The tendency to experience the world as non-threatening and within one's own control. This measure consisted

of 20 items. The measure was scored by averaging the sum all 20 items. Please see Table 1 for descriptive statistics.

5. *Openness to Experience*. The tendency or desire to seek intellectual stimulation, variety, and change. This measure consisted of 12 items. The measure was scored by averaging the sum all 12 items. Please see Table 1 for descriptive statistics.

A norming study was conducted with a total of 3963 participants from 10 organizations in the restaurant industry, in a variety of positions, including both hourly and management personnel throughout the United States. Factor analysis results showed that the items fell into each of the 5 factors (DeCotiisErhard, 2000). Statistical analysis was used to determine the internal consistency of each factors of the measure, including reliability (extraversion, $\alpha = .89$; agreeableness, $\alpha = .86$; conscientiousness, $\alpha = .82$; emotional stability, $\alpha = .91$; openness to experience, $\alpha = .65$) and content validation. The scales were validated using criterion measures and divergent scales.

The EQI asks participants to what degree they agree or disagree with the statements provided. Participants had 6 choices to answer each statement: 1 – *strongly disagree*, 2 – *disagree*, 3 – *slightly disagree*, 4 – *slightly agree*, 5 – *agree*, 6 – *strongly agree*. The reliability statistics for the

Personality – Optimism – Optimism was measured using the Global Attribution Outlook Scale (GAOS, see Appendix B). The GAOS is designed to

measure an individual's level of positive outlook on specific as well as global situations. The GAOS is theoretically based on the dispositional optimism literature by Scheier & Carver (1985, 1987). Specifically, the GAOS measures an individual's ability/willingness to remain positive in stressful situations. In order to increase the content validity of present optimism scales, the GAOS was developed to contextualize more specific work examples and items pertaining to the work environment. In a recent study, the GAOS was shown to correlate with the popularly used Life Orientation Test (LOT, Scheier & Carver, 1987) at $r = .74$, $p < .01$ (Chan, 2003). The GAOS is a 12-item assessment on a 6-point Likert scale. The Cronbach's alpha has been consistently acceptable (overall average $\alpha = .82$) in several previous studies done with this scale. In the present study, the Cronbach's alpha falls within the acceptable average with $\alpha = .81$.

Stress Measure – Perceived Stress Scale – It is a common assumption among health researchers that the impact of “objectively” stressful events is, to some degree, determined by one's perception of their stressfulness (e.g., Lazarus, 1966, 1977). As a general measure of stress in the employees' life, the Perceived Stress Scale (PSS) was used (see Appendix C). The PSS measures the degree to which situations in an individual's life are appraised as stressful (Cohen et al., 1983). The instrument was designed to evaluate the degree to which respondents found their lives specifically unpredictable, uncontrollable, and overloading. There has been extensive normative data collected on over 2,000 respondents using the PSS (Cohen, 1999). The coefficient alpha reliability

for the PSS is stable at approximately $\alpha = .86$ (Cohen et al., 1983). The scale is strong psychometrically and relates to relevant outcomes in expected ways. The PSS contains 14 items on a 5 point Likert scale ranging from 0 = *never*, 1 = *almost never*, 2 = *sometimes*, 3 = *fairly often*, and 4 = *very often*. In the current study, the Cronbach's alpha falls in the average with $\alpha = .85$.

Performance Dimensions – Performance dimensions used to evaluate participants were developed by DeCotiisErhard Inc. tailored specifically for each organization (see Appendix D). Based on the customer's vision, culture, principles and/or beliefs, the performance dimensions are developed to measure the criteria that are important to the organization. The performance items were evaluated on a 6 point Likert scale format with 1 being the worst and 6 being the best. For this specific customer, the following 7 performance dimensions were measured; dedication, teamwork, self-responsibility, winning attitude, fit, quality of operations, guest promises/service. Previous performance evaluations structured in similar formats have yielded strong reliabilities ranging between $\alpha = .86$ to $\alpha = .93$. In the current study, individual performance rating on the 7 performance dimensions were consolidated and reported as one overall performance rating score. Results showed a very strong overall coefficient alpha of $\alpha = .99$.

Procedure

This field study was conducted on research samples located throughout the United States. In all cases, permission was granted by the corporate

headquarters to conduct the study. Permission was also received from DeCotiisErhard Inc. to use the data for this dissertation. The procedure and scope of the study have both been understood and approved by the organization.

