379
N81d
No. 4386

AN EMPIRICAL INVESTIGATION OF PERSONALITY AND SITUATIONAL PREDICTORS OF JOB BURNOUT

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Helene L. Caudill, B.I.E., M.B.A.

Denton, Texas

December, 1996

379
N81d
No. 4386

AN EMPIRICAL INVESTIGATION OF PERSONALITY AND SITUATIONAL PREDICTORS OF JOB BURNOUT

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Helene L. Caudill, B.I.E., M.B.A.

Denton, Texas

December, 1996

Caudill, Helene L., An empirical investigation of personality and situational predictors of job burnout. Doctor of Philosophy (Management), December, 1996, 180 pp., 19 tables, 1 illustration, references, 217 titles.

Empirical research exploring the complex phenomenon of job burnout is still considered to be in its infancy stage. One clearly established stream of research, though, has focused on the antecedents of the three job burnout components: emotional exhaustion, depersonalization, and personal accomplishment. In particular, situational characteristics have received a great deal of attention to date. Four situational factors: (1) role ambiguity, (2) role conflict, (3) quantitative role overload, and (4) organizational support were included in this analysis to test their significance as predictors of job burnout.

Another set of antecedents that has received far less attention in job burnout research is personal dispositions. Individual differences, most notably personality traits, may help us understand why some employees experience burnout whereas others do not, even within the same work environment. Four personality characteristics: (1) self-esteem, (2) locus of control, (3) communal orientation, and (4) negative affectivity were included to test their significance as predictors of job burnout.

An on-site, self-report survey instrument was used. A sample of 149 human service professionals employed at a large government social services department voluntarily participated in this research. The main data analysis techniques used to test the research hypotheses were canonical correlation analysis and hierarchical analysis of sets.

While role ambiguity showed no significant associations with any of the three job burnout components, the remaining situational factors had at least one significant association. Among all the situational characteristics, quantitative role overload was the strongest situational predictor of emotional exhaustion and depersonalization, while organizational support was the strongest situational predictor of personal accomplishment.

The personality predictor set as a whole showed a significant relationship with each of the job burnout components, providing strong proof that dispositional effects are important in predicting job burnout. Among all the personality characteristics, negative affectivity was the strongest personality predictor of emotional exhaustion and depersonalization, while communal orientation was the strongest personality predictor of personal accomplishment.

Comparisons between the personality and situational predictor sets revealed that personality characteristics were the stronger predictor for all three of the job burnout components. No interactions among the situational and personality predictors proved significant.

TABLE OF CONTENTS

LIST OF TABLES vi

LIST OF FIGURES viii

CHAPTER I: INTRODUCTION 1

Statement of the Problem 3
Theoretical Foundation 4
Purpose of the Research 6
Significance of the Research 7
Definition of Terms 9
    Dependent Variables 9
    Independent Variables 9
Organization of the Proposal 10

CHAPTER II: REVIEW OF THE LITERATURE 12

Historical Background 12
Definitional Issues 13
    Emotional Exhaustion 17
    Depersonalization 19
    Reduced Personal Accomplishment 20
Measurement of Job Burnout 20
    Reliability of the MBI 21
    Factorial Validity of the MBI 23
    Convergent and Discriminant Validity of the MBI 26
Theoretical Models of Job Burnout 30
    Sequence Models of Burnout 30
        Maslach and Colleagues 31
        Golembiewski and Colleagues 32
        Lee and Ashforth 33
    Predictor/Outcome Models of Burnout 34
Predictors of Job Burnout 35
    Personality Characteristics 35
        Self-esteem 38
        Locus of Control 42
        Communal Orientation 47

        Negative Affectivity....................49
        Summary of Personality Predictors....................52
    Situational Characteristics....................54
        Role Ambiguity and Role Conflict....................55
        Role Overload....................61
        Organizational Support....................63
        Summary of Situational Predictors....................69
    Situational Characteristics Versus Personality Characteristics....................71
The Person-Situation Debate....................73
Chapter Summary....................78

CHAPTER III: RESEARCH METHODOLOGY....................81

Subjects....................81
Measures....................83
    Independent Variables....................83
        Role Ambiguity and Role Conflict....................84
        Role Overload....................84
        Organizational Support....................85
        Self-esteem....................86
        Locus of Control....................87
        Communal Orientation....................88
        Negative Affectivity....................88
    Dependent Variables: Three Components of Job Burnout....................89
    Control Variables: Demographic Characteristics....................90
Procedure....................92
Data Analysis Techniques....................92
Chapter Summary....................94

CHAPTER IV: RESULTS....................95

Data Screening....................95
Demographic Characteristics....................96
Descriptive Statistics....................98
Canonical Correlation Analysis....................101
Hierarchical Analysis of Sets....................103
Post Hoc Power Analysis....................114
Chapter Summary....................114

CHAPTER V: DISCUSSION....................120

Analysis and Implications of Findings....................120
    Personality Predictors....................120

Self-esteem 121
Locus of Control 122
Communal Orientation 123
Negative Affectivity 124
Situational Predictors 126
Role Ambiguity 126
Role Conflict 127
Quantitative Role Overload 128
Organizational Support 129
Personality Versus Situational Predictors 130
The Interaction of Personality and Situational Characteristics 132
Limitations and Validity Issues 133
Statistical Conclusion Validity 133
Statistical Power 134
Reliability of Measures 134
Assumptions of Statistical Tests 135
Error Rate Problems 135
Internal Validity 135
Construct Validity 136
External Validity 140
Directions for Future Research 141
Predictors of Job Burnout 141
Methodological Issues 143
Chapter Summary 145

APPENDIX A: RESEARCH QUESTIONNAIRE 147

APPENDIX B: POWER ANALYSIS 156

REFERENCES 162

LIST OF TABLES

Table 1: Conceptual Definitions of Job Burnout........16

Table 2: Subscales of the Maslach Burnout Inventory........22

Table 3: Factorial Validity of the Maslach Burnout Inventory........25

Table 4: Summary of Relationships Between Role Characteristics and Job Burnout.......56

Table 5: Summary of Research Hypotheses........80

Table 6: Demographic Characteristics........97

Table 7: Descriptive Statistics/Intercorrelation Matrix........99

Table 8: Canonical Correlation Analysis........102

Table 9a: Results of Hierarchical Analysis of Sets for Emotional Exhaustion (Order of Entry: Demographic Variables, Situational Variables, Personality Variables)........104

Table 9b: Results of Hierarchical Analysis of Sets for Emotional Exhaustion (Order of Entry: Demographic Variables, Personality Variables, Situational Variables)........105

Table 10a: Results of Hierarchical Analysis of Sets for Depersonalization (Order of Entry: Demographic Variables, Situational Variables, Personality Variables)........106

Table 10b: Results of Hierarchical Analysis of Sets for Depersonalization (Order of Entry: Demographic Variables, Personality Variables, Situational Variables)........107

Table 11a: Results of Hierarchical Analysis of Sets for Personal Accomplishment (Order of Entry: Demographic Variables, Situational Variables, Personality Variables)........108

Table 11b: Results of Hierarchical Analysis of Sets for Personal Accomplishment

(Order of Entry: Demographic Variables, Personality Variables, Situational Variables)........109

Table 12: A Comparison of ΔR2 for Situational and Personality Characteristics..........111

Table 13: A Summary of the Association Among Job Burnout Components and Personality Characteristics..........112

Table 14: A Summary of the Association Among Job Burnout Components and Situational Characteristics..........112

Table 15: Explained Variance for Emotional Exhaustion: Contribution of Each Characteristics..........113

Table 16: Explained Variance for Depersonalization: Contribution of Each Characteristics..........114

Table 17: Explained Variance for Personal Accomplishment: Contribution of Each Characteristics..........115

Table 18: Post Hoc Power Analysis..........116

Table 19: Summary of Results..........118

LIST OF FIGURES

Figure 1: Research Model: Situational Characteristics and Personality Characteristics as Predictors of Job Burnout..................................36

CHAPTER I

INTRODUCTION

The topic of job burnout has strong appeal for both the practitioner and academic communities. Part of this appeal is due to burnout's possible links to negative organizational outcomes such as turnover, absenteeism, and lowered job performance (Kahill, 1988). Anecdotal accounts of job burnout have recently appeared in *Newsweek* (Hancock, 1995), *Fortune* (Smith, 1994), and *USA Today* (Rosenthal, 1991). These accounts portray the burned-out employee as emotionally fatigued and worn-out. These same descriptions can be found in the proliferation of academic literature on the job burnout phenomenon.

This proliferation of literature can be described as interdisciplinary, crossing into areas such as organizational behavior, human resource management, public and health care administration, nursing, industrial/organizational psychology, education, and social work. Indeed, a wide variety of subjects have been included in job burnout research, such as top management executives (Reichel & Neumann, 1993), correctional officers (Dignam, Barrera, & West, 1986), lawyers (Jackson, Turner, & Brief, 1987), nurses (Dolan, 1987), teachers (Schwab & Iwanicki, 1982), and social workers (Soderfelt, Soderfelt, & Warg, 1995).

The job burnout phenomenon has created such a strong research following that four major reviews on the topic have appeared in less than 15 years (e.g., Cordes & Dougherty, 1993; Kahill, 1988; Perlman & Hartman, 1982; Shirom, 1989). Moreover, a bi-annual edition of the *Journal of Health and Human Resources Administration* devoted exclusively to articles on job burnout has been published for over a decade. In addition, countless books on the topic have been authored by a number of key contributors to the field (e.g., Freudenberger & Richelson, 1980; Golembiewski & Munzenrider, 1988; Maslach, 1982a; Pines, Aronson, & Kafry, 1981). Even though such a vast amount of information has been written on the topic of job burnout, empirical research exploring this complex phenomenon is still considered to be in its infancy stage (Maslach, 1993).

One clearly established stream of research, though, has focused on the antecedents of job burnout. In particular, situational characteristics have received a great deal of attention to date. This is understandable due to the desire for organizations to prevent the onslaught of burnout, or to simply slow down the burnout process, by changing facets of the job or the organization itself which may be the source of the problem. Four situational characteristics: (1) role ambiguity, (2) role conflict, (3) quantitative role overload, and (4) organizational support are included in this analysis in order to test their significance as predictors of job burnout.

Another set of antecedents that has received far less attention in job burnout research is personality traits. Individual differences, most notably personality traits, may help us understand why some employees experience burnout whereas others do not, even within the same work environment. Four personality characteristics: (1) self-esteem, (2) locus of control, (3) communal orientation, and (4) negative affectivity are included here to test their significance as predictors of job burnout.

Statement of the Problem

A major assumption concerning antecedents of job burnout is that the phenomenon can be explained primarily by situational factors. Although many authors acknowledge that individual factors may affect one's predisposition to burn out and one's coping response, in general, these authors have included only demographic indicators rather than personality traits in their research models and studies (e.g., Cordes & Dougherty, 1993; Jackson et al., 1987; Maslach & Jackson, 1985).

By concentrating exclusively on situational characteristics we have ignored and overlooked what the individual brings to the burnout process. In particular, personality factors may help us to better understand what epidemiologists call host resistance, the ability of a person to withstand stressors and to function without negative effects, such as burnout (Kahn & Byosiere, 1992). Thus, it is important from both applied and academic viewpoints to determine whether all employees exposed to particular role/organizational stressors will be affected the same, or whether some will be more adversely affected than others (Parkes, 1994).

Related to the lack of studies which have included personality factors as predictors of job burnout, is the lack of studies which have taken an interactionist focus. An interactionist approach focuses on both situational characteristics and personality characteristics in their prediction of job burnout. Because job burnout is a phenomenon inherent in the workplace, an interactionist approach to its prediction seems to most accurately represent the true nature of the real world of work organizations (Schneider, 1983). Despite earlier pleas to incorporate an interactionist viewpoint (e.g., Carroll & White, 1982; Meier, 1983), Shirom (1989) notes that these pleas have not inspired systematic empirical studies. Thus, this study attempts to fill two apparent gaps in empirical research related to job burnout by (1) including personality characteristics as significant predictors of burnout, and (2) taking an interactionist approach to its prediction.

Theoretical Foundation

The primary theoretical basis for this study relies on correlate, i.e., predictor/outcome, models of burnout which theorize the causal order of the burnout process from antecedents (i.e., stressors), which then lead to job burnout (i.e., strain), which then result in negative personal and organizational outcomes. The Cherniss (1980a, 1980b) model is often credited as being the earliest and most well known of the correlate models of job burnout. In essence, the Cherniss model is based on the general theoretical framework for the study of organizational stress, where characteristics of the work setting in conjunction with characteristics of the employee are proposed to predict strains (Kahn & Byosiere, 1992). In terms of job burnout, this type of strain is considered to be psychological as opposed to a behavioral or physiological strain.

Although it is certainly important to investigate the entire burnout process, this study takes a more narrow focus by investigating only predictors of job burnout. Person-Environment fit theory provides an explanation as to why a person's well-being is affected by individual differences and the environment (Caplan, 1983). Carroll and White (1982) first urged researchers to incorporate P-E fit theory into their models of burnout. As the following formula illustrates, Carroll and White contend that the interaction of personal characteristics and environmental characteristics generates burnout: $Burnout = f\,(P \leftrightarrow E)$.

P-E fit theory parallels interactional psychology, or interactionism, which asserts that personal characteristics, more specifically personality traits, and situational characteristics interact to predict affect, cognitions, attitudes, and behaviors (George, 1992). In relation to job burnout, an interactionist approach theorizes that the determinants of burnout are influenced by both individual and situational factors. By concentrating only on situational factors we are, in essence, implying that in certain jobs there is little anyone can do to prevent burnout (Meier, 1983). On the other hand, by concentrating only on personal characteristics, we are implying that the fault lies with the individual, and the job or the organization has no effect on the manifestation of burnout. Both assumptions appear inadequate. Thus, it appears that research focusing on predictors of job burnout must take an interactionist approach, whereby personality characteristics and situational characteristics are given equal importance and theoretical consideration.

The four factors included in the personality characteristics set (self-esteem, locus of control, communal orientation, and negative affectivity), and the four factors included in the situational characteristics set (role ambiguity, role conflict, quantitative role overload, and organizational support) were selected for this study due to their proposed theoretical association with job burnout. Moreover, empirical evidence provides strong support for each one's inclusion in the research model. Specific theories and empirical research for each characteristic are presented in detail in Chapter II.

Purpose of the Research

The purpose of this research is to examine the role of personality characteristics and situational characteristics as predictors of job burnout. Based on a strong theoretical foundation and empirical support, this study attempts to answer the following research questions:

1. Is the personality characteristics set comprised of self-esteem, locus of control, communal orientation, and negative affectivity a significant predictor of job burnout? If so, which of these individual characteristics are significant predictors?
2. Is the situational characteristics set comprised of role ambiguity, role conflict, quantitative role overload, and organizational support a significant predictor of job burnout? If so, which of these individual characteristics are significant predictors?
3. Which is the stronger determinant of job burnout, personality characteristics or situational characteristics?

4. Are any of the interaction among the personality predictor set and the situational predictor set significant determinants of job burnout?

An on-site self-report survey instrument with previously validated measures was used in this study. Human services subjects employed in a large government social services department were asked to voluntarily participate in this research. A self-report instrument was chosen due to the need to assess individuals' internal feelings and perceptions (Podsakoff & Organ, 1986). The main data analysis techniques used to test the hypotheses were canonical correlation and hierarchical analysis of sets.

Significance of the Research

This study has significance for both the academic and practitioner communities. In terms of its significance to scholarly research, this study helps advance our theoretical understanding of predictors of job burnout. Moreover, this knowledge will also apply to the larger body of research pertaining to stress-strain relationships.