Boxes of questionnaires were shipped to the managers of each restaurant on a previously agreed date. Each questionnaire packet included a personality questionnaire (EQI, GAOS), perceived stress scale (PSS), performance appraisal forms for each participant, and other scales included in the validation study. The packet also included a letter stating the purpose of the study, why it is being conducted, who is involved, and confidentiality of the data. Managers of each restaurant were asked to pass out a packet to each employee. The employees had 2 weeks to complete and return the packet in a sealed envelope. Before returning the packets back to DeCotiisErhard Inc., managers were asked to complete performance appraisal forms for every employee in his/her restaurant (in order to keep employee confidentiality, managers are asked to complete one for everyone so they do not need to look at the packets).

When the data were returned to DeCotiisErhard Inc., only specific persons involved in the validation project examined the data. The data were reported as group data with no links to specific restaurants or individuals in all reports. A technical report was provided to the customer on the exact procedure, analysis, and results from this process.

3. Results

Data Analysis

All statistical analyses were conducted using the SPSS statistical package version 11.5. In this study, the alpha level for significance was .05. Hypothesis 1 stated that perceived stress will have a significant negative relationship with job performance. Results from a Pearson correlation give evidence to support the hypothesis with the correlation between perceived stress and job performance $r = -.18$, $p < .05$ (see table 2). More specifically, individuals who reported high levels of stress tended to receive lower job performance ratings.

Hypothesis 2 proposed that the FFM personality factors were significantly correlated with perceived stress and job performance scores. A Pearson correlation was used in the analyses to gather support for the hypothesis. Correlation and descriptive statistics between the FFM, perceived stress, and job performance are shown in Table 3. As the table shows, results only partially support the hypothesis. The FFM personality factors were all significantly correlated with perceived stress at $p < .01$. Within the factors of the FFM, Agreeableness, Conscientiousness, Extraversion, and Openness to Experience all had a negative relationship with stress while Emotional Stability had a positive relationship with stress.

When examining the relationship between the FFM and job performance, only agreeableness ($r = .19$, $p < .05$) and conscientiousness ($r = .20$, $p < .05$) showed a significant relationship with job performance. The results indicate that

although all five variables in the FFM has a strong relationship with perceived stress, only 2 variables (agreeableness, conscientiousness) were correlated with job performance.

Hypothesis 3 proposed that individual scores on optimism will be significantly related to perceived stress and job performance. As shown in Table 4, results support the hypothesis that optimism is indeed significantly related to perceived stress and job performance. First, there was a significant negative relationship between perceived stress and reported optimism $r = -.67, p < .01$. More specifically, individuals who scored high on levels of optimism tended to report less stress than those individuals classified as pessimistic. However, there was a significant positive relationship between optimism and job performance $r = .22, p < .01$. Individuals who reported higher levels of optimism also tended to receive higher job performance ratings.

Hypothesis 4 suggested that optimism will be more highly correlated with perceived stress than factors in the FFM. As shown in Table 5, a simple examination of the correlation table illustrates that optimism clearly shows higher correlations when compared with the FFM on perceived stress. In examining the relationship with job performance, optimism only shows a slight increase when compared with agreeableness and conscientiousness (only significant dimensions from the FFM).

The second part of the hypothesis proposed that optimism can add incremental validity to predicting perceived stress and job performance after

accounting for the FFM. To provide evidence to support this hypothesis, a regression analysis was conducted. As shown in Table 6, this hypothesis was supported by the regression analysis with perceived stress as the dependent measure. In the model using only the FFM factors, $r^2 = .54$, $p < .01$. In the second model, optimism was added to the model with a yield of $r^2 = .82$, $p < .01$ with a Δr^2 of .28 and $\Delta F = 50.43$, $p < .01$. To summarize, the results indicates that optimism is a viable variable when examining perceived stress. Even after accounting for the variance presented by variables in the FFM, optimism still increased the predictability of the model.

Similar to hypothesis 4, hypothesis 5 proposed that optimism will have a stronger relationship with job performance than the FFM. As shown in Table 5, a simple comparison of the relationships supports the hypothesis that optimism does have a stronger relationship with job performance compared with the FFM. Hypothesis 4 also proposed that optimism can add incremental validity to job performance after accounting for the variables in the FFM. In this analysis, only agreeableness and conscientiousness were used to represent the FFM due to lack of significant relationship between openness, emotional stability, and extraversion with job performance (see Table 7). A regression analysis using the enter method was once again employed to provide evidence to support the hypothesis. Results from the regression model do not support the hypothesis that optimism adds incremental validity to predicting job performance after accounting for variables from the FFM (agreeableness, conscientiousness).

After accounting for agreeableness and conscientiousness, the regression model was not significant ($p > .05$) with an $r^2 = .04$. After adding the optimism variable, the model remained insignificant with an $r^2 = .05$. The result from the present study failed to support the hypothesis that optimism can add incremental validity to job performance rating.

4. Discussion

The present study was conducted to integrate and expand on previous research examining the relationship between personality, stress, and job performance. More specifically, this study attempted to examine the validity of personality variables (optimism and FFM) as predictors of stress in general and job performance in particular. Generally speaking, it was hypothesized that individuals who scored high on levels of optimism would display less stress and receive higher job performance ratings than those who were less optimistic.

Consistent with Scheier and Carver's (1985) model, individuals who have an optimistic predisposition have the tendency to exhibit behaviors that will allow them to be more positive and self-assured going into any situation. Even when an unfavorable event happens, an optimistic individual has the ability to interpret the situation as temporary, specific, and to external attributions thus allowing the individual to continue to exhibit the belief that their actions affect certain outcomes. This perception of the world allows the individual to continually strive for success. Based on previous research on stress (e.g., Bromet et al., 1992; Cartwright and Cooper, 1997; Kahn & Byosiene, 1992; Quick, 1998) several hypotheses were developed to add further support as well as advancing the understanding between the link of personality, stress, and job performance.

Although not all hypotheses were supported by the results found in this study, four strong findings did emerge. Specifically, there is a strong relationship

between stress and job performance. In line with results from previous research (e.g. Bromet et. al., 1992; Lee & Ashforth, 1996; Cooper and Cartwright, 1997; Wright & Cropanzano, 1998), stress had a significant negative relationship with job performance within the examined population. These results give further evidence to the importance of examining stress in the workplace. Not only are the effects detrimental to the individual, but organizations will also be affected by having employees suffering from stress.

Stressed individuals can be detrimental to any type of organization. This may be especially true in the service/hospitality sector such as the restaurant industry. For example, a stressed server may be less likely to provide the care and service that is critical for the success of a restaurant. Along those same lines, a stressed server may be more likely to be discourteous or unmannerly to a customer, this one act by a single individual could be detrimental to a restaurant.

A second major finding emerged as variables in the FFM exhibited a strong correlation with the stress variable. However, only agreeableness and conscientiousness had a significant relationship with job performance. The results from the first statement can be explained by the hypothesis that personality plays a role in determining how likely an individual is to suffer from the effects of stress. As discussed in previous research, this result further adds to the body of literature that argues the motion that there are individual differences in responses to stress (e.g., Kahill, 1985; Savicki and Cooley, 1983; Zellars et. al., 2000). However, the strong relationship from all 5 variables of the

FFM opens the door to the question concerning the existence of a moderating variable between the FFM and stress and this requires further research.

With regard to the FFM and stress, agreeableness, conscientiousness, extraversion, and openness to experience all showed a significant negative correlation while emotional stability had a significant positive correlation with perceived stress. With the working population of restaurant employees that was used in the current study, agreeableness was negatively correlated with stress. Defined as friendliness or social conformity by researchers, agreeableness has been associated with the ability to be flexible, good-natured, and cooperative. This allows the individuals to gain support from those around them to help alleviate the pressures of stress. Along those lines, agreeableness has also been associated with adapting to changing work environments (Piedmont & Weinstein, 1994). This ability to adapt to an ever changing environment is especially important in restaurant positions. Individuals with higher levels of agreeableness will be much more likely to tolerate and be buffered from the effects of stress.

Results also show conscientiousness to have a negative correlation with stress. An individual who is conscientious is defined as being dependable, careful, and meticulous. Being conscientious has also be associated with better problem-solving abilities in an individual. As previous research has suggested, the ability to be careful and meticulous allows the individual to avoid problems that may become stressors, and if a problem does arise, a conscientious

individual will be better suited to persevere and find solutions to alleviate the stressor. The ability to avoid problems and to problem solve allows an individual to adjust his/her environment in order to evade the effects of stress.