By including personality characteristics as key predictors of job burnout, this study also helps advance personality theories in organizational research. As Weiss & Adler (1984) recommend, it is important to include personality traits in order to expand the nomological network of both personality theories as well as the organizational problem, i.e., job burnout, under investigation. Further, they strongly assert that it is unproductive and too premature to restrict the role of personality in our studies. This same argument has been made for including personality characteristics in burnout research (Garden, 1985, 1989; Maslach, 1993).

The inclusion of personality characteristics is also significant in terms of advancements in interactional psychology. In order to test work related behaviors, attitudes, and perceptions we must look at the interaction of personality and situational characteristics (Schneider, 1983). We cannot determine which is the stronger of the two predictors without doing so. In addition, we cannot ascertain if job burnout is actually influenced by the interaction of personality and situational characteristics without including both predictor sets.

In terms of this study's significance to the practitioner community, Thomas and Tymon (1982) assert that the practitioner should be used as the frame of reference when assessing the significance or usefulness of our research. These authors describe several key needs of practitioners, two of which are clearly met in this study. First, research findings should have descriptive relevance. That is, they should accurately capture real phenomena encountered by employees in their workplaces. The phenomena of job burnout certainly applies here because it is a real-world potential problem with which organizations must confront.

Second, research is likely to be more useful if it has goal relevance. That is, the outcome or dependent variable should correspond to the outcomes practitioners wish to influence. Indeed, organizations have tried a number of intervention strategies in the hopes of mitigating the effects of job burnout (Frew & Sellaro, 1994; Newman & Beehr, 1979). Thus, this research endeavor has a great deal of significance to the practitioner community which, in turn, adds to its significance to the academic community.

Definition of Terms

The following definitions comprise the essential constructs included in this research study.

Dependent Variables

There are a total of three dependent variables, each comprising one of the components of job burnout.

Job burnout: a response to a chronic, prolonged stress comprised of three components (Maslach & Jackson, 1981, 1986):

a) Emotional Exhaustion: a feeling of being worn-out, used up, and lacking energy.
b) Depersonalization: denotes an uncaring and unsympathetic attitude toward recipients of one's services.
c) Reduced Personal Accomplishment: a feeling of unhappiness with oneself and one's work-related accomplishments, specifically one's relationship with clients.

Independent Variables

There are eight independent variables, with four variables in each of the two predictor sets: (1) personality characteristics consisting of self-esteem, locus of control, communal orientation, and negative affectivity, and (2) situational characteristics consisting of role ambiguity, role conflict, quantitative role overload, and organizational support.

Self-esteem: an individual's personal judgment of worthiness within the workplace (Pierce, Gardner, Cummings, & Dunham, 1989).

Locus of Control: an individual's belief in internal versus external control of reinforcement (Rotter, 1966, 1990).

Communal Orientation: the desire or felt obligation to help others (Clark, Ouellette, Powell, & Milberg, 1987).

Negative Affectivity: a multidimensional trait which includes aversive emotional states (e.g., nervousness, tension, worry, and anger) such that those high in negative affectivity tend to focus on the negative aspects of themselves and their environment (Watson & Clark, 1984).

Role Ambiguity: a feeling of uncertainty arising from having inadequate or inconsistent information about work roles (Kahn, 1978).

Role Conflict: conflict arising from the need to meet conflicting job demands (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964).

Quantitative Role Overload: overload due to the perception that one cannot complete all job requirements in the time allotted (Kahn et al., 1964).

Organizational Support: Workers' perceptions concerning whether or not the organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchinson, & Sowa, 1986).

Organization of the Dissertation

This dissertation is organized into five separate, but interrelated chapters. This chapter provides a brief introduction to the study. Included here are the (1) statement of the problem, (2) theoretical foundation of the research, (3) purpose of the research, (4) significance of the research, and (5) definition of terms.

Chapter II presents a thorough review of the literature pertaining to job burnout, including its history and measurement. Literature is also presented related to the two predictor sets, personality characteristics and situational characteristics. Also included in this chapter is the research model and hypotheses that were tested.

Chapter III presents the research design and methodology used in this study. This chapter provides details related to the number and type of subjects that were included, the survey instrument measures used, the procedure implemented, and the data analysis techniques that were employed.

Chapter IV presents the results of the data analyses. Included here are descriptive statistics, canonical correlation analysis, and hierarchical analysis of sets. A summary of the results of each tested hypothesis is also provided.

Chapter V presents the discussion of the results obtained in Chapter IV. Separate discussion sections are presented for the personality characteristics set, the situational characteristics set, and a comparison of the two predictor sets. Of particular interest is the finding that personality characteristics were more strongly associated with job burnout than situational characteristics.

CHAPTER II

REVIEW OF THE LITERATURE

The following review of the literature provides a thorough integration of studies related to job burnout. A clear conceptual definition of job burnout is provided, as well as a detailed description of the measurement instrument, the Maslach Burnout Inventory (MBI), which was used in this study. Next, a brief presentation of theoretical models of job burnout is discussed. Lastly, a thorough analysis of the personality and situational predictor sets of burnout, along with the research model and hypotheses, is presented. First, a brief history of the job burnout phenomenon is provided.

Historical Background

Due to the intuitive appeal and real-world popularity of the job burnout phenomenon, academic research on the topic is plentiful. This research interest can be credited to a number of key individuals who convincingly demonstrated the legitimacy of burnout as an important social issue and field of study. This legitimacy, though, did not come easily. In fact, Maslach and Jackson, two of the earliest pioneers in the field, had their article which described the psychometric properties of their burnout instrument returned by some journal editors unread stating that "we do not publish 'pop' psychology" (Maslach & Schaufeli, 1993: p.5). Although Maslach and Jackson did indeed pave the way for over two decades of research on the topic, credit for first calling attention to the job burnout phenomenon itself must be given to Herbert Freudenberger.

Over 20 years ago, Freudenberger (1974, 1975), a psychoanalyst, brought the concept of burnout to our attention in describing the psychological well-being of individuals with whom he worked at public health care agencies. These individuals, he noted, were idealistic professionals who seemed to suffer from chronic physical and emotional exhaustion in dealing with an endless stream of needy clients. This state of depletion could be compared to chronic drug abusers who, during the 1960s, were often described as being "burned out" on drugs (Farber, 1983). Indeed, the term burnout has been used to describe a variety of different affective states from job dissatisfaction to depression in a wide-range of occupations (Meier, 1984). This widespread, but seemingly inconsistent use of the term burnout started what can now be described as a definitional problem surrounding the term.

Definitional Issues

Shirom (1989) contends that the term burnout, unlike other behavioral science concepts, was adopted by researchers from its colloquial use by respondents who described specific negative attitudes they felt toward their jobs. Although this common use of the term burnout has advantages in field research where it is important to build rapport with participants, it has also added to the diverse ways of defining burnout both conceptually and operationally (Shirom, 1989).

Job burnout, which is often called career burnout, emotional burnout, professional burnout, or psychological burnout, has been labeled a "fuzzy" construct, void of a precise meaning (Burisch, 1993; Meier, 1984). This same label has also been given to the term job stress (Kahn & Byosiere, 1992; Schuler, 1980). Thus, it is not surprising that at the core of the concern over the conceptual definition of job burnout is its apparently close tie to job stress.

One reason confusion surrounds job burnout and job stress is that both concepts are psychologically-based with many commonly shared antecedents and consequences. Handy (1988) argues that both have a number of common problems because they use similar research models and techniques. Adding to this confusion is the most recent review of the burnout literature by Cordes and Dougherty (1993) who contend that burnout is a *type* of stress. Yet, the main confusion is likely because, as Farber (1983) notes, "burnout is said to be caused by stress, yet is often used as a synonym for stress" (p. ix). It appears that some authors have simply avoided trying to distinguish between the two terms. Instead, they simply chose to include both stress and burnout in their book titles (see Farber, 1983; Paine, 1982; Riggar, 1985). A clear distinction between the concepts is still needed to fully integrate the two research streams.

Stress, as broadly defined by Selye (1983), whose stress research dates back to the 1930s, "is a nonspecific response of the body to any demand" (p. 2). He notes that the perceived stress producing factors (or stressors) can be pleasant or unpleasant. Thus, a variety of seemingly dissimilar situations can produce stress. In addition to the importance of the situation as a possible stressor, other definitions of stress emphasize the fit between person and environment. In particular, Beehr and Newman (1978) contend that job stress is a function of job-related factors interacting with workers which then change their psychological and/or physiological condition.

The definition of job burnout relies heavily on the definition of job stress because it is conceived that job stress leads to job strain, i.e., burnout. Thus, job burnout is a response to chronic, prolonged stress (Maslach, 1982b). As Table 1 illustrates, a number of conceptual definitions exist for job burnout. Although slightly different, they generally describe burnout as (1) a response to stressors on the job, (2) a process that occurs over time, and (3) a state of exhaustion (emotional, mental, and/or physical). Maslach (1982b) adds that the majority of the conceptual definitions of burnout (1) are at the individual level of analysis, (2) describe internal feelings, attitudes, motives, and expectations, and (3) describe the phenomenon as a negative experience for the individual and the organization.

The most commonly used conceptual definition of burnout was conceived by Maslach and her colleagues (e.g., Maslach, 1982b; Maslach & Jackson, 1981, 1986; Pines & Maslach, 1978). They define burnout as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind" (Maslach & Jackson, 1986: p. 1). A key descriptor in this definition is the type of subjects included. Those that do people-work would include, among others, nurses, physicians, teachers, social workers, childcare workers, and public service workers.

Table 1

Conceptual Definitions of Job Burnout:
A Representative Sample from Conceptual and Empirical Articles

Source	Definition
Byrne, 1993	The inability to function effectively in one's job as a consequence of prolonged and extensive job-related stress. (p. 197)
Cherniss, 1980b	A process in which a previously committed professional disengages from his or her work in response to stress and strain on the job. (p. 18)
Cordes & Dougherty, 1993	A particular type of job stress, in which a pattern of emotional exhaustion, depersonalization, and decreased personal accomplishment (strains) result from a variety of work demands (stressors), especially those of an interpersonal nature. (p. 625)
Freudenberger, 1974	To fail, wear out, or become exhausted by making excessive demands on energy, strength or resources (as quoted from a dictionary). (p. 159)
Garden, 1989	A form of psychological distress arising from overexertions of the self that manifests as a severe loss of energy and a deterioration in performance. (p. 223)
Jackson, Schwab, & Schuler, 1986	A state of emotional exhaustion caused by excessive psychological and emotional demands made on people helping people. (p. 630)
Leiter & Maslach, 1988	A response to interpersonal stressors on the job, in which an overload of contact with people results in changes in attitudes and behaviors toward them. (p. 297)
Levinson, 1981	A special phenomenon [that] occurs after people extend a great deal of effort, intense to the point of exhaustion, often without visible results. (p. 76)
Maslach & Jackson, 1986	A syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do "people work" of some kind. (p. 1)
Meier, 1983	A state in which individuals expect little reward and considerable punishment from work because of a lack of valued reinforcement, controllable outcomes, or personal competence. (p. 899)
Perlman & Hartman, 1982	A response to chronic emotional stress with three components: (a) emotional and/or physical exhaustion, (b) lowered job productivity, and (c) overdepersonalization. (p. 293)
Pines & Aronson, 1988	A state of physical, emotional, and mental exhaustion caused by long-term involvement in situations that are emotionally demanding. (p. 9)
Pines, Aronson, & Kafry, 1981	The result of constant or repeated emotional pressure associated with an intense involvement with people over long periods of time. (p. 15)
Pines & Maslach, 1978	A syndrome of physical and emotional exhaustion involving the development of negative self-concept, negative job attitudes, and loss of concern for clients. (p. 233)
Schwab, Jackson, & Schuler, 1986	A psychological process--a series of attitudinal and emotional reactions--that an employee goes through as a result of job-related and personal experiences. (p. 14)

Garden (1989) contends that a different understanding of the burnout phenomenon would have emerged had initial interest and research been conducted outside the human services. Indeed, Maslach and Schaufeli (1993) agree that burnout is a phenomenon that may occur in any work-related context, but they note that there has been insufficient analysis as to the form of burnout in other professions. Thus, the definition used here will be the one originated by Maslach and her colleagues which describes burnout within the context of human service occupations. This definition describes job burnout as a multidimensional phenomenon consisting of three independent, but interrelated components: (1) emotional exhaustion, (2) depersonalization, and (3) reduced personal accomplishment. Each of these components measures a different aspect of burnout; thus, burnout exists if any one of the three is present (Maslach & Jackson, 1986).

As Cordes and Dougherty (1993) explain in their review, and as will be done throughout this dissertation, burnout is used as an umbrella term to describe its three components. When results of empirical studies are discussed, the burnout components, emotional exhaustion, depersonalization, and personal accomplishment, are described individually rather than as a composite term.

Emotional Exhaustion

A number of researchers (e.g. Gaines & Jerimer; 1983; Garden, 1987; Reilly, 1994; Saxton, Philips, & Blakeney, 1991; Shirom, 1989), including Maslach herself, contend that the emotional exhaustion component of burnout is at the heart of the phenomenon. It is considered to be the first sign of burnout, the result of excessive psychological and emotional demands. As workers' emotional resources are depleted, they may no longer feel that they are able to give of themselves fully (Maslach & Jackson, 1986). Individuals feel drained, used up, and lack enough energy to face another day (Maslach, 1982a).

Jackson, Schwab, and Schuler (1986) note that the use of the word "exhaustion" implies work that is very involving. This is in contrast to what may be termed "tedium," which is most often associated with monotonous or boring work. Thus, Jackson et al.'s definition of emotional exhaustion reflects the human service subjects or helping professionals for whom the term burnout was originally drafted. A number of researchers who have since broadened the concept of burnout to professionals outside of the human services have argued for the use of only the emotional exhaustion component as the complete definition of burnout, with depersonalization and reduced personal accomplishment as other variables related to, but not part of burnout (see Garden, 1989; Koeske & Koeske, 1989).

Maslach (1993) is strongly opposed to using only the emotional exhaustion component as the definition of burnout. In fact, she is strongly opposed to the notion that burnout is a unidimensional concept. This rush to view burnout as unidimensional, she contends, stems from the fact that it is easier to hypothesize about one dimension as opposed to several. Additionally, she notes that the majority of the variables used in burnout research have shown higher correlations with emotional exhaustion than with the other two components. This has led some researchers (e.g., Shirom, 1989) to argue for the use of only emotional exhaustion, ignoring possible relationships with depersonalization and reduced personal accomplishment. Instead of ignoring depersonalization and personal accomplishment, Maslach (1993) recommends more theorizing and research devoted to these two components of burnout. Thus, additional research incorporating the depersonalization and personal accomplishment components is warranted.

Depersonalization

The second component or stage of burnout is termed depersonalization to denote an uncaring and unsympathetic attitude workers may begin to feel toward their clients. This stage is characterized by individuals treating their clients as objects instead of people. This characterization of the depersonalization stage reflects the stress-strain-coping process as proposed by Lazarus and Folkman (1984), where emotional exhaustion represents strain and depersonalization represents coping (Kahill, 1988; Lee & Ashforth, 1993a, 1993b).

Of the three components of burnout, depersonalization seems to be the one most closely associated with human service subjects. In particular, Garden (1987) contends that it should not be accepted as a generic facet of burnout. Additionally, she argues that depersonalization may be situation-specific, i.e., an artifact of the human service samples used to generate the original factor. Depersonalization's strong tie to the helping professions is perhaps because the negative stereotyping and impersonal response toward the recipients of one's care or service is not normally associated with a professional attitude (Maslach & Jackson, 1981; Maslach & Schaufeli, 1993). Although a certain amount of detached concern or dehumanizing is appropriate for some helping professionals, excessive detachment and depersonalization likely exist when employees report feelings of callousness and cynicism toward their recipients (Jackson et al., 1986). Depersonalization, or feeling negatively about others, can progress until it results in feeling negatively about oneself, a feeling of reduced personal accomplishment (Maslach, 1982a).

Reduced Personal Accomplishment

The third component and final stage of burnout is feelings of reduced personal accomplishment. These feelings imply that individuals tend to evaluate themselves negatively, particularly in reference to their dealings with clients (Maslach & Jackson, 1981). They are unhappy with themselves and unhappy with their work-related accomplishments. The concept of reduced personal accomplishment has been compared to the notion of learned helplessness (Jackson et al., 1986). After repeated efforts with no positive results, individuals may quit trying because they believe it is not worth the effort (Abramson, Seligman, & Teasdale, 1978).

Although conceptually distinguishable, the three components of burnout have not always been empirically separable. Their independence obviously depends on how they are measured, with the use of the Maslach Burnout Inventory (MBI) having become the standard instrument of choice for researchers addressing burnout in human services samples (Maslach, 1993).

Measurement of Job Burnout

During the early stages of burnout research a number of measurement instruments were used, but with limited application (see Schaufeli, Enzmann, & Girault, 1993, for a complete review). These measures include (1) the Staff Burnout Scale for Health Professionals (Jones, 1980), (2) the Freudenberger Scale (Freudenberger & Richelson, 1980), (3) the Tedium Measure (Pines et al., 1981), which was later renamed the Burnout Measure (Pines & Aronson, 1988), (4) the Teacher Attitude Scale (Farber, 1984), and (5) the Energy-Depletion Index (Garden, 1987). Although these measures tap some common components of burnout, Stout and Williams (1983) have warned that one should carefully review the instruments in question because they are not interchangeable. Nearly a decade after these instruments were first introduced, they have all almost disappeared from current burnout research. In their place has emerged the MBI. Thus, use of the MBI implies acceptance of the definition of burnout as proposed by Maslach and her colleagues (Maslach & Jackson, 1981, 1986; Leiter & Maslach, 1988).

The MBI operationalizes the three components of burnout (emotional exhaustion, depersonalization, and personal accomplishment) with a 22-item self-report questionnaire (See Table 2). Initial development of the questionnaire was based on exploratory interview and survey data, as well as a review of established scales that tapped similar constructs (Maslach & Jackson, 1986). A set of 47 questions was initially used, which was later trimmed to 25, and now the existing 22 statements. These revisions spanned an eight-year period during which the questionnaire's reliability and validity were thoroughly examined.

Reliability of the MBI

Reliability of the MBI scales was conducted by calculating Cronbach's coefficient alpha (Cronbach, 1951) for internal consistency and a correlation coefficient for test-retest reliability. Using a sample of over 1,000 human service workers, Maslach and Jackson (1986) found Cronbach alphas for the three subscales to be adequate, with an alpha of .90 for emotional exhaustion, .79 for depersonalization, and .71 for personal accomplishment. Subsequent studies using a similar sample population have resulted in comparable reliability estimates (e.g., Brookings, Chacos, Hightower, Howard, & Weiss, 1985;

Table 2

Subscales of the Maslach Burnout Inventory

A. Emotional Exhaustion

1. I feel emotionally drained from my work.
2. I feel used up at the end of the workday.
3. I feel fatigued when I get up in the morning and have to face another day on the job.
6. Working with people all day is really a strain for me.
8. I feel burned out from my work.
13. I feel frustrated by my job.
14. I feel I'm working too hard on my job.
16. Working directly with people puts too much stress on me.
20. I feel like I'm at the end of my rope.

B. Depersonalization

5. I feel I treat some recipients as if they were impersonal "objects."
10. I've become more callous toward people since I took this job.
11. I worry that this job is hardening me emotionally.
15. I don't really care what happens to some recipients.
22. I feel recipients blame me for some of their problems.

C. Personal Accomplishment

4. I can easily understand how my recipients feel about things.
7. I deal very effectively with the problems of my recipients.
9. I feel I'm positively influencing other people's lives through my work.
12. I feel very energetic.
17. I can easily create a relaxed atmosphere with my recipients.
18. I feel exhilarated after working closely with my recipients.
19. I have accomplished many worthwhile things in this job.

Constable & Russell, 1986). In contrast, Schaufeli et al. (1993) note that internal coefficient estimates lower than .70 have been found in studies using non-human service samples, such as gifted students (Fimian, Fastenau, Tashner, & Cross, 1989), and university students (Gold, Bachelor, & Michael, 1989). These lower than adequate reliability estimates using non-human service samples add to the argument that the MBI should only be used with populations of helping professionals.

A much smaller sample (n = 53) was used to determine the test-retest reliability of the three scales. With this small sample, Maslach and Jackson (1986) found reliability coefficients of .82 for emotional exhaustion, .60 for depersonalization, and .80 for personal accomplishment over a two- to four-week period. A subsequent study by Jackson et al. (1986) found slightly lower test-retest reliabilities using a much larger sample (n = 700). Thus, it appears that less emphasis has been placed on reliability estimates calculated with test-retest correlations. This is likely due to the strong possibility that the three components of burnout may change over time; therefore, internal consistency estimates provide a better picture with which to judge the scale's reliability (Cortina, 1993). In comparison to reliability estimates, more attention has been given to the validity of the MBI, particularly its factorial validity, and its convergent and discriminant validity.

Factorial Validity of the MBI

It is important to note that the dimensions of the MBI were not deduced theoretically, but were instead labeled after an exploratory factor analysis of the initial questionnaire statements (Schaufeli et al., 1993). Three primary factors (emotional exhaustion, depersonalization, and reduced personal accomplishment) emerged with eigenvalues over 1.00. A weaker, fourth factor, labeled involvement with people, was initially considered, but was later dropped due to an achieved eigenvalue of less than 1.00 (Koeske & Koeske, 1989).

Although a number of researchers have assessed the factorial validity of the MBI, the three-factor model is still not universally accepted. Table 3 illustrates that a significant number of factorial studies of the MBI have resulted in a three-factor solution, yet other researchers have found different results. For example, several factor analyses of the scale have resulted in a two-factor model (e.g., Brookings et al., 1985; Green, Walkey, & Taylor, 1991) or a four-factor model (Firth, McIntee, McKeown, & Britton, 1986; Iwanicki & Schwab, 1981; Powers & Gose, 1986).

In particular, the emotional exhaustion and depersonalization components are noted for their moderate to high correlation. Lee and Ashforth (1990) found these two subscales to be fairly highly correlated (r = .58). Maslach and Jackson (1986) contend that their finding of a moderate correlation (r = .40) between the two scales was in agreement with theoretical expectations. In any event, the majority of the studies to date have found the three-factor solution to be adequate and those that used confirmatory factor analysis (e.g., Evans & Fischer, 1993; Lee & Ashforth, 1990) contend that the three-factor model provides the best fit in comparison to other alternative models.

Table 3

Factorial Validity of the Maslach Burnout Inventory:
Representative Studies Illustrating the Three-Factor Solution

Source	Subjects	Method
Byrne, 1991	Teachers	Confirmatory Factor Analysis
Byrne, 1993	Teachers	Exploratory and Confirmatory Factor Analysis
Evans & Fischer, 1993	Teachers and Computer Professionals	Confirmatory Factor Analysis
Fimian & Blanton, 1987	Teachers	Exploratory Factor Analysis
Gold, 1984	Teachers	Exploratory Factor Analysis
Gold, Bachelor, & Michael, 1989	Student Teachers	Confirmatory Factor Analysis
Golembiewski, Munzenrider, & Carter, 1983	Private Sector Workers	Exploratory Factor Analysis
Green & Walkey, 1988	Teachers and Nurses	Exploratory Factor Analysis
Koeske & Koeske, 1989	Social Workers	Exploratory Factor Analysis
Lee & Ashforth, 1990	Supervisors & Managers--Human Services Setting	Confirmatory Factor Analysis
Maslach & Jackson, 1981, 1986	Helping Professionals	Exploratory Factor Analysis

Though the three-factor MBI model has maintained its prominence in burnout research, Byrne (1993) strongly advocates the need for additional item analyses of the scale. She found problematic loadings with items 12 and 16 in her sample of teachers. Other researchers have also found problems with these two items, as well as three others (numbers 6, 11, and 20). For example, item 11, which measures depersonalization and item 12, which measures personal accomplishment, have been found to cross-load on the emotional exhaustion factor (Byrne, 1991; Golembiewski, Munzenrider, & Carter, 1983; Green & Walkey, 1988; Powers & Gose, 1986). Moreover, statements 6, 16, and 20, which should tap the emotional exhaustion factor have sometimes loaded incorrectly or cross-loaded on the depersonalization scale (Belcastro, Gold, & Hays, 1983; Byrne, 1991; Golembiewski et al., 1983; Green & Walkey, 1988). Thus, it seems that there is continued debate surrounding the factorial soundness of the MBI. There is also debate centering on the MBI's convergent and discriminant validity.

Convergent and Discriminant Validity of the MBI

Second only to the number of studies which have tested the factorial validity of the MBI are the number of studies which have analyzed the convergent and discriminant validity of the measure. Maslach and Jackson's (1981, 1986) own studies assessing the convergent and discriminant validity of their measure have provided substantial evidence for the scale's robustness. In terms of the scale's convergent validity, they assessed its correlation with other measures in three different ways.

First, Maslach and Jackson (1981, 1986) correlated the self-ratings of the MBI with behavioral ratings assessed by an individual with whom the participant was very familiar (i.e., a coworker and/or spouse). Second, they correlated MBI scores with certain job characteristics proposed to contribute to burnout. These job characteristics included workload, and three dimensions (feedback from the job itself, dealing with others, and task significance) assessed by the *Job Diagnostic Survey* developed by Hackman and Oldham (1975).

Lastly, Maslach and Jackson correlated MBI scores with various personal outcome measures such as career growth satisfaction, experienced meaningfulness of the work, and knowledge of performance results. Additionally, other behavioral outcomes, such as peer and coworker satisfaction, desire to leave one's job, absenteeism, and experienced difficulty with family and friends, were also correlated with MBI scores. Further, the relationship between MBI scores and various stress outcomes, such as insomnia and increased substance abuse, was also assessed. For all three ways of testing for convergent validity the hypothesized directions were significant, i.e., independent, outcome, and behavioral measures were positively correlated with emotional exhaustion and depersonalization, and negatively correlated with personal accomplishment.

Despite Maslach and Jackson's seemingly thorough and conclusive evidence, other researchers have not found convergent validity for all three subscales of the MBI. In particular, Schaufeli et al. (1993) note that the correlations among self-ratings, peer ratings, and expert ratings of burnout using the MBI have not been significantly high. Also, increasing evidence supports the convergent validity of the emotional exhaustion subscale but shows much weaker support for the depersonalization and personal accomplishment subscales (Schaufeli et al., 1993; Shirom, 1989). For example, Rafferty, Lemkau, Purdy, and Rudsill (1986) found convergence for the emotional exhaustion scale when they correlated scores with an independent assessor, but did not find significant results for the other two subscales. While the emotional exhaustion subscale has shown high convergent validity, it has been much more difficult to prove its discriminant validity.

Meier (1984), one of the only researchers to employ a multitrait-multimethod matrix (Campbell & Fiske, 1959) as a means of testing for construct validity, found considerable overlap between the MBI and several measures of depression. Meier's study has been criticized because he used a total MBI score, as opposed to keeping each subscale score separate (Schaufeli et al., 1993). In contrast, Firth et al. (1986) did look at the discriminant validity of the separate MBI subscales and concluded that emotional exhaustion was substantially related to depression ($r = .50$), while the correlations between depression and depersonalization ($r = .32$) and personal accomplishment ($r = -.17$) were significantly lower. These results conferred with their earlier findings (Firth, McIntee, & McKeown, 1985).

In addition to depression, job burnout has been shown to correlate highly with job satisfaction. In Maslach and Jackson's article detailing the psychometric qualities of the MBI (Maslach & Jackson, 1981), as well as in their test manual (Maslach & Jackson, 1986), they contend that all three subscales have moderate to weak and insignificant correlations with job satisfaction. Maslach and Jackson (1986) also back their claim of the MBI's discriminant validity by citing other studies (e.g., Riggar, Godley, & Hafer, 1984) that have demonstrated low correlations between the MBI subscales and job satisfaction.

While the studies cited above indicate that job burnout and job satisfaction are only slightly related, other studies indicate that the two constructs are much more significantly related. For example, Koeske and Koeske (1989) found a significantly high correlation ($r = -.51$) between emotional exhaustion and job satisfaction. Other authors (e.g., Dolan, 1987; Eisenstat & Felner, 1984; Stout & Williams, 1983) have found similar results. Schaufeli et al. (1993) note that the results from these validation studies have generally been consistent, with emotional exhaustion having moderately negative correlations with job satisfaction, depersonalization being only slightly negatively correlated, and personal accomplishment having a positive, but insignificant relationship with the construct.

Meier (1984) implies that it should not be surprising that burnout, and depression and job satisfaction would show moderate to high correlations. He hypothesizes that these constructs are related because "many psychological states are primarily experienced by individuals as *feelings*" (p. 217). Feelings, such as those experienced by burned-out, depressed, and unsatisfied individuals, are holistic and difficult to express in words (Zajonc, 1980). Meier's (1984) answer to this apparent lack of the MBI's discriminant validity is additional validity research. Fortunately, one construct that seems to be less controversially related to burnout is social desirability.

Maslach and Jackson (1981, 1986) assessed the influence of social desirability and the MBI with the use of the *Crowne-Marlowe Social Desirability Scale* (Crowne & Marlowe, 1964). They found low correlations between all three MBI subscales and the social desirability scale. Similar results assessing the relationship between burnout and social desirability were found by Golembiewski (1985), and Golembiewski and Munzenrider (1981) who also used the MBI and Crowne-Marlowe scales.

In summary, researchers have aggressively tested the psychometric validity of the MBI. Based on all this research it appears that: (1) the three-factor solution of the MBI is adequate, with additional item analyses for problem statements (e.g., 11, 12, 16, 20) recommended, and (2) the emotional exhaustion subscale has the highest convergent validity of the three subscales, but still lacks adequate discriminant validity. Several researchers (e.g., Koeske & Koeske, 1989; Lee & Ashforth, 1990; Schaufeli et al., 1993) have noted that the MBI should be revised to include more equal weighting between positively and negatively worded items within each of the subscales. Currently, the statements in the emotional exhaustion and depersonalization subscales are phrased negatively, while the statements in the personal accomplishment subscale are phrased positively. In addition, Koeske and Koeske (1989) recommend that an equal number of items (e.g., 10) be included in each scale in order to increase the scale's reliability and validity. While a great deal of research and discussion has surrounded the reliability and validity of job burnout, the same emphasis on theoretical models of job burnout is lacking.

Theoretical Models of Job Burnout

In general, theoretical models of burnout have centered on either (1) the sequencing of or interrelationship among the emotional exhaustion, depersonalization, and personal accomplishment components of burnout, or (2) the correlates of burnout, i.e., predictors and outcomes of the phenomenon. A brief discussion of these two types of theoretical models follows.

Sequence Models of Burnout

As previously discussed and as shown in Table 3, the three-factor model of burnout has general support. In contrast, how these three components are sequenced has received less consensus. This lack of consensus concerning the ordering of the components has led to three different sequence models of burnout, with three different teams of researchers arguing that their proposed model is more theoretically and/or empirically correct than the others. These pairs of researchers are (1) Maslach and her colleagues (e.g., Leiter & Maslach, 1988; Maslach, 1976, 1982; Maslach & Jackson, 1981, 1986), (2) Golembiewski and his colleagues (e.g., Golembiewski & Munzenrider, 1981, 1986, 1988; Golembiewski et al., 1983; Golembiewski, Munzenrider, & Stevenson, 1986), and (3) Lee and Ashforth (1993b).