The tendency to be more externally focused and to enjoy being around others are characteristics of an individual high in extraversion. In the present study, extraversion was negatively related to perceived stress. This finding is similar to Zellars et al. (2000) who reported extraversion to be negatively associated with the third dimension of job burnout depersonalization. Moreover, extraverts tend to be highly motivated and driven to seek out interactions with the environment. Therefore it is plausible that they may not cognitively appraise changes in the environment as stressful but as a welcome challenge.

Openness to experience also showed a negative relationship to stress. This finding contradicts that of Zellars et al. (2000) who reported no relationship between openness and job burnout. According to Costa and McCrae (1987), individuals high on this trait tend to be imaginative, curious, and intelligent. Although there is very little research on the role of openness to experience on stress, it is possible that this characteristic may indeed be another stress buffer. Future studies are warranted.

Emotional stability, or neuroticism, was the only variable in the FFM to show a positive correlation with stress. Although not hypothesized directly, it was an expected finding. According to Costa and McCrae (1987), this characteristic is commonly associated with being worried, anxious, and depressed. With this in

mind, there is considerable evidence which associates stress with depression (e.g. (Sapolsky, 1998). Furthermore, Scheier et al. (1994) reported a significant positive relationship between neuroticism and trait anxiety. These characteristics alone will increase an individual's level of stress. The finding from the present study is in keeping with previous research on neuroticism and stress levels.

Although only 2 of the 5 factors examined in this study were related to job performance, these results are in line with previous research. When examining job performance in related sales positions, previous research has shown that conscientiousness and agreeableness are the two most prevalent factors that have been associated with job performance. Conscientiousness is most likely to be related to interpersonal dimensions of performance (e.g., Barrick, Mount, & Judge, 2001; Barrick, Mount, & Strauss, 1994; Barrick, Mount, & Strauss, 1993; Vickers, Kolar, & Hervig, 1989) because of the characteristics of a conscientious individual. The characteristics of being detail-oriented, hard-working, and persevering will naturally lead to greater success in most jobs. Along those same lines, researchers have often found agreeableness to be associated with performance in several similar job settings: customer service orientation (Frei & McDaniel, 1998; McDaniel & Frei, 1994); the ability to accomplish work-related goals and to adapt to changing work conditions (Piedmont & Weinstein, 1994) are characteristics that are universal in individuals that have high levels of job performance.

The third major finding in this research was related to the effects of optimism on stress and job performance. As was proposed in the hypothesis, optimism showed a strong negative relationship to stress. In lines with previous research (e.g., Scheier & Carver, 1985, 1992; Chang, Rand, & Strunk, 2000; Peterson, 2000), the mental perception and behavior of an optimistic individual are better able to cope with, and buffer themselves from the effects of stress. The strong relationship between the two variables adds to the body of literature on the positive effects of optimism on perceived stress.

An individual's level of perceived stress is simply how an individual interprets his/her environment and determines how stressful each event is. As Seligman (1991) has suggested, optimism creates a set of mental and behavioral frameworks that allows the individual to interpret each occurrence and situation in a more positive light. Along with the positive interpretation of events, optimistic individuals are also more likely to engage in proactive behaviors to ensure that the desired situation is achieved. Simply put, an optimistic individual not only believes that success and positive outcomes are achievable in every situation, but will engage in behaviors to ensure positive outcomes.

Although stress has independently been evaluated in terms of the FFM and optimism, no current research has shown the additive effects of combining the variables. In this explorative analysis, optimism exhibited incremental validity over variables in the FFM in a regression model to predict stress. More specifically, results showed that even after accounting for the variance from all 5

variables in the FFM, Optimism still added incremental validity to the model of predicting stress. The results provided evidence of the utility and validity of examining optimism as a predictor of stress. As optimism adds validity above the FFM, it also suggests that optimism is an individual difference that is not accounted for in the FFM, the most widely used and accepted model of personality in applied use and research.

These findings suggest that individuals with an optimistic mentality appear to have an ability to better buffer themselves from the effects of perceived stress. In addition, the findings also give evidence that the variable of optimism can add value to popularly used personality constructs (FFM) when predicting for levels of perceived stress in individuals. Although the evidence to support the notion that optimism is a good predictor of job performance is inconclusive, there is enough support in the findings to suggest that more research is justified.