Maslach and Colleagues

When research concerning burnout was first initiated, Maslach (1976) contended that emotional exhaustion was the first stage of the syndrome, followed by depersonalization and, subsequently, diminished personal accomplishment. She and Jackson later elaborated on these three components by discussing them in a more theoretical vain (Maslach, 1982a; Maslach & Jackson, 1981, 1986). A person must feel emotionally exhausted, i.e., drained of resources and overwhelmed by the situation, prior to treating people in a depersonalized manner. Once service providers sense their loss of commitment to their clients and exhaustion continues, then a feeling of a lack of personal accomplishment sets in (Leiter, 1989).

Maslach later teamed with Leiter to empirically test this sequencing of the burnout components (see Leiter & Maslach, 1988). Their results are consistent with Maslach and Jackson's original theory in which emotional exhaustion leads to greater depersonalization which then leads to reduced personal accomplishment. While Maslach and her colleagues assert that emotional exhaustion is the first stage of the burnout phenomenon, Golembiewski and his colleagues place emotional exhaustion last among the three stages in their phase model.

Golembiewski and Colleagues

In the phase model proposed by Golembiewski and his colleagues (Golembiewski & Munzenrider, 1981, 1986, 1988; Golembiewski et al., 1983; Golembiewski et al., 1986), the sequence of the burnout components follows from depersonalization to reduced personal accomplishment to emotional exhaustion. Golembiewski and his team of researchers contend that depersonalization characterizes the onset of burnout. Once individuals allow themselves to become detached and uncaring toward their clients, they then feel less productive and a sense of reduced personal accomplishment. Emotional exhaustion is then viewed as the most advanced stage of burnout. As depersonalization continues and perceived personal accomplishment weakens further, an individual may be unable to cope with various stressors. This then leads to a feeling of emotional exhaustion.

The phases themselves are defined by the eight possible high versus low combinations of each of the three subscales. For example, low scores on all three subscales (with scores on personal accomplishment reversed) represent the first phase, while high scores on all three components represent the eighth phase. Golembiewski (1989) notes that the model proposes only that the phases become progressively more severe. An individual will not necessarily move through all eight phases, nor will he or she necessarily reach the eighth phase, which is called full-term burnout.

The debate concerning the interrelationship among the three subcomponents of burnout is likely to continue. Golembiewski (1989) steadfastly opposes the sequencing proposed by Maslach and her colleagues, while Leiter (1989, 1993) has severely criticized the eight-phase model of burnout. In his narrative comparison of the two models, Burke (1989) praises both teams of researchers, but notes that each model has conceptual and methodological concerns. These concerns are further examined by Lee and Ashforth (1993b) in their empirical comparison of the two models.

Lee and Ashforth

In the only known empirical comparison to date of the Maslach et al. and Golembiewski et al. models, Lee and Ashforth (1993b) used structural equation analysis to assess the overall fit of the two models. Based on their results, Lee and Ashforth contend that neither model is suitable. Instead, they propose a revised Maslach et al. model where emotional exhaustion leads directly to both depersonalization and reduced personal accomplishment.

It appears that research interest is lacking in deciding, once and for all, just how the three components of burnout are interrelated. It also appears that far more researchers have concentrated on the phase model (e.g., Burke, Shearer, & Deszca, 1986; Golembiewski & Munzenrider, 1986) than on the Maslach et al. model. Even so, these studies number far fewer than those whose main research question has centered on what the correlates of burnout are. Without consensus as to what the major predictors and outcomes of burnout are, it seems unlikely that research concentrating on the sequencing of the three components will ever take on a higher priority.

Predictor/Outcome Models of Burnout

Although a number of predictor/outcome models of burnout have been proposed, none has received more attention than the developmental model proposed by Cherniss (1980a, 1980b). Cherniss proposes that characteristics of the work setting, such as workload, and characteristics of the person, such as career orientation, lead to sources of stress. These sources of stress, such as bureaucratic interference, lead to coping behaviors. If these coping behaviors are unsuccessful, attitude changes associated with burnout, such as emotional detachment, occur. Research testing the Cherniss model has generally been supportive (e.g., Burke & Greenglass, 1989). Other researchers (e.g., Jackson et al., 1986; Lee & Ashforth, 1993a, 1993b; Schwab, Jackson, & Schuler, 1986) have tested variations of this general model, also finding support for its validity.

The Cherniss model and most all correlate models of burnout are not unlike a number of proposed organizational stress models. In their comprehensive review of the organizational stress literature, Kahn and Byosiere (1992) describe a variety of stress models. In general, the common denominator among these stress models and correlate models of burnout is their emphasis on characteristics of the work setting and characteristics of the individual as predictors of job stress and/or job burnout.

Predictors of Job Burnout

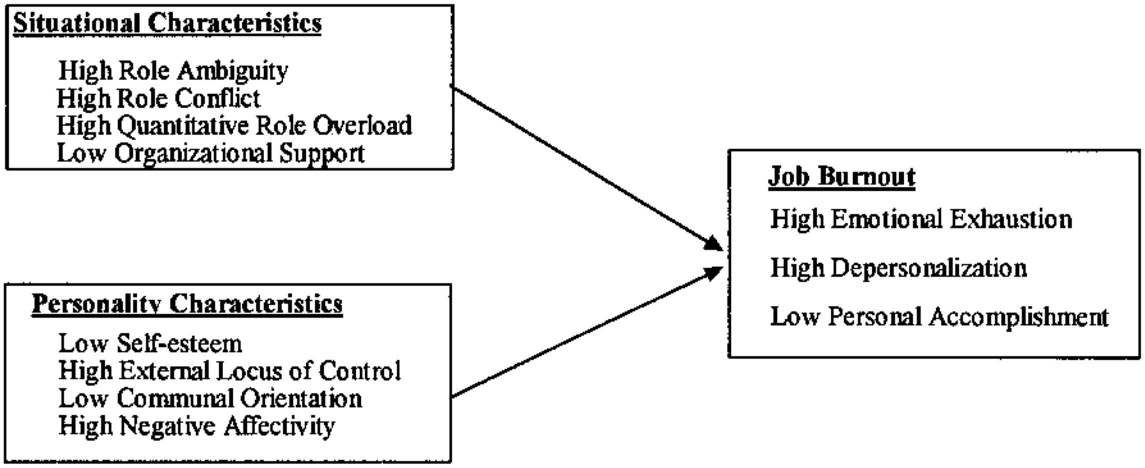
During the past two decades of research on job burnout, two primary predictors of the phenomenon have emerged: (1) personal characteristics of the individual, and (2) situational characteristics associated with the work environment. Without intentionally doing so, Maslach (1993) admits that her educational background in social psychology led her to emphasize situational characteristics over personal characteristics during the early years of burnout research. She now seems determined to reverse this trend by urging researchers to place personal characteristics, particularly personality traits, on an equal footing with situational characteristics. Thus, in this research study, personality characteristics are considered to be a major determinant of job burnout. Figure 1 shows the personality and situational characteristics within each predictor set used in this study, along with their predicted association with each component of job burnout. A description of the personality characteristics follows.

Personality Characteristics

Over two decades ago, Freudenberger (1974) asked a seemingly simple question concerning burnout: "What type of personalities are more prone than others to its onslaught?" (p. 159). Unfortunately, it seems, we are only slightly closer to answering his question today than when he first proposed it. Although early burnout research did include personality as a key predictor (e.g., Gann, 1979), in general, burnout research, which has concentrated on personality characteristics, has been noticeably scarce as

Figure 1

Research Model: Situational Characteristics and Personality Characteristics as Predictors of Job Burnout


Situational Characteristics
High Role Ambiguity
High Role Conflict
High Quantitative Role Overload
Low Organizational Support
Personality Characteristics
Low Self-esteem
High External Locus of Control
Low Communal Orientation
High Negative Affectivity
Job Burnout
High Emotional Exhaustion
High Depersonalization
Low Personal Accomplishment

compared to research that has concentrated on situational characteristics. Even in the most recent review of the literature on job burnout by Cordes and Dougherty (1993), a section on personality characteristics is conspicuously absent. A valid reason for this absence is the relatively small numbers of published studies available that have investigated the relationship between personality characteristics and job burnout. Another reason may be the inconsistent selection of the personality characteristics that have been actually researched.

Researchers have chosen a wide variety of personality characteristics in their analyses of job burnout. These have ranged from multidimensional personality profiles such as ego levels (Gann, 1979) and Jungian type, such as feeling versus thinking types

(Garden, 1985), to more specific traits such as extraversion (Eastburg, Williamson, Gorsuch, & Ridley, 1994), emotional reactivity (Keinan & Melamed, 1987), and empathy (Gross, 1994). Although, in general, these characteristics have been shown to be significantly associated with burnout, the majority have been included in only one study. Therefore, it would be far too premature to conclude that any one of these personality profiles or specific traits is a key determinant of burnout.

Based on the variety of personality characteristics used, coupled with the rather sparse number of studies assessing the relationship between personal dispositions and burnout, the choice of which personality characteristics to include in this study was a difficult one. A review of the literature revealed that self-esteem and hardiness/locus of control appear to be the two most frequently included personality constructs to be significantly associated with burnout. These two constructs, along with the Type A behavior pattern, have also been the most frequently included personality characteristics cited in the general stress literature (Ganster & Schaubroeck, 1991; Kahn & Byosiere, 1992). A valid reason for not including the Type A behavior pattern is due to its broad and vague conceptualization, as well as to its multidimensionality (Friedman & Booth-Kewley, 1987; Ganster, Schaubroeck, Sime, & Mayes, 1991; Parkes, 1994). Moreover, in her comprehensive review of personality, George (1992) notes that Type A individuals are more likely to be at risk for physiological strains such as coronary heart disease, as opposed to psychological strains such as job burnout. Indeed, Keinan and Melamed

(1987) found nonsignificant results between the achievement-oriented component of Type A behavior and job burnout.

Thus, self-esteem and locus of control are proposed to be important predictors of burnout, along with two more recently researched traits, communal orientation and negative affectivity. Communal orientation is an individual difference variable assessing a person's helping orientation (Clark et al., 1987). It was selected for inclusion in this study due to its strong tie to human service professionals. Negative affectivity, or trait NA as it is also called, is a personal disposition reflecting an individual's negative emotionality and self-concept (Watson & Clark, 1984). It has a strong theoretical linkage to physiological and psychological strains, but has rarely been investigated in burnout research. A thorough review of each of these four personality characteristics follows.

Self-esteem

Self-esteem is a multifaceted phenomenon whose definition requires different levels of generality (Pierce et al., 1989). The most commonly measured generality is global self-esteem, which refers to an overall evaluation of self-worth (Rosenberg, 1965). Other generalities include role-specific self-esteem, which is the self-evaluation of an individual's many roles such as parent or friend, and situation-specific self-esteem, which is the self-evaluation resulting from an individual's perception of his or her attitude and behavior in specific situations, such as the workplace. Since the focus of this study is on work-related attitudes and behaviors, a situation-specific form of self-esteem, called organization-based self-esteem as developed by Pierce et al. (1989), was used. As noted by Epstein (1979), the use of a self-esteem measure consistent with the attitudes and behaviors to be predicted, i.e., job burnout, will likely yield stronger relations than using more general or global measures.

In general, self-esteem can be viewed as an individual's self-appraisal of competence and personal worth. In particular, organization-based self-esteem refers to an individual's personal judgment of worthiness within an organizational context (Pierce et al., 1989). Thus, individuals with high organization-based self-esteem should see themselves as capable, successful, and important members in their place of employment. This conceptualization of organization-based self-esteem follows the theoretical position of self-esteem proposed by Korman (1976) who asserts that individuals continually strive to maintain their level of self-esteem. This striving for equilibrium will pressure individuals in the workplace to develop and maintain attitudes and behaviors that reflect their level of self-esteem. For example, employees with high self-esteem will likely maintain positive work attitudes and high productivity in order to maintain a level of consistency with their personal view of being highly self-competent. Brockner's (1988) plasticity theory of self-esteem corroborates Korman's (1976) view. For example, the plasticity hypothesis posits that individuals low in self-esteem are psychologically more susceptible to organizational stressors than individuals high in self-esteem. Thus, self-esteem, and particularly organization-based self-esteem, appears to be a fundamental aspect of personality that can help in the understanding of job burnout.

Although self-esteem has a high theoretical salience in terms of its association with job burnout, it surprisingly has seldom been empirically tested. Golembiewski and Aldinger (1994) contend that it is possible that self-esteem's significance is so convincing at face value that researchers assume that the association between self-esteem and burnout is true even without a great deal of empirical proof. Indeed, only a few published studies have empirically tested the relationship between burnout and self-esteem and, in general, have found the two to be significantly related.

Byrne (1994) contends that her study of over 3,000 school teachers is one of the first to empirically test the relationship between self-esteem and job burnout among teachers. She tested for the significance between self-esteem and only one dimension of burnout, personal accomplishment. She found the relationship to be significant, with higher levels of self-esteem associated with higher levels of perceived personal accomplishment. She asserts that self-esteem is a key factor involved in the predisposition of teachers to burnout. Beehr and Beehr (1992) also found self-esteem to be significantly related to a total burnout measure in a sample of 92 teachers. Additionally, in a related stream of research, Bhagat and Allie (1989) found that in a sample of 276 teachers, sense of competence, a personality characteristic similar to self-esteem, was positively related to personal accomplishment and negatively related to emotional exhaustion and depersonalization. While sense of competence had a significant main effect with all three burnout components, it had an interaction effect with organizational stressors in predicting emotional exhaustion and depersonalization, but not personal accomplishment.

In addition to samples of teachers, significant findings have also been found using other types of occupations. For example, Brookings et al. (1985) found a negative relationship between self-esteem and a total measure of burnout in their sample of 135 human service professionals. McMullen and Krantz (1988) found that self-esteem was significantly related to emotional exhaustion and depersonalization in their sample of 67 day care workers. They note that the insignificant findings found between self-esteem and personal accomplishment may have been due to the lack of a valid survey instrument. More recently, Golembiewski and Aldinger (1994) replicated a previous study by Golembiewski and Kim (1989) which investigated the relationship between self-esteem and burnout in a military setting. In both studies they found an inverse relationship between self-esteem and burnout using a total burnout score.

In the previous studies described, self-esteem was conceptualized as either an antecedent or moderator of burnout. In their review of the stress literature, Kahn and Byosiere (1992) reviewed nine studies which included self-esteem and its relationship with job stress and job strain. In eight of these studies, self-esteem was assessed as a direct predictor of strain, with significant results found in six of the eight studies. In all studies with significant results, higher self-esteem was associated with lower job strain. In comparison, only three studies assessed the moderating effects of self-esteem, with only one of these studies reporting a significant moderator effect between stress and strain.

In contrast, Rosse, Boss, Johnson, and Crowen (1991) investigated whether self-esteem is an antecedent, moderator, or consequence of burnout. In two separate samples of 1,163 police officers and 494 hospital employees, they found self-esteem to be both a predictor and an outcome of burnout, but not a moderator. In particular, they found self-esteem to be more strongly associated with emotional exhaustion than either depersonalization or personal accomplishment. In their discussion, they contend that the extreme form of the antecedent argument was not substantiated, i.e., low self-esteem employees did not display more burnout symptoms than high self-esteem employees regardless of the situation. They contend that situational factors do play a significant role. On the other hand, they note that the effect of self-esteem was strong enough to give personality factors the same emphasis as situational factors in the prediction of burnout.

In summary, self-esteem has both theoretical and empirical support for including it in the study of job burnout. While the results of studies assessing the association between self-esteem and the different dimensions of burnout have not been completely consistent, the majority of the studies have shown strong significance with either a total burnout measure or at least one of the dimensions.

Locus of Control

Like self-esteem, locus of control is an individual difference variable that has received far more attention in the stress literature than in the burnout literature (Kahn & Byosiere, 1992). The personality characteristic called hardiness (Kobasa, 1979, 1982), it appears, has gained wider popularity in burnout research than either self-esteem or locus of control. Hardiness is comprised of three components: commitment (involvement in life and work activities), challenge (having a positive outlook on change), and control (belief in the ability to influence events) (Kobasa, Maddi, & Zola, 1983). The popularity of the hardiness construct is surprising given the number of criticisms surrounding this personality trait.

These criticisms center on (1) the multitude of scales used to assess the three components, (2) the failure of factor analyses to consistently produce the three components, (3) the lack of the challenge dimension to be consistently associated with a number of valid outcome measures, and (4) the use of a composite measure when the three components have been found to be unrelated to one another and to be differently related to various outcomes (Carver, 1989; Funk, 1992; Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987). Based on these criticisms and Carson's (1989) recommendation to focus on more precisely measurable constructs, only one component of hardiness, locus of control, will be investigated here.

Locus of control is considered to be a stable personality trait which focuses on an individual's belief in internal versus external control of reinforcement (Rotter, 1966, 1990). Internality implies individuals believe that control of events is a consequence of their own actions. In contrast, externality implies individuals believe control of events is beyond their power and is due, instead, to fate, luck, or the actions of others. The theoretical tenet for including locus of control in this investigation is based on the notion that employees who have an internal locus of control are likely to respond to stress differently than those who have an external locus of control. In this respect, internals are likely to take more action than externals against a stressor in order to mitigate its effect. Thus, internals are likely to incur less strain, such as job burnout, than externals.

Indeed, Fusilier, Ganster, and Mayes (1987) suggest that externals respond more strongly to job stressors than internals. Specifically, they hypothesized that internals' tendency to perceive situations as controllable would foster more active coping with role conflict as compared to externals. In support of their hypothesis, they found in their sample of 312 police officers and fire fighters the relationship between role conflict and somatic complaints stronger among externals than internals. Similarly, Sandler and Lakey (1982) found a strong correlation between environmental stressors and anxiety greater for externals than for internals in their sample of 93 college students.

In agreement with Fusilier et al. (1987) and Sandler and Lakey (1982), Jackson and Schuler (1985) found positive correlations between role ambiguity and role conflict, and locus of control in their meta-analysis examining role ambiguity and role conflict. Essentially, they found externals showing less strain than internals when exposed to these two role stressors. These studies suggest that locus of control may act as a moderator of the stress-strain relationship. In contrast, Spector and O'Connell (1994) took a different approach by simply hypothesizing that locus of control is significantly correlated with a number of job stressors, such as role ambiguity and role conflict, as well as a number of job strains, such as work anxiety. No moderating effects were assessed. They found locus of control, with higher scores reflecting externality, to be positively related to role ambiguity, role conflict, and work anxiety. Thus, a number of main and moderator effects of locus of control have been investigated in the stress-strain literature.

In their recent analysis of the stress literature, Kahn and Byosiere (1992) reviewed 11 studies of job stress and strain in which locus of control was also investigated. An analysis of the moderating effect of locus of control was made in four of these studies, with three of the four showing a significant moderator effect. Main effects of locus of control were assessed in eight studies, with seven of the eight showing significant main effects. None of the 11 studies reviewed used job burnout as the measure of strain.

The majority of the few published studies found that have assessed the relationship between locus of control and job burnout have hypothesized locus of control as a main determinant, as opposed to a moderator, of the phenomenon. As previously noted, this is not surprising given the limited number of studies that have taken an interactionist approach in the prediction of burnout. In general, those researchers who have investigated the relationship between locus of control and burnout, have found this relationship to be significant. For example, Glogow (1986) found that in his sample of 103 human resource management professionals, the "burnouts," as he categorized them, tended to have an external locus of control. He used a total burnout measure; thus, information concerning how the three dimensions of burnout differently associate with locus of control could not be determined.

Instead of looking at job burnout as a unitary measure, Byrne (1994) investigated the relationship between external locus of control and only one dimension of burnout, personal accomplishment. As a direct determinant, she found external locus of control to be negatively related to personal accomplishment. Additionally, she found external locus of control to moderate the relationship between role conflict and personal accomplishment. These results were found in her sample of secondary teachers (n = 1,431), but not in her samples of elementary (n = 599) or intermediate (n = 410) teachers. She notes that these results are puzzling and could be due to a statistical artifact. Similar to Byrne, Chay (1993) found that in his sample of 117 small business entrepreneurs and employees, interpersonal control was positively related to personal efficacy, a construct very similar to the personal accomplishment dimension of burnout.

Other researchers have investigated the relationship between locus of control and all three dimensions of burnout. In Brookings et al.'s (1985) study of 135 human service professionals, they found locus of control to be significantly associated with all three dimensions of burnout. That is, higher scores on the locus of control scale used, which reflect internality, were negatively related to emotional exhaustion and depersonalization, and positively related to personal accomplishment.

In contrast, Topf (1989) found no significant main effects between external locus of control and the three burnout dimensions in her sample of 100 nurses. Nor did she find a significant relationship between locus of control and a total burnout measure. On the other hand, she did find a strong positive correlation between nursing stress and external locus of control. She also found significance between a composite measure of hardiness, of which the external locus of control measure was included, and personal accomplishment, as well as a total burnout measure. Similarly, Nowack and Pentowski (1994) found a composite measure of hardiness to be negatively related to emotional exhaustion and depersonalization, and positively related to personal accomplishment in their sample of 879 dental health professionals. They did not investigate how each of the three components of hardiness individually associates with each of the burnout measures; thus, it is not possible to isolate the individual effects of locus of control on burnout in this particular study.

In summary, locus of control has been investigated as a separate measure, as well as one of three components of hardiness, in a number of stress, strain, and burnout studies. Although the results of these studies are inconsistent, locus of control does appear to have a significant association with job burnout, particularly the personal accomplishment dimension.

Communal Orientation

A key component in the definition of burnout developed by Maslach and her colleagues (Jackson et al. 1986; Maslach, 1982b; Maslach & Jackson, 1981, 1986) is that the individual under consideration be involved in a helping profession of some type. One would assume that those that enter helping professions have a personal disposition to want to help others. This desire or felt obligation to respond to the needs of others is what may be termed communal orientation (Clark et al., 1987).

Clark et al. (1987) found that people high in communal orientation are more likely to help others than people low in communal orientation. In addition, people low in communal orientation may react in a negative way to recipients' emotional indications of need. Buunk, Doosje, Jans, & Hopstaken (1993) looked at communal orientation in terms of individual well-being. They found that individuals high in communal orientation felt higher states of well-being if they perceived they had benefited from their relationships with their recipients. The findings by Clark et al. and Buunk et al. help to specify one possible individual characteristic, i.e., communal orientation, that may contribute to positive or negative outcomes of employee-recipient relationships, such as those involved in the human services profession.

In the only known published study to date which has investigated the relationship between communal orientation and job burnout, VanYperen, Buunk, & Schaufeli (1992) found that in their sample of 194 nurses, those low in communal orientation had higher levels of burnout. In other words, emotional exhaustion, depersonalization, and reduced personal accomplishment were more prevalent in nurses low in communal orientation as compared to nurses high in communal orientation. VanYperen et al. also suggest that individuals with a high communal oriented ideology may promote more commitment and enhance social support; thus, communal orientation could then be viewed as buffering the effect between stressors and strains.

Communal orientation, then, appears to be a viable personality characteristic to include in the study of job burnout with subjects involved in helping professions. It is likely that a misfit will occur if an individual low in communal orientation is employed in a helping profession. This misfit might then result in higher levels of burnout.

Negative Affectivity

Trait NA is a multidimensional phenomenon which includes affective mood states such as nervousness, tension, worry, and anger. In general, high NA individuals (1) tend to focus on the negative aspects of themselves and their environment, and (2) in any situation, they are more apt to perceive and report significant levels of distress than individuals low in NA (Brief, George, Robinson, & Webster, 1988; Watson, Pennebaker, & Folger, 1987).

A decade ago, Watson and Tellegen (1985) noted that affect had been rediscovered. Not only has this personal disposition been rediscovered, it has also caused somewhat of a controversy in stress-strain research. A conceptual article by Watson et al. (1987) helped spark the controversy when they asserted that:

> To the extent various self-report measures all tap the same underlying NA construct, presumed 'independent variables' and 'dependent variables' in many stress studies may represent little more than different measures of the same thing--and that thing is not necessarily the construct of stress, but perhaps merely the predisposition to respond negatively (p. 155).

Moreover, a study by Brief et al. (1988) provides empirical evidence supporting the proposition that NA, stressors, and strains may simply be tapping the same underlying construct. Thus, the relationships found between stressors and strains may simply be spurious. Brief et al. found a number of insignificant relationships between life and job stressors and various distress symptoms after partialling out the effects of NA. Ganster, Fox, and Schaubroeck (1990), as reported in Ganster and Schaubroeck (1991), replicated this effect with confirmatory factor analysis.

In contrast, not all findings have supported the contention that the relationship between stressors and strains is inflated due to NA. Chen and Spector (1991) found that NA did not account for a large amount of variance shared by the stressors and strains in their investigation. They note that a possible reason why their results are different than those reported by Brief et al. (1988) could be due to the different mix of stressors and strains included in each study. Chen and Spector investigated many of the work stressors to be investigated in this research, including role ambiguity, role conflict, and quantitative role overload, whereas Brief et al. (1988) included a general job stressor category as well as life stressors.

Additionally, Spector and O'Connell (1994) examined the relationship among a number of stressors, strains, and personality traits. They report that one of the other personality variables investigated had stronger relationships with six of the 10 stressors and strains than NA. In particular, locus of control showed stronger associations than did NA with role ambiguity and role conflict. Schaubroeck, Ganster, and Fox (1992) also did not find evidence that NA measures factors in common with organizational/role stressors and a variety of subjective and objective strains. Schaubroeck et al. also included a number of the same situational stressors, such as role ambiguity and role conflict, planned for inclusion in this analysis. Thus, there is equivocal proof that NA can cause the results of research addressing stress-strain relationships to be spurious.

It should be noted that job burnout was not included as a strain measure in any of these studies discussed to this point. Only two studies could be found that have assessed the relationship between NA and job burnout. In a sample of 79 physicians, Keinan and Melamed (1987) investigated the relationship between five personality characteristics and a total burnout measure developed by Pines and Aronson (1981). They found that the construct of repression-sensitization (R-S) correlated quite strongly ($r = .55$) with job burnout. Although these authors did not label R-S as NA, the R-S measure used is listed as a valid measure of NA by Watson and Clark (1984). Keinan and Melamed (1987) contend that R-S/NA, as well as other personality traits, should be considered when trying to predict an individual's proneness to burnout.

More recently, Iverson, Olekalns, & Erwin (1994) assessed NA's relationship with all three components of job burnout in a sample of 467 public healthcare workers. Using structural equation modeling, they report that NA was associated, both directly and indirectly, with increased emotional exhaustion and depersonalization, but had no effect on personal accomplishment. Additionally, based on inter-item correlations, NA was significantly related to all three components of burnout.

One theoretical explanation as to why NA is likely to be a direct predictor of burnout is based on the symptom perception hypothesis. This view suggests that the relationship between NA and strains is a reflection of those high in NA to have a tendency to complain about all aspects of their lives, including the workplace (Watson, 1988; Watson & Pennebaker, 1989). An additional explanation offered by Watson (1988) is that individuals high in NA may be motivated to search for events that help explain and justify their negativism. Thus, individuals high in NA are more apt to interpret relatively benign events as stressful. These explanations suggest that individuals having a high NA disposition may perceive themselves as being burned-out, even in the absence of organizational role stressors. If this assertion is true, organizations may have a difficult time reducing burnout levels by changing job or organizational factors if a large number of employees have high NA (Chen & Spector, 1991). Therefore, it is important to the continued advancement of burnout research to include NA as a possible personality predictor.

Summary of Personality Predictors

The previous analysis thoroughly describes the four personality traits (self-esteem, locus of control, communal orientation, and negative affectivity) included in the personality characteristics predictor set. Theoretical justification, in addition to a number of empirical studies, suggests that these personality traits are associated with the three components of job burnout. These hypothesized relations between personality characteristics and the three job burnout components are summarized below:

H1a: Self-esteem will be negatively associated with emotional exhaustion.

H1b: External locus of control will be positively associated with emotional exhaustion.

H1c: Communal orientation will be negatively associated with emotional exhaustion.

H1d: Negative affectivity will be positively associated with emotional exhaustion.

H2a: Self-esteem will be negatively associated with depersonalization.

H2b: External locus of control will be positively associated with depersonalization.

H2c: Communal orientation will be negatively associated with depersonalization.

H2d: Negative affectivity will be positively associated with depersonalization.

H3a: Self-esteem will be positively associated with personal accomplishment.

H3b: External locus of control will be negatively associated with personal accomplishment.

H3c: Communal orientation will be positively associated with personal accomplishment.

H3d: Negative affectivity will be negatively associated with personal accomplishment.

In summary, Hypothesis 1 proposed that low levels of self-esteem and communal orientation, an external locus of control, and high levels of negative affectivity would be significantly associated with high levels of emotional exhaustion. Hypothesis 2 proposed that low levels of self-esteem and communal orientation, an external locus of control, and high levels of negative affectivity would be significantly associated with high levels of depersonalization. Hypothesis 3 proposed that low levels of self-esteem and communal orientation, an external locus of control, and high levels of negative affectivity would be significantly associated with low levels of personal accomplishment.

Although there may be a number of significant relationships among the constituent independent variables within the personality characteristics predictor set and the three components of job burnout, it was not possible to test their significance until the set's significance as a whole was proven first (Cohen & Cohen, 1983). Thus, the following general research question was proposed which tested the separate relationships among the personality characteristics and the job burnout components:

Which of the personality traits included in the personality characteristics set has a significant relationship with any or all of the three job burnout components? Which one has the strongest relationship?

The testing of these general research questions was contingent upon finding the personality set as a whole to be significant. If found significant, then the appropriate personality characteristics were tested for their association with each of the job burnout components.

Situational Characteristics

A number of situational factors have been proposed to be predictors of job burnout. These include job characteristics such as autonomy and significance (e.g., Friesen & Sarros, 1989; Maslach & Jackson, 1981, 1986), supervisory leadership (e.g., Polok & Boss, 1994; Seltzer & Numerof, 1988), and the work environment in general (e.g., Pretty, McCarthy, & Catano, 1992; Savicki & Cooley, 1994). While the majority of these have characteristics have proven to be significant predictors of job burnout, the four characteristics selected for inclusion in the situational predictor set in this study: (1) role ambiguity, (2) role conflict, (3) quantitative role overload, and (4) organizational support are among the most prevalent, consistent, and strongest work setting predictors of burnout to date.

Since personality characteristics have been included in job burnout research far less frequently than situational characteristics, these four were chosen as the role/organizational predictor set in order to adequately answer one of the central research questions of this study: Which is the strongest predictor of job burnout--personality characteristics or situational characteristics? By having such a strong situational predictor set to compare against an equally strong personality set more confidence can be given to the results of this study. In particular, role ambiguity, role conflict, and role overload are likely the most frequently investigated predictors of the burnout phenomenon. Not surprisingly, these three variables are also the most prevalent antecedent variables assessed in the stress research as well (Kahn & Byosiere, 1992).

The seminal work by Kahn et al. (1964) promoted the widely held belief that role ambiguity, conflict, and overload strongly influence a number of negative personal reactions, including job burnout. It is suggested that these variables act as stressors because they add to the uncertainty of a job and they reduce the extent to which employees feel they have control over their work activities. As shown in Table 4, these three role stressors have been associated individually and as a set in a number of studies involving job burnout, increasing both emotional exhaustion and depersonalization and decreasing personal accomplishment.