In the fourth major finding of the study, results added to the existing literature on optimism and job performance. In an exploratory examination in this study, optimism was examined to determine its practical utility over the FFM in the work place in predicting job performance. Findings from the results showed optimism to have a higher correlational relationship with job performance than the FFM. By far, the FFM has been the most popularly used personality construct in the work place (Barrick, Mount, & Judge, 2001; Mount, Barrick, & 1998) for selection in relation to job performance. However, in the analysis of the data, the results failed to support the hypothesis that optimism can add

incremental validity to predicting job performance after accounting for two variables in the FFM (Agreeableness, Conscientiousness). Even though optimism has been shown to have a higher correlational relationship with job performance than variables in the FFM, the relationship was not strong enough to increase the amount of validity added to the regression model to predict job performance.

Although the results do not strongly confirm optimism as a variable that will add incremental validity in addition to the FFM when predicting job performance, the results do support previous research in the claim that optimism does have a positive relationship to higher levels of job performance (e.g., Seligman & Schulman, 1986; Schulman, 1999; Strutton & Limpkin, 1993). These results follow the optimism/pessimism model in that individuals who believe that bad events are internally, stably, and globally caused (and conversely for good events) will be less persistent after failure than those with the opposite (optimistic) views (Seligman, 1991; Seligman & Schulman, 1986).

Contribution to Current Knowledge

The present study examines the effects of optimism on perceived stress and job performance. Variables in the FFM were used as a comparison in examining the utility of using optimism over popularly used personality constructs. Optimism, construed as a stable personality characteristic, has important implications for the manner in which people regulate their actions

(Scheier & Carver, 1985). The hypotheses presented in this study seek to examine how the effects of individual optimistic style, having the propensity to make specific, unstable, and external attributions for negative outcomes effects how the individual reacts to stress.

The results from this study add to the current literature in demonstrating the utility of using optimism to predict perceived stress. This study also strengthens the theory behind using positive characteristics in order to predict individual that may be less prone to a negative condition (e.g., stress). In other words, instead of examining negative behaviors that could be the cause of a negative condition, examine positive characteristics that may help an individual buffer from the effects and prevent the negative condition from ever setting in. This may be a more valid approach as selecting for a positive trait guarantees that those individuals will have the coping strategies/buffers that will allow them to be less affected by the negative condition. On the other hand, selecting for the lack of a negative trait does not necessarily translate into those individuals having the coping strategies/buffers against a negative condition.

As previous studies have shown, stress is related to the expectation of how well an individual is able to handle the situation. If an individual's behavior is to constantly seek and perform actions that will ensure minor stressors do not grow to be major problems, the individual is much more likely to be able to buffer him/herself from the effects of stress.

The results from the current study also add to the body of research suggesting the detrimental impact of stress on both the individual and for the organization. Stress was found to have a significant relationship with job performance. It is important for organizations to examine what can be done to help alleviate stressful environments and situations that they may be putting their employees in. However, this may not be enough as was previously argued. Organizations can also help themselves by selecting for individuals who have characteristics (i.e., optimism) that may help buffer them from the effects of stress.

Overall, one major practical implication of these findings is that it is possible to identify in advance, those individuals who may be particularly suited for certain positions that entails frequent failures or rejections. The utility of the optimism variable will give organizations as well as individuals to better match up their predispositions with a specific position. This is a useful service for an organization in terms of turnover. This would especially be more beneficial for individuals as these selection criteria would steer vulnerable individuals away from positions that will have short and long term ill-effects on the individual.

Limitations and Future Research

One common limitation when doing applied research with a field sample is the lack of control over the pool of participants. Although the sample included 201 individuals in the restaurant industry from across the country, the participants

were fairly homogenous with the majority being Caucasian and under the age of 40. Future research should seek out a more diverse population in examining the utility of optimism in order to ensure the generalizability of the research across populations.

In the examination of stress, a comparison should be made between the relationship of optimism and perceived stress versus actual symptoms of occupational stress (e.g., sick days, doctor visits, etc.). Although it is argued, both here and in previous research, that the perception of stress is a better indicator of actual stress level than stress symptoms, it would be important to examine the difference in the relationship between the two pairs of variables (Cohen, et. al., 1983; Lazarus, 1966, 1977).