Role Ambiguity and Role Conflict

In general, role or job ambiguity arises when individuals have inadequate or inconsistent information about their work roles, including the work objectives associated

Table 4

Summary of Relationships Between Role Characteristics and Job Burnout

Source	Role Characteristics+	Emotional Exhaustion	Deperson-alization	Personal Accomplishment	Job Burnout (Total Score)
Bacharach, Bamberger, & Conley, 1991	Role Conflict	X			
	Role Overload	X			
Brookings, Bolton, Brown, & McEvoy, 1985	Job Stress (Role Ambiguity, Conflict, and Overload)	X	X	X	
Burke & Greenglass, 1989	Role Stress (Role Ambiguity and Conflict)				X
Burke, Shearer, & Deszca, 1984	Role Stress (Role Ambiguity and Conflict)				X
	Role Overload				X
Drory & Shamir, 1988	Role Ambiguity				X
	Role Conflict				X
Eisentstat & Felner, 1984	Job Stress (Role Ambiguity, Conflict, and Overload)	X	X	–	
Iverson, Olekalns, & Erwin, 1994	Role Stress (Role Ambiguity and Conflict)	X	X	X	
	Role Overload	X	X	X	
Jackson, Turner, & Brief, 1987	Role Conflict	X	X	–	
	Role Overload	X	–	–	
Jayaratne & Chess, 1983	Role Ambiguity	–	–		
	Role Conflict	–	–		
	Role Overload	–	–		
Jayaratne & Chess, 1986	Job Stress (Role Ambiguity, Conflict, and Overload)	X	X	X	
Lee & Ashforth, 1993a	Role Stress (Role Ambiguity and Conflict)	X	X	–	
Lee & Ashforth, 1993b*	Role Stress (Role Ambiguity and Conflict)	Time 1: X Time 2: X	Time 1: X Time 2: X	Time 1: X Time 2: –	
Leiter & Maslach, 1988	Role Conflict	X	–	–	
Miller, Ellis, Zook, & Lyles, 1990	Role Stress (Role Ambiguity and Conflict)	X	X	X	
	Role Overload	X	X	X	
Saxton, Philips, & Blakeney, 1991	Job Stress (Role Ambiguity, Conflict, and Overload)	X			
Schwab & Iwanicki, 1982	Role Ambiguity	X	X	X	
	Role Conflict	X	X	X	
Schwab, Jackson, & Schuler, 1986	Role Ambiguity	X	–	–	
	Role Conflict	X	X	–	

X: Relationship between role characteristics and job burnout is significant.
–: Relationship between role characteristics and job burnout is not significant.
+: Role overload: All studies operationalized overload as quantitative overload or workload.
*: Longitudinal study with separate results reported for Time 1 and Time 2.

with the role and the scope of responsibilities of the job (Kahn, 1978). More specifically, Breaugh and Colihan (1994) describe three distinct aspects of job ambiguity: (1) performance criteria ambiguity (uncertainty stemming from the standards used to determine satisfactory performance), (2) work method ambiguity (uncertainty stemming from the methods or procedures which should be used on the job), and (3) scheduling ambiguity (uncertainty stemming from the scheduling or sequencing of work activities). These uncertainties interfere with the ability of employees to effectively do their jobs, thus leading to possible negative outcomes, such as job burnout.

From a more theoretical viewpoint, Rizzo, House, and Lirtzman (1970) explain how classical organizational theory and role theory as first conceptualized by Kahn et al. (1964) relate to role ambiguity. Based on classical organizational theory, there should be a formal definition of the role requirements for every position in an organization. If these requirements are nonexistent or ambiguous then employees do not know what they are expected to accomplish or how they will be evaluated. Based on role theory, the lack of necessary information given to employees may result in experienced anxiety or dissatisfaction with their role, which in turn, could lead to negative outcomes such as burnout.

Kahn et al. (1964) have asserted that even though there are likely to be individual differences in terms of an employee's ability to deal effectively with ambiguity, all employees find the state of being uncertain to be stressful. Thus, role ambiguity should be significantly related to job burnout, with high levels of ambiguity leading to high levels of emotional exhaustion and depersonalization, and a low level of personal accomplishment.

While in general, role ambiguity has been more frequently studied than role conflict (Jackson & Schuler, 1985), the opposite appears to be true in research involving job burnout. And while the two are associated with a number of outcomes, including job burnout, Jackson and Schuler (1985) recommend they be treated as theoretically distinct constructs.

Based on role theory, role conflict involves the need to meet conflicting job demands, such that compliance with one demand would make compliance more difficult with the other (Kahn et al., 1964). These conflicting demands can stem from either the same source, such as the demand to provide high quality service to a large number of clients, or from two different sources, such as an administrator and a supervisor demanding different tasks from an employee at the same time (Pines, 1982). Based on classical organization theory, the principle of unity of command has implications for role conflict. This principle states that employees should receive direction from only one source, thus helping reduce the possibility of employees having to face conflicting or incompatible demands (Rizzo et al., 1970).

This lack of agreement between received roles may result in an uncomfortable attitude toward the job because it diminishes an individual's perceived effectiveness in the organization. Additionally, when these demands are incompatible, an individual may become frustrated after continued attempts to meet those demands fail (Jackson et al., 1986). Moreover, Leiter and Maslach (1988) contend that it is more difficult and requires more effort to work in organizational settings characterized by high levels of role conflict.

Kahn (1978) has found that role conflict tends to be especially high in boundary-spanning positions in which the individual has responsibility for dealing simultaneously with people inside and outside the organization, as is the case with employees employed in helping professions. Thus, it appears likely that role conflict has a direct relationship to job burnout.

Researchers investigating role ambiguity and role conflict as either separate constructs (e.g., Drory & Shamir, 1988; Jayaratne & Chess, 1983; Leiter & Maslach, 1988; Schwab & Iwanicki, 1982; Schwab et al., 1986) or as a combined role stress variable (e.g., Burke et al. 1984; Iverson et al., 1994; Lee & Ashforth, 1993a, 1993b; Miller, Ellis, Zook, & Lyles, 1990) have consistently found a significant relationship between all three components of job burnout and both role ambiguity and role conflict. In particular, role conflict and role ambiguity have been shown to have a strong positive relationship with emotional exhaustion, a positive, but a moderate relationship with depersonalization, and a moderately negative relationship with personal accomplishment. In general, the relationship between burnout and role conflict has been stronger than that between burnout and role ambiguity

These studies investigating the relationship between burnout and role ambiguity and role conflict have used a variety of helping professional samples, including teachers (e.g., Schwab & Iwanicki, 1982; Schwab et. al., 1986), human service supervisors (e.g., Lee and Ashforth, 1993a, 1993b), health care workers (Iverson et al., 1994; Leiter & Maslach, 1988; Miller et al., 1990), police officers (e.g., Burke et al., 1984), prison guards (Drory & Shamir, 1988), and social workers (Jayaratne & Chess, 1983). In a sample of 469 teachers, Schwab and Iwanicki (1982) found that separate measures of role conflict and ambiguity accounted for a significant amount of variance in all three of the burnout components. Role conflict accounted for more variance in emotional exhaustion and depersonalization than did role ambiguity, while role ambiguity accounted for more variance in personal accomplishment than did role conflict.

Lee and Ashforth (1993a) also found that in a sample of 148 human service supervisors that role ambiguity and role conflict as a combined role stress variable were significantly related to all three burnout components. Lee and Ashforth (1993b) also conducted a longitudinal research study with a sample of 223 public welfare agency workers and found similar results. Role ambiguity and role conflict as a combined role stress variable were found to be significantly related to all burnout components at time 1, but only significantly related to emotional exhaustion and depersonalization at time 2. For both time periods, role stress was more strongly associated with emotional exhaustion than either depersonalization or personal accomplishment, while depersonalization was more strongly associated than personal accomplishment with role stress. Burke et al. (1984) also found role ambiguity and role conflict to be strong predictors of job burnout using a combined role stress variable as well as a combined job burnout variable.

While Kahn and his colleagues (Kahn, 1978; Kahn & Byosiere, 1992; Kahn et al., 1964) contend that role overload can be regarded as a special form of role conflict, it is possible that these two role characteristics could also operate independently. Therefore, separate measures for role conflict and role overload are included in this study.

Role Overload

Role overload can be conceptualized as either qualitative overload or quantitative overload. Qualitative overload relates to the type of client with whom one must deal or, more generally, an employee's perception that he or she does not have the necessary skills to perform the job adequately (Cordes & Dougherty, 1993; Maslach & Jackson, 1986). Quantitative overload occurs when individuals perceive that they cannot complete all their job requirements in the time allotted. The individual's perception implies subjective overload versus objective overload, which is the actual (as opposed to perceived) volume of work completed (Pines, 1982). Although there have been continued pleas to assess both qualitative and quantitative overload (Cordes & Dougherty, 1993; Maslach & Jackson, 1986; Pines, 1982), the majority of studies to date have assessed only quantitative overload. This choice is likely due to the ease of measuring quantitative overload as compared to measuring qualitative overload. All the studies shown in Table 4 which investigated role overload operationalized the construct using a quantitative measure; thus, the term role overload as used here implies quantitative overload or simply workload.

In terms of role overload's relation to burnout, employees' attempts to maintain high performance standards with their perception that there is insufficient time may lead to excessive emotional energy, thus leading to emotional exhaustion. Depersonalization may then result as employees lack the time and energy to give personalized service to their clients. Additionally, employees may feel a reduced sense of personal accomplishment as they are continually unable to complete their job requirements (Maslach, 1982a).

Researchers have looked at the relationship between job burnout and quantitative role overload with overload measured as a separate construct (e.g., Bacharach, Bamberger, & Conley, 1991; Burke et al., 1984; Iverson et al., 1994; Jackson et al., 1987; Jayaratne & Chess, 1983; Miller et al., 1990) and as a combined job stress variable with role conflict and role ambiguity (e.g., Brookings, Bolton, Brown, & McEvoy, 1985; Eisentstat & Felner, 1984; Jayaratne & Chess, 1986; Saxton et al., 1991).

In general, role overload has been shown to have a positive relationship with emotional exhaustion and depersonalization, and a negative relationship with personal accomplishment. In particular, workload appears to have the strongest relation to emotional exhaustion. In Jackson et al.'s (1987) study of 391 public service lawyers workload was strongly associated with emotional exhaustion, but not depersonalization or personal accomplishment. More recently, Iverson et al. (1994) found a significant relationship between overload and all three components of burnout in a sample of 487 health care workers. Similarly, Burke et al. (1984) found overload to be a strong predictor of burnout using a combined measure of the three MBI job burnout components.

When overload has been combined with role conflict and role ambiguity as a job stress variable its relationship with job burnout has also been significant. In their sample of 168 human service workers, Eisenstat and Felner (1984) found that job stress was positively related to emotional exhaustion and depersonalization, but not significantly associated with personal accomplishment. Brookings et al. (1985) and Jayaratne and Chase (1986) also used a combined job stress variable, but found it to be significantly related to all three burnout components. Similarly, Saxton et al. (1991) found job stress to be a significant predictor of emotional exhaustion in their sample of 859 airline reservationists.

Early burnout research also stressed the negative effect of workload in leading to burnout. For example, Maslach and Pines (1977) found that higher staff-child ratios in day-care centers led to higher burnout scores. In summary, quantitative role overload or workload has consistently been a strong predictor of job burnout in a large number of studies, and thus, should also be a significant predictor of burnout in this research endeavor.

Organizational Support

Organizational support, or the lack thereof, is also considered to be a major determinant of burnout. Eisenberger et al. (1986) define organizational support as the extent to which employees form global beliefs concerning whether or not the organization values their contributions and cares about their well-being. The definition of organizational support is similar to the definition of social support proposed by Cobb (1976) who states that social support is information that leads employees to believe they are cared for, esteemed, valued, and part of a network of communication and mutual obligation. Thus, organizational support can be viewed as one source of social support, which includes other sources such as peers, supervisors, and family, as well as different types of support such as emotional and instrumental (House, 1981).

In general, social support's relationship with job burnout or strain can be viewed in one of two ways: (1) a main or direct effect, or (2) a buffer or moderator effect. In the main or direct effect, a positive association between support and well-being is attributable to an overall beneficial effect of support. In contrast, the buffer or moderator hypothesis proposes that the relationship between stressors and strains will be weaker for those who experience higher degrees of support. Evidence for both types of relationships have been found (e.g., Cohen & Wills, 1985; La Rocco & Jones, 1978), with a number of researchers proposing rival hypotheses suggesting that social support can act as either a main or moderator effect (e.g., Boumans & Landeweerd, 1992; Etzion, 1984; Ganster, Fusiler, & Mayo, 1986; Lee & Ashforth, 1993b).

The position taken in this study was that organizational support would have a direct effect on burnout. Since organizational support has been labeled a role/organizational stressor, along with role ambiguity, conflict, and overload, it was proposed that these situational characteristics, acting as an additive set, would be predictive of job burnout. Additionally, this situational set would also interact with personality characteristics in predicting job burnout. Thus, the choice of the direct approach, as opposed to the moderator approach, has been chosen in order to correctly answer the research questions addressed in this study.

It also appears that organizational support was originally theorized as a direct determinant of burnout (Cherniss, 1980a; Fibkins, 1983; Maslach, 1982a; Pines, 1983, 1993). In Cherniss' (1980a) model, he includes organizational sources, which include support, as well as role variables such as role ambiguity, conflict, and overload, as one of the major factors in predicting burnout. He based this factor on extensive interviews with a variety of human service professionals who consistently described the lack of support received from their employers as a major reason why they were experiencing burnout symptoms. Cherniss theorized that if the organization repeatedly neglects or opposes employees' concerns, employees will feel powerless to make changes which, in turn, may result in burnout. Fibkins (1983) also notes that supportive or caring organizations that create a sense of belonging and recognition of contributions can help alleviate burnout.

Maslach (1982a), too, identifies the importance of organizational support and its relationship with job burnout. She notes that the organization can have a profound effect on the form and content of the helping relationship between employees and their recipients. If employees feel there is a lack of clear communication and a nonsupportive atmosphere, then burnout could directly follow.

Pines (1993) also agrees with the contention that the lack of organizational support is a stressor that may lead to burnout. She uses the term supportive work environment and defines this type of setting as one that provides a maximum of positive features, including the needed resources and support, that enable individuals to attain their goals and to perform effectively. If employees are confronted with a constant stream of negative factors, the result may be a subjective experience of failure. Moreover, she contends that it is not always an objective failure that leads to burnout, but instead, a perception that one can never make a truly significant contribution no matter how hard one's efforts are. Indeed, in a study of 205 human service professionals, Pines (1983) found a significant relationship between support in the work environment and burnout, with higher levels of support reflecting lower levels of burnout. Additionally, Pines and Aronson (1988) note that in their many collaborative research endeavors burnout has been less severe in organizations that allow their employees to express their feelings and get feedback. Moreover, they contend that organizations who reward and appreciate their employees will face less burnout among their staff.

Jackson et al. (1986) hypothesized that unmet organizational expectations, defined as the expectations about the systems within which an employee operates, would correlate significantly with each of the MBI components. Their operational definition of unmet organizational expectations was a self-report measure which included items tapping employees' perceptions of their participation in decision making and the fairness of the administration of rewards and punishment. Although the researchers did not find significant results, they suggest that this may have stemmed from methodological problems such as range restriction and the questionable validity of the measurement instrument. Despite the insignificant results found by Jackson and her colleagues, others have found the relationship between organizational support and burnout to be highly significant.

In their analysis of 600 public school teachers, Russell, Altmaier, and Van Velzen (1987) found that reassurance of worth, which they defined as a perception that the organization properly acknowledges employees' skills and abilities, was significantly related to all three components of the MBI. Teachers who indicated that their skills and abilities were respected reported less emotional exhaustion, more positive attitudes toward students, i.e., less depersonalization, and greater personal accomplishment.

Similarly, in their study of 266 prison guards, Drory and Shamir (1988) found that management support, which they defined as a general sense of organizational caring as perceived by its employees, was the major contributor to burnout. In fact, management support was a larger contributor than role ambiguity, role conflict, and a number of task characteristics such as autonomy and significance. Golembiewski and Munzenrider (1988) also note that high levels of management support help diminish the onset of burnout.