Accurate job performance evaluation has always been difficult to acquire. This is especially true when one individual has to evaluate a number of people. A common problem that can arise from collecting performance evaluations is the halo effect. The halo effect refers to the generalization of a favorable or unfavorable rating of an individual that is based on a single, prominent personality trait or a single event (Derlega, Winstead, & Jones, 1991). The performance rating received for each participant showed a great deal of agreement with a reliability of .99. This indicates that there was not a great deal of variation in the way supervisors were rating the job performance evaluation. Future studies should examine both qualitative and quantitative performance evaluations in examining its relationship with stress.

The results from the present study also open the door for future research in suggesting that optimism may play a moderating role between personality and stress. With the significant correlation of all 5 variables in the FFM, it suggests that although there is an individual difference, there is a moderating variable that links personality to those who are affected or not affected by stress. As future research continues to pursue the utility of optimism, it is suggested that not only should direct links be made, but also to examine optimism as something more than just a personality difference. The combination of behaviors and cognitive processes that are involved in optimism can shape how an individual reacts to an environment no matter what the underlying personality characteristics may be.

Conclusion

The present study expands the current literature on factors that may be important in the selection of individuals that are more likely to be able to buffer themselves from the effects of stress. The findings from past studies on optimism and stress has paved the way for the present study to examine the validity of using optimism as a predictor variable for stress and job performance. Results confirm the suggestion that optimism is indeed a viable variable to use when predicting stress and job performance. Future research is needed to provide more evidence for the use of optimism as a predictor of stress and job performance across populations and occupations.

There is a trend in the health sciences, both psychological and physical health, to act only when something bad has happened. In medical science, most individuals will rely on a doctor to cure his/her pains rather than practice a healthy lifestyle in order to avoid health problems. Along those same lines, employees will rely on programs such as EAPs to fix their problems instead of developing and adapting to healthy lifestyles and coping habits in the first place in order to ward off the debilitating effects of stress.

Health science has too long been obsessed with pathology and illnesses, and being only reactive to negative events only after they occur. By focusing on relieving people from sicknesses, examining what it is that makes life worth living seems to have been forgotten by the health sciences. A healthy person is not defined as a person free from disease and illness, and along those same lines, physical and mental health should not just be focused on what to do after an illness or disease has occurred. Health science should do more than merely heal injuries. Instead, health science should also seek to promote and educate individuals about healthy self-sufficient habits and traits so that an individual has the tools and knowledge to move into a path that will help buffer them from the effects of illnesses and diseases.

The examination of optimism and positive traits is one step in helping solve this issue. The results from these studies are not only logically sound, but have a great deal of practicality in their uses. Organizations can greatly benefit from the ability to more accurately select for individuals that are able to perform

under the level of stress that a certain position requires. This will greatly affect turnover, performance, and health associated costs.

The information gathered and used from research in optimism and other positive traits perhaps will most benefit the individuals. As more research is conducted on optimism, researchers are beginning to find specific strategies that can help an individual be better acquainted and learn to have a more optimistic predisposition in their mental framework. Through training, every individual can adjust their level of optimism and use it in their everyday lives (Seligman, 1991). Through the many experiences in life that fall into a gray level of totally controllable and totally uncontrollable, optimism can help an individual interpret the event positively and to set him/herself up for success. To assume the best and to act on that belief that success is attainable is the crucial result that we all strive for. By having a predisposition to succeed in our actions, an individual's optimistic beliefs can create a more positive outlook and the expectations for success can lead to self-fulfilling prophecies.

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Appendices

Appendix A:

Table 1

Descriptive Statistics for the Five Factor Model of Personality (N=201)

Dimensions	Number of Items	Scale Mean	Cronbach's Coefficient Alpha
1. Agreeableness	12	97.38	.93
2. Conscientiousness	19	100.12	.92
3. Extraversion	19	59.33	.86
4. Emotional Stability	20	90.68	.89
5. Openness	12	58.78	.83

Table 2

Correlation Coefficients for Perceived Stress on Job Performance (N = 201)

Variable	M	SD	1	2
1. Perceived Stress	35.53	8.66	1	-.18*
2. Job Performance	64.17	11.67	-.18*	1

Note. * $p < .05$.

Table 3

Correlation Coefficients on Variables in the Five Factor Model on Perceived Stress and Job Performance (N = 201)

Variable	1	2	3	4	5	6	7
1. Perceived Stress	1.00						
2. Job Performance	-0.18	1.00					
3. Agreeableness	-0.49**	0.19*	1.00				
4. Conscientiousness	-0.47**	0.20*	0.84**	1.00			
5. Extraversion	-0.42**	0.15	0.77**	0.78**	1.00		
6. Emotional Stability	0.43**	0.09	0.79**	0.75**	0.74**	1.00	
7. Openness	-0.44**	0.12	0.78**	0.72**	0.69**	0.71**	1.00

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

Table 4

Correlation Coefficients of Optimism on Perceived Stress and Job Performance

(N = 201)

Variable	1	2	3
1. Perceived Stress	1.00		
2. Job Performance	-0.18*	1.00	
3. Optimism	-0.67**	0.22**	1.00

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

Table 5

Correlation Coefficient Comparison of Optimism Versus Variables in the Five Factor Model on Perceived Stress and Job Performance (N = 201)

Variable	1	2	3	4	5	6	7	8
1. Perceived Stress	1.00							
2. Job Performance	-0.18*	1.00						
3. Optimism	-0.67**	0.22**	1.00					
4. Agreeableness	-0.49**	0.19*	0.56**	1.00				
5. Conscientiousness	-0.47**	0.20*	0.60**	0.84**	1.00			
6. Extraversion	-0.42**	0.15	0.53**	0.77**	0.78**	1.00		
7. Emotional Stability	0.43**	0.09	0.49**	0.79**	0.75**	0.74**	1.00	
8. Openness	-0.44**	0.12	0.44**	0.78**	0.72**	0.69**	0.71**	1.00

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

Table 6Incremental Prediction of Optimism and Variables in the Five Factor Model onPerceived Stress (N = 201)

	Enter	β	SE	R^2	ΔR^2	F	ΔF
1.	FFM Personality Factors - Agreeableness, Conscientiousness, Extraversion, Emotional Stability, Openness to Experience	0.12	0.02	0.29**		65.17	
2.	FFM Personality Factors Optimism	0.05 0.69	0.02 0.10	0.46**	0.17	68.00	50.43

Note. **p < .01.

Table 7Incremental Prediction of Optimism and Variables in the Five Factor Model onJob Performance (N = 201)

	Enter	β	SE	R ²	ΔR^2
1.	FFM Personality Factors- Agreeableness	0.22	0.11	0.03	
2.	FFM Personality Factors- Agreeableness Conscientiousness	0.07 0.21	0.17 0.18	0.03	0.01
3.	FFM Personality Factors- Agreeableness, Conscientiousness, Optimism	0.02 0.15 0.22	0.18 0.19 0.23	0.05	0.01

Note. **p < .01.

Appendix B:

**Employee Quality Inventory (EQI)
(82 items)**

NOTE: This scale contains confidential and proprietary information. No copies or references can be made without the written permission of DeCotiisErhard Inc.

I. AGREEABLENESS: Desire to help others and to work as part of a team; capacity to understand and get along with others (total = 19 items)

Example:

	Item
1	I enjoy helping others, even if I have to make some sacrifices.
2	I am known for being a team player.
3	My friends would describe me as someone who can easily put myself in other people's shoes.
4	It is easy for me to fit in with the people around me.
5	I generally approach situations in a good-natured manner.

II. CONSCIENTIOUSNESS: Loyalty and dedication to work and personal standards; knowledge or feelings of right and wrong (total = 19 items)

Example:

	Item
1	I keep my commitments to others.
2	People who know me well would describe me as someone who takes responsibility for my own behavior.
3	I am good at completing assignments on time.
4	I tend to be on time, prepared, and focused.
5	People who know me well would describe me as disciplined.

III. EXTRAVERSION: Being active and energetic; being verbally expressive and assertive; seeking or desiring social interaction (total = 12 items)

Example:

	Item
1	If given the opportunity, I would prefer to do something active.
2	I am generally very outspoken.
3	If I feel that someone is not treating me well, I typically let them know exactly how I feel.
4	I generally start conversations with other people.
5	I like to go to events where there are new people to meet.

IV. EMOTIONAL STABILITY: Capacity to experience the world as non-threatening and within one's control; ability to be calm, steady, and non-reactive under pressure (total = 20 items)

Example:

#	Item
1	I become nervous easily.
2	I become overwhelmed by emotions.
3	I am satisfied about my prospects for my future.
4	I rarely lose my composure.
5	I accept myself for who I am and what I am.