In a related stream of research, Ferris, Frink, Gilmore, and Kacmar (1994) found that organizational politics, which they defined as an organizational stressor leading to negative worker attitudes toward the organization as a whole, adversely affected job anxiety. The researchers' measure of organizational politics taps various facets of organizational support such as a sense of organizational caring and interest in the employee.

While these studies just presented used what may be described as surrogate measures of organizational support (e.g., unmet organizational expectations, reassurance of worth, management support, and organizational politics), only two studies to date are known to have used an actual measure of organizational support. Lee and Ashforth (1993a, 1993b) used a measure called Perceived Organizational Support developed by Eisenberger et al. (1986) to test the significance of the relationship between social support and burnout. This same measure of organizational support has been selected for this study and is further described in Chapter 3 of this proposal.

Lee and Ashforth (1993a) used a composite measure of social support in their study of 148 human service supervisors. They combined organizational support with supervisory support, which correlated significantly with emotional exhaustion and depersonalization, but not with personal accomplishment. In a later study, Lee and Ashforth (1993b) used a sample of 223 public welfare agency workers and again combined organizational support and supervisory support. In this longitudinal study, support was significantly related to all three burnout components at time 1, but was significantly related to only emotional exhaustion and depersonalization at time 2.

The authors provide no justification as to why they chose the Perceived Organizational Support instrument, nor do they mention if previous burnout researchers had used the measure in the past. The construct validity of the Perceived Organizational

Support questionnaire was first reported by Eisenberger et al. (1986) and later by Shore and Tetrick (1991). It is possible that researchers interested in the relationship between social support and burnout are just now becoming aware of a validated instrument measuring organizational support. This would help explain the past use of surrogate measures of organizational support, as well as the limited use of the Perceived Organizational Support scale. Nevertheless, there is sufficient theoretical justification for including organizational support as one of the role/organizational stressors in the situational characteristics predictor set.

Summary of Situational Predictors

The previous analysis thoroughly describes the four role/organizational stressors (role ambiguity, role conflict, quantitative role overload, and organizational support) included in the situational characteristics predictor set. Previous research, as well as theoretical justification, indicate that these four stressors are likely to be significant predictors of job burnout. The following hypotheses summarize the relationship between situational characteristics and the three components of job burnout.

H4a: Role ambiguity will be positively associated with emotional exhaustion.

H4b: Role conflict will be positively associated with emotional exhaustion.

H4c: Quantitative role overload will be positively associated with emotional exhaustion.

H4d: Organizational support will be negatively associated with emotional exhaustion.

H5a: Role ambiguity will be positively associated with depersonalization.

H5b: Role conflict will be positively associated with depersonalization.

H5c: Quantitative role overload will be positively associated with depersonalization.

H5d: Organizational support will be negatively associated with depersonalization.

H6a: Role ambiguity will be negatively associated with personal accomplishment.

H6b: Role conflict will be negatively associated with personal accomplishment.

H6c: Quantitative role overload will be negatively associated with personal accomplishment.

H6d: Organizational support will be positively associated with personal accomplishment.

In summary, Hypothesis 4 proposed that high levels of role ambiguity, role conflict, and quantitative role overload, and low levels of organizational support would be significantly associated with high levels of emotional exhaustion. Hypothesis 5 proposed that high levels of role ambiguity, role conflict, and quantitative role overload, and low levels of organizational support would be significantly associated with high levels of depersonalization. Hypothesis 6 proposed that high levels of role ambiguity, role conflict, and quantitative role overload, and low levels of organizational support would be significantly associated with low levels of personal accomplishment.

The same reasoning applies to the separate situational characteristics in testing each one's relationship to job burnout as does with the personality characteristics. That is, the situational characteristics set as a whole must prove significant to the job burnout components in order for the separate role/organizational stressors to be further tested.

Thus, the following general research question was proposed which tested the separate relationships among the situational characteristics and the job burnout components:

Which of the role/organizational stressors included in the situational characteristics set has a significant relationship with any or all of the three job burnout components? Which has the strongest relationship?

The testing of this general research question was contingent upon finding the situational set as a whole to be significant. If found significant, then the appropriate situational characteristics were tested for their association with each of the job burnout components.

Situational Characteristics Versus Personality Characteristics

Although discussions of burnout have certainly emphasized both personal and environmental factors, research evidence to date suggests that environmental factors, particularly role/organizational characteristics of the workplace, are more strongly associated with job burnout than personality factors (e.g., Burke, Shearer, & Deszca, 1984; Maslach & Jackson, 1984; Leiter & Maslach, 1988). Pines and Aronson (1988) note that in some cases the primary predictor of burnout does lie in the individual or is due to the fit between the individual and the work situation, but they strongly assert that "our work has made it clear that, in the vast majority of cases of burnout, the major cause lies in the situation" (p. 5). Their assertion is based on more than a dozen studies, both qualitative and quantitative, researched in a variety of settings and with a variety of different subjects.

Based on his qualitative studies of job burnout, Cherniss (1980b) suggests that personality traits should not be overestimated. He contends that "the structure of the job and work organization ultimately is a stronger determinant of the incidence of burnout than the individual's personality makeup" (p. 131). Maslach (1993), too, asserts that situational characteristics are more powerful predictors of burnout than are personality characteristics. It is possible that her conclusions may be based on a comprehensive dissertation by Gann (1979), one of Maslach's students. Gann focused on personality as it interacts with job-related factors. Although personality, as measured by the participants' ego-level, provided additional power for predicting burnout, job-related characteristics accounted for more of the variance in the three components of burnout. Maslach and Jackson (1981, 1986) later cite Gann's study as a prime reason for focusing on situational characteristics as opposed to personal characteristics as predictors of job burnout.

Burke et. al. (1984) also found work settings characteristics, which included role ambiguity and role conflict, to be stronger predictors of burnout than personal characteristics, which included Type A behavior. While the interaction of the two sets of variables accounted for a higher variance than either set alone, the work setting characteristics proved to be a stronger predictor set than the personal characteristics set. Duckitt (1984) also took an interactionist approach in his study of social support and personality in predicting psychological distress, a construct similar to job burnout. He found that social support was a stronger predictor of distress than a variety of personality characteristics including extroversion and sensitivity, but that the interaction of the two was the strongest predictor overall.

Thus, it was proposed that situational characteristics would be more strongly related to the three job burnout components than personality characteristics. This leads to the seventh hypothesis that was tested in this study:

H7a: The association between situational characteristics and emotional exhaustion will be stronger than the association between personality characteristics and emotional exhaustion.

H7b: The association between situational characteristics and depersonalization will be stronger than the association between personality characteristics and depersonalization.

H7c: The association between situational characteristics and personal accomplishment will be stronger than the association between personality characteristics and personal accomplishment.

While the association between situational characteristics and job burnout may be stronger than the association between personality characteristics and job burnout, it is also important to test the interaction of the two. This approach to researching work related attitudes and behaviors is not new. Indeed, it follows the theoretical foundation inherent in person-environment (P-E) fit theory and interactional psychology. These two theories have helped spur the person-situation debate in management and psychology research.

The Person-Situation Debate

The issue of whether burnout is a product of the person or the environment can be resolved through P-E fit models and interactional psychology. Carroll and White (1982) helped expose researchers interested in burnout with the notion that the dynamic interaction of personal variables and environmental variables generates burnout. Pines and Aronson (1988) agree that burnout may be the result of the misfit between the individual and a particular organizational or job situation. Essentially, P-E fit theory helps explain why individual well being is affected by characteristics of the person and the environment (Caplan, 1983).

Caplan (1983) describes two types of fit: (1) needs-supplies fit and (2) abilities-demands fit. In terms of needs-supplies fit, people vary in their needs and values and, in turn, the environment varies in the extent to which it can supply the opportunities to meet these individual needs and values. In relation to burnout, an example of this type of fit would be a low self-esteem individual who would likely require more feedback and support than a high self-esteem individual. Individuals with low self-esteem who do not receive the amount of support and feedback needed may become burned-out due to the misfit between their needs and the supply they receive from their organization.

In terms of abilities-demands fit, environments vary in terms of how much is demanded of their people and people, in turn, vary in terms of their ability to meet these demands. In relation to burnout, an example of this type of fit would be the amount of quantitative workload required by an organization. It is likely that employees will vary in their ability to handle that workload. If an organization has above average production standards and the individual is just an average producer, this misfit between the person and the organization may lead to job burnout. Thus, P-E fit theory is certainly applicable in the study of predictors of job burnout. Additionally, the theoretical framework of interactional psychology, or interactionism, is also applicable to the study of job burnout.

While some researchers (e.g., Davis-Blake & Pfeffer, 1989) argue that it is predominately the situation that influences job attitudes and behavior, others (e.g., Staw, Bell, & Clausen, 1986; Staw & Ross, 1985) argue that personal characteristics, particularly personality traits or dispositions, should be credited with greater explanatory power. Speaking in favor of the situational approach, Davis-Blake and Pfeffer (1989) argue that because organizational settings represent strong situations, personality characteristics are likely to have very limited power in relation to individual reactions in organizations. These researchers do not contend that dispositional effects are completely nonexistent, only that they are far less important in comparison to situational effects. In contrast, Staw and Ross (1985) argue in favor of traits, but do not deny the influential role of situational factors. Indeed, they assert that it is naive to assume that individuals are unaffected by their surroundings in forming attitudes about work. At the same time, they also argue that people do tend to behave consistently from one situation to another.

This debate among "situationists" and "personologists" has been argued for over fifty years (c.f. Icheisser, 1943), but did not create controversy until Mischel's (1968) influential critique where he concluded that correlations between trait scores and behaviors are seldom larger than $r = .30$. This rather low correlation has been protested by many researchers noting that Mischel's review excluded the better studies in the personality literature (Kenrick & Funder, 1988). Additionally, Weiss and Adler (1984) contend these low correlations stem from traits seldom being the focus of the research itself. Moreover, Weiss and Adler note that because we have placed far more emphasis on testing the influence of situational factors, it is not surprising that these factors have appeared far more robust than personality effects. Hogan and his colleagues (Hogan, 1991; Hogan, DeSoto, & Solano, 1977) also warn that one cannot take a correlation of .30, which equates to 9% of the variance accounted for by personality traits, and simply assume that the remaining 91% of the variance can be attributed to situational factors.

To make amends among situationists and personologists, interactional psychology has been viewed as the best alternative. As Epstein and O'Brien (1985) contend, "interactionism provides a reasonable resolution of the person-situation debate, as behavior can never be determined by person or situation variables alone, but always a result of the interaction between them" (p. 515). Indeed, Pervin and Lewis (1978) agree in their assertion that "we can never understand persons in isolation from situations or situations in isolation from persons" (p. 140). These assertions are echoed in a statement by Bowers (1973):

> It is my argument that both the trait and the situationist position are inaccurate and misleading and that a position stressing the interaction of the person and the situation is both conceptually satisfying and empirically warranted (p. 307).

Bowers (1973) supports this perspective by providing an analysis of 18 studies where he empirically tested the person X situation interaction. The results indicate that the interactions of persons and situations account for a higher percentage of the variance than either person or situation main effects in 14 out of the 18 comparisons.

Several of the studies included in Bower's (1973) analysis are those by Endler (1973) and Endler and Hunt (1966, 1968, 1969). These studies and others by Endler and his colleagues (e.g., Endler, Hunt, & Rosenstein, 1962) also demonstrate the explanatory power of the person X situation interaction. Endler's influence on interactionism culminated in his seminal book titled, *Interactional Psychology and Personality* (Endler & Magnusson, 1973). Here, Endler (1973) notes that the question of whether situations or individual differences are the major source of behavioral or attitudinal variance is really a pseudo issue. The real question should be "How do individual differences and situations interact in evoking behavior?" (Endler, 1973, p. 587).

Thus, a focus taken in this study was to investigate the interaction of situational characteristics, in the form of organizational/role factors, and personal characteristics, in the form of personality traits, in predicting job burnout. Although, as previously described, numerous person x situation studies exist in the general psychology literature, few consistent findings based on personal dispositions x situational interactions exist in the burnout literature to make any definitive argument as to whether or not such interactions would be significant. For example, Dignam et al. (1986) investigated the interaction among demographic characteristics and situational characteristics in their prediction of job burnout. They tested ten interactions and only found significance for one, length of employment x social support, in predicting personal accomplishment. In contrast, Eastburg et al. (1994), who did include a personality characteristic, found significance with the interaction of supervisor support x extraversion for all three job burnout components, but found no other significant interactions among the six others tested. Therefore, a general research question was proposed:

After controlling for the main effects of situational and personality characteristics, do the interactions among the situational and personality characteristics account for any significant variance in any of the job burnout components?

Chapter Summary

This chapter presented a complete overview of the literature related to the job burnout phenomenon. The conceptual and operational definitions of job burnout were detailed. In particular, a thorough presentation of the job burnout measurement instrument that was used in this study, the MBI, was also included. A number of researchers have sought to determine the MBI's reliability and validity. Although not all findings have proved favorable, in general, the MBI is a psychometrically sound instrument with which to measure the three components of job burnout: emotional exhaustion, depersonalization, and personal accomplishment.

Also presented were a number of theoretical models of job burnout, which are comprised of two general types: sequence models and predictor/outcome models. The focus of this study was specifically on predictors of job burnout. Based on theory and empirical research, two general predictors of job burnout have emerged thus far: characteristics of the work setting and characteristics of the individual. Although much research has centered on situational predictors of job burnout, far less attention has been given to personal characteristics, particularly personality traits.

In view of the multitude of personality traits that could be associated with job burnout, four were selected as the personality characteristics set in this study: (1) self-esteem, (2) locus of control, (3) communal orientation, and (4) negative affectivity. The selection of these four traits was based on their proposed theoretical relationship to job burnout, as well as empirical findings supporting their significant association with the phenomenon.

The selection of the four role/organizational stressors included in the situational characteristics set was also based on their theoretical linkage with job burnout, in addition to their prevalence as significant predictors in past empirical job burnout research. These four situational characteristics: (1) role ambiguity, (2) role conflict, (3) quantitative role overload, and (4) organizational support are also thoroughly presented in this chapter.

In total, seven main hypotheses related to the three components of job burnout, were posited. These hypotheses are summarized in Table 5. The research design and methodology used in this study are described in the following chapter.

Table 5

Summary of Research Hypotheses

H1a: Self-esteem will be negatively associated with emotional exhaustion.

H1b: External locus of control will be positively associated with emotional exhaustion.

H1c: Communal orientation will be negatively associated with emotional exhaustion.

H1d: Negative affectivity will be positively associated with emotional exhaustion.

H2a: Self-esteem will be negatively associated with depersonalization.

H2b: External locus of control will be positively associated with depersonalization.

H2c: Communal orientation will be negatively associated with depersonalization.

H2d: Negative affectivity will be positively associated with depersonalization.

H3a: Self-esteem will be positively associated with personal accomplishment

H3b: External locus of control will be negatively associated with personal accomplishment.

H3c: Communal orientation will be positively associated with personal accomplishment.

H3d: Negative affectivity will be negatively associated with personal accomplishment.

H4a: Role ambiguity will be positively associated with emotional exhaustion.

H4b: Role conflict will be positively associated with emotional exhaustion.

H4c: Quantitative role overload will be positively associated with emotional exhaustion.

H4d: Organizational support will be negatively associated with emotional exhaustion.

H5a: Role ambiguity will be positively associated with depersonalization.

H5b: Role conflict will be positively associated with depersonalization

H5c: Quantitative role overload will be positively associated with depersonalization.

H5d: Organizational support will be negatively associated with depersonalization.

H6a: Role ambiguity will be negatively associated with personal accomplishment.