V. OPENNESS TO EXPERIENCE: Capacity for creative problem-solving; tendency to seek intellectual and emotional stimulation, variety, and change (total = 12 items)

Example:

	Item
1	I like to try out new ways of doing things.
2	I am interested in a wide variety of activities and subjects.
3	I try hard to see things from the other person's viewpoint, even when it is different than mine.
4	I am good at figuring out how to do things.
5	In a disagreement, I typically try to look at the situation from the other person's point of view.

Appendix C:

**Global Attitude Outlook Scale (GAOS)
(12 items)**

NOTE: This scale contains confidential and proprietary information. No copies or references can be made without the written permission of DeCotiisErhard Inc.

1	2	3	4	5	6
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

1. I expect that I will have a good day at work.
2. I have high hopes for myself in this job.
3. When I am experiencing problems at work, I can generally stay positive.
4. It is useless to try to control what will happen in the future.*
5. Things at work always work out the way I expect them to.
6. I tend to spend time dwelling when something goes badly in my life.*
7. I feel tired at work because I never get a chance to relax.*
8. I expect to be the best at what I do at work.
9. I view problems I encounter at work as "Personal Challenges" I can overcome.
10. When something bad happens at work, I feel powerless to do anything about it.*
11. I have had more good days at work than bad days.
12. I doubt that my future will be any better than now.*

* - Filler items (not scored)

Appendix D:

**Perceived Stress Scale
(14 items)**

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

1. I have often been upset because of something that happened unexpectedly.
2. I feel that I am unable to control the important things in my life.
3. I often feel nervous and "stressed".
4. I usually deal with irritating life hassles successfully.*
5. I effectively cope with important changes that occur in my life.*
6. I feel confident about my ability to handle my personal problems.*
7. I often feel things are going my way.*
8. I often find that I cannot cope with all the things that I had to do.
9. I can usually control the irritations in my life.*
10. I usually feel I am on top of things.*
11. I am often angered because of things that happened that were outside of my control.
12. I often think about all the things that I have to accomplish.
13. I have been able to control the way I spend my time.*
14. I often feel that my difficulties were piling up so high that I could not overcome them.

* - denotes reversed scored items.

Appendix E:

**Criterion Measure: Staff Members
(42 ITEMS)**

NOTE: This scale contains confidential and proprietary information. No copies or references can be made without the written permission of DeCotiisErhard Inc.

Example:

Dedication

1. Understands how our vision applies to him/her.
2. Actively lives the restaurant's vision and practices it without exception.

Teamwork

3. Performs own share of work without exception.
4. Proactively follows up with others about commitments and projects.

Self-Responsibility

5. Does exactly what he/she is supposed to do.
6. Has a "no excuses" approach to his/her own attitude, performance, and results.

Winning Attitude

7. Consistently demonstrates a "Yes, I will take care of you" attitude.
8. Treats everyday as if it were a new restaurant opening.

Fit

9. Is a superb example of our restaurant's culture.
10. Is a person I would love to have in a new store opening.

Quality of Operations

11. Strictly follows all of the restaurant's procedures (e.g., safety, sanitation, administrative).
12. Demonstrates a thorough knowledge of all menu and drink items.

Guest Promises/Service

13. Handles Guests' complaints effectively.
14. Demonstrates kindness, warmth, and caring to Guests.

VITA

Chan Fung Ming was born in Kaohsiung, Taiwan on November 4th, 1976. Shortly after Kindergarten, he moved to Hong Kong for 3 years. The next stop for him and his family was Los Angeles, California where they lived for 2 years. During that time, he attended Golden elementary school in Placentia. Fung Ming then moved to Atlanta, Georgia where his parents still resides. In Morrow, he attended Morrow elementary, middle, and high school. He graduated from Emory University in the May of 1998. In the fall of the same year, he began his graduate program at the University of Tennessee, Knoxville. He received his Master's degree in psychology in May, 2002.

At the University of Tennessee, Fung Ming worked as a research and teaching assistant. He also helped develop the Organizational Research and Consulting Center. He pursued research in the areas of optimism, stress, gender, vengeance, and marital issues. While working on his dissertation, Fung Ming moved to Colorado Springs, Colorado to intern with DeCotiisErhard, Inc, a consulting firm specializing in selection and assessment.