H6b: Role conflict will be negatively associated with personal accomplishment.

H6c: Quantitative role overload will be negatively associated with personal accomplishment

H6d: Organizational support will be positively associated with personal accomplishment.

H7a: The association between situational characteristics and emotional exhaustion will be stronger than the association between personality characteristics and emotional exhaustion.

H7b: The association between situational characteristics and depersonalization will be stronger than the association between personality characteristics and depersonalization.

H7c: The association between situational characteristics and personal accomplishment will be stronger than the association between personality characteristics and personal accomplishment.

CHAPTER III

RESEARCH METHODOLOGY

The following chapter outlines the type and number of subjects that were included in this study. Next, thorough descriptions of the measures included in the self-report questionnaire are provided (See Appendix A). Also outlined are the procedures that were used during administration of the on-site self-report survey. Additionally, a brief explanation of the statistical analyses that were used to test the research hypotheses is also included.

Subjects

The subjects included in this study were 149 employees of a large government social services department located in a large metropolitan county in the western United States. These employees are called eligibility technicians and their main responsibility is to administer entitlement programs such as aid to dependent children, government sponsored health care benefits, and food stamps. Thus, these subjects fit the description of human service workers as specified by Maslach and Jackson (1981, 1986) as the appropriate type of sample to use when measuring job burnout with the MBI. Employees from two offices were asked to volunteer to be participants.

In order to strengthen this study's statistical conclusion validity and, thus, ensure that a sufficient number of participants were included, a power analysis as described by

Cohen (1988) was conducted. Calculating the statistical power of a test a priori provides greater assurance that a study's results will be statistically significant (Mazen, Hemmasi, & Lewis, 1987). There are three parameters involved in calculating power: (1) the significance level, alpha (α), which is the risk of committing a Type I error--mistakenly concluding a phenomenon is present in the population of interest, (2) effect size, which is the degree to which the phenomenon is present in the population of interest, and (3) sample size. Cohen recommends a power level of at least .80 ($1-\beta$), with β representing the Type II error rate--mistakenly concluding a phenomenon is not present in the population of interest.

An analysis was conducted with the use of NCSS--Power Analysis and Sample Size (Hintze, 1993) using standard alpha levels of .01, .05, and .10, Cohen's (1988) recommended range of effect sizes for set correlation and multivariate methods of small (.02), medium (.15), and large (.35), and various sample sizes (n). The results are shown in Appendix B. With an $\alpha = .05$ and a small effect size, a sample size of approximately 600 would have been needed in order to reach an acceptable power level of .80. In comparison, a sample size of approximately 70 would have been needed for a medium effect size, and only 50 would have been required for a large effect size to reach the same level of power. Since 600 subjects were not available to participate in this study, a range of 70-200 participants was targeted for inclusion, with 149 actually participating.

Measures

As Schwab (1980) contends, a scientific orientation should place approximately equal importance on both the independent and dependent constructs in a study in order to ensure their substantive validity. Therefore, careful attention was placed on selecting measures for all the variables that correlate highly with their conceptual and theoretical definitions. Most importantly, the measures chosen for this study were selected based on their theoretical linkage to the proposed research model. Each measure's psychometric quality has been investigated by the instrument's developers, as well as by other researchers. Additionally, the majority of the measures have been used in previous research related to job burnout. The statements included in each measure are listed in Appendix A: Proposed Research Questionnaire. A discussion of each measure's structure, reliability, and validity, including a reference to each measure within the Appendix, follows.

Independent Variables

There are a total of eight independent variables in this study. Four of these variables relate to the situational characteristics set (role ambiguity, role conflict, role overload, and organizational support), while the remaining four relate to the personality characteristics set (self-esteem, locus of control, communal orientation, and negative affectivity). Although separate measures for each variable were selected, the measures for role ambiguity and role conflict were developed by the same researchers; thus, they are included in the same instrument known as the role questionnaire (Rizzo et al., 1970).

Role Ambiguity and Role Conflict

Role ambiguity and role conflict were operationalized using the scales developed by Rizzo et al. (1970). While the role ambiguity subscale consists of six items all worded positively, the role conflict subscale consists of eight items all worded negatively. Respondents were asked to indicate the degree to which each condition applies to them on a 7-point Likert scale (1=very false to 7=very true). (See Appendix A, Section 2--Part A; items 1-8: role conflict; items 9-14: role ambiguity). Higher subscale scores (with the role ambiguity items reverse-scored) indicate higher levels of role ambiguity and role conflict.

Rizzo et al. (1970) report on the validity of the measures. The factorial validity of the scales was confirmed by showing the independence of the two subscales. Additionally, the construct validity of the scales was confirmed by correlating the two constructs with variables theoretically related to them. Other researchers (e.g., House, Schuler, & Levanoni, 1983; Schuler, Aldag, & Brief, 1979; Szilagyi, Sims, & Keller, 1976) have also reported on the scales' favorable psychometric properties. Internal consistency estimates of reliability have consistently been .85 or higher (Schwab & Iwanicki, 1982; Schwab et al., 1986). Thus, the measures of role ambiguity and role conflict by Rizzo and his colleagues are both valid and reliable instruments.

Role Overload

Role overload was operationalized using a three-item scale adopted from Dougherty and Pritchard (1985) and Cordes (1989). Respondents were asked to indicate how strongly they agree or disagree with each item on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). (See Appendix A, Section 2--Part B). Higher scores (with item one reverse-scored) reflect higher levels of role overload. Cordes (1989) reported an acceptable internal reliability coefficient alpha of .72 for this scale (Nunnally & Bernstein, 1993).

Organizational Support

Organizational support was operationalized using the Perceived Organizational Support Questionnaire developed by Eisenberger et al. (1986). The questionnaire focuses on the employees' perceptions of their organization's attitude toward them. Respondents were asked to indicate how strongly they agree or disagree with each of the 16 items on a 7-point Likert scale (1=strongly disagree to 7=strongly agree). (See Appendix A, Section 4). Eisenberger et al. note that half the statements are worded positively and half are worded negatively in order to control for agreement response bias. Higher scores (with negatively worded statements reverse-scored) reflect higher organizational support.

Eisenberger et al. (1986) reported on the scale's psychometric soundness. The internal reliability coefficient alpha was .97 in their sample. Subsequent studies by Eisenberger, Fasolo, and Davis-LaMastro (1990), Shore and Tetrick (1991), and Shore and Wayne (1993) have reported similar Cronbach's alphas over .90. Additionally, the items have loaded on one main factor, providing support for the questionnaire's factorial validity. Further, the authors' provide support for its construct validity by correlating the measure with constructs within its nomological network (Cronbach & Meehl, 1955).

Shore and Tetrick (1991) also found that the scale is distinguishable from affective and continuance commitment. Moreover, research on burnout has demonstrated the scale's relationship to all three components of the MBI (Lee & Ashforth, 1993a, 1993b).

Self-esteem

Self-esteem was operationalized using the Organization-Based Self-esteem (OBSE) scale developed by Pierce et al. (1989). Because the OBSE scale is related to self-esteem in an organization, it should demonstrate more significant relations with other organization-based variables, such as job burnout, in comparison to measures of global self-esteem such as the well known and used Rosenberg (1965) self-esteem scale.

The OBSE is a 10-item instrument with statements all positively worded. Respondents were asked to indicate how strongly they agree or disagree with each item on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). (See Appendix A, Section 3--Part A). Higher scores reflect higher levels of OBSE.

In their comprehensive analysis of the scale, Pierce et al. (1989) conducted five separate studies to assess the scale's reliability and validity. Measures of internal consistency reliability ranged from .86 to .96, with an average coefficient alpha of .91. A measure of the scale's test-retest reliability of .87 provides evidence of the scale's stability over time. The scale was also tested for its convergent and discriminant validity with seemingly similar constructs (e.g., other measures of self-esteem) and seemingly dissimilar constructs (e.g., organizational commitment and job satisfaction). Further, the scale was tested for its factorial, predictive, and concurrent validity. All studies combined help demonstrate the scale's sound psychometric qualities.

Locus of Control

Locus of control was operationalized using the Work Locus of Control (WLCS) Scale developed by Spector (1988). The WLCS measures generalized control beliefs in the workplace. This measure, like the OBSE, is a domain-specific measure. Thus, the WLCS was chosen over more global locus of control scales, such as the one by Rotter (1966), in expectation of finding larger relations with other work related variables, such as job burnout.

The WLCS is a 16-item instrument with one-half of the statements worded positively and one-half worded negatively. Respondents were asked to indicate how strongly they agree or disagree with each item on a 6-point Likert scale (1=disagree very much to 6=agree very much). (See Appendix A, Section 1). With the positively worded items reverse-scored, low scores represent internality while high scores represent externality.

Spector (1988) reported on the validation of his instrument based on six different samples. Coefficient alpha measures of internal consistency ranged from .75 to .85. Evidence of the scale's convergent validity was demonstrated by correlating the WLCS with other general locus of control scales. Additionally, the relationship among the WLCS and other variables (e.g., job satisfaction and organizational commitment) also proved significant.

Communal Orientation

Communal orientation was operationalized using the Communal Orientation Scale developed by Clark et al. (1987) and later revised by Buunk et al. (1993). The revised scale consists of 10 items, versus 14 in the original scale. The four discarded items had previously loaded on a second factor (Clark et al., 1987). Thus, the items in the revised measure all load on one factor which helps strengthen its factorial validity. Buunk et al. (1993) reported an internal reliability coefficient alpha of .80. Clark et al. (1987) also reported on the scale's reliability, as well as its construct validity.

Respondents were asked to indicate how characteristic of themselves each of the items is on a 5-point Likert scale (1=extremely uncharacteristic to 5=extremely characteristic). (See Appendix A, Section 3--Part B). Higher scores (with those worded negatively reverse-scored) indicate higher levels of communal orientation.

Negative Affectivity

Negative affectivity was operationalized using an 11-item measure from the Multidimensional Personality Index as reported in Watson and Tellegen (1985) and Agho, Price, and Mueller (1992). Respondents were asked to indicate whether each statement is either true or false. Items marked as true are scored as "1," whereas items marked as false are scored "0." Thus, higher scores reflect higher levels of negative affectivity. (See Appendix A, Section 3--Part C).

Agho et al. (1992) report on the measure's reliability and validity. They calculated an acceptable Cronbach's alpha of .79 for the scale. Additionally, they tested the scale's convergent and discriminant validity by correlating the measure with job satisfaction, positive affectivity, and other situational variables. Their findings provide evidence that job satisfaction, positive affectivity, and negative affectivity are related, but distinct constructs. In addition, their findings show that the three constructs do not have the same situational conditions as predictors. Moreover, each measure loaded onto a separate factor, thus, ensuring that individuals are able to distinguish among the three scales.

Dependent Variables: Three Components of Job Burnout

Job burnout was measured with the MBI (Maslach & Jackson, 1981, 1986). The 22-item instrument, comprised of the three components of emotional exhaustion, depersonalization, and reduced personal accomplishment, is shown in Table 2. The three subscales are separate and distinct components of burnout; thus, as Maslach and Jackson (1986) recommend, a total burnout score was not computed and each component was treated as a separate dependent variable. The MBI's psychometric qualities were previously discussed (see Chapter 2).

Respondents were asked to indicate how often or how frequently they experience each statement on a 6-point Likert scale (0=never to 6=every day). (See Appendix A, Section 5). The original version of the MBI (Maslach & Jackson, 1981) included both a frequency and an intensity response format. Subsequent research has shown that the two dimensions have fairly high correlations. Therefore, in their most current version of the MBI, Maslach and Jackson (1986) recommend assessing only the frequency dimension. Higher scores on the emotional exhaustion and depersonalization subscales reflect higher levels of burnout, while lower scores on the personal accomplishment subscale reflect higher levels of burnout.

Control Variables: Demographic Characteristics

Although the research questions addressed in this study do not include demographic characteristics, it is important to control for them in order to adequately test the hypotheses described and to reduce threats to the study's internal validity. In particular, four demographic characteristics have been shown to be significantly related to job burnout (see Cordes & Dougherty, 1993, for a complete review). These four characteristics are (1) gender, (2) age, (3) tenure/experience, and (4) marital status.

In terms of gender, men and women often report differences in their perceived level of job burnout, with women reporting higher levels of emotional exhaustion and men reporting higher levels of depersonalization and personal accomplishment (Maslach & Jackson, 1981, 1986). These differences are not always consistent though, with Maslach and Jackson (1984, 1985) reporting no differences among men and women in other studies.

More consistent results have been found for age. Younger employees consistently perceive themselves to be more burned out in comparison to their older peers (Maslach & Jackson, 1981, 1986; Schwab & Iwanicki, 1982). Since age is often related to tenure or experience it follows that employees with more years of experience in their positions tend to report lower levels of job burnout than those with fewer years of experience. This finding stems from Maslach and Jackson's (1981) contention that burnout is likely to occur within the first few years of one's career. In terms of marital status, married employees tend to report lower levels of burnout as compared to their nonmarried counterparts. Like gender, the findings related to marital status have also been inconsistent.

Less researched, but other possible demographic characteristics which may relate to burnout, are education level, ethnic background, and whether or not the individual has any dependent children. Maslach and Jackson (1981) report that higher levels of education are associated with higher levels of emotional exhaustion. In subsequent studies, Maslach and Jackson (1984, 1985) report that Caucasian employees may have higher levels of burnout than African American employees. Additionally, childless employees have reported higher burnout levels than those with children. This finding stems from the possible source of social support that having a family can give to the employee.

In summary, demographic characteristics have played a rather minor role in determining the main predictors of job burnout. Inconsistent findings and low explained variances (the majority report less than two percent) place demographic characteristics at a lower priority in predicting job burnout than either personality characteristics or situational characteristics. The demographic characteristics described are included in the demographic section of the survey instrument (see Appendix A, Section 6). The data analysis procedure that was used to control for these factors is described next.

Procedure

Participants were asked to voluntarily complete the self-report questionnaire on site during working hours, either during a staff meeting or at another time which was convenient to the employee. The questionnaire was pretested for clarity and ease of scoring with a sample of 79 undergraduate students. This pretest was also used to determine if there was any severe multicolinearity among the independent and variables sets. Multicolinearity did not prove to be a problem; thus, all the measures were kept on the administered survey. This pretest also provided an average time required to complete the instrument, which was predicted to take between 20 to 30 minutes. Administrative staff responsible for overseeing research within their government agency also preapproved the use of the survey instrument.

The distribution and collection of the questionnaire was completed by this researcher who was available at all times to answer participants' questions. All completed questionnaires were given to this researcher directly, with no management staff intervening in the process. This procedure helped to ensure that participants felt free and comfortable to respond honestly and that these responses would remain confidential.

Data Analysis Techniques

The three primary statistical techniques used in this study were (1) descriptive statistics, (2) canonical correlation analysis and (3) hierarchical regression analysis of sets. The descriptive statistics included the calculation of internal reliabilities and intercorrelations among all the study's variables. This analysis was primarily used to judge the independence of the variables and the reliability of the measures.

Canonical correlation analysis was used to simplify the model. This procedure is ideal for studies such as this one which have multiple independent and dependent variables (Hair et al., 1992). Those sets that did not prove significant in this analysis were dropped from the model prior to conducting hierarchical analysis of sets.

Hierarchical analysis of sets was used to test the main hypotheses proposed in this study. The situational and personality characteristics, as well as the demographic information collected, were grouped into sets for reasons of parsimony and their substantive content, as well as their role in the logic of the research (Cohen & Cohen, 1983). An additional reason to use sets instead of separate independent variables is due to the possibility of an investigationwise Type I error rate (Cohen & Cohen, 1983). Because the number of sets is much smaller in comparison to the number of individual independent variables, this Type I error rate will not be as large a value over the tests for the sets as it would be over the tests for the total number of separate independent variables. Moreover, the use of independent variable sets has been used in several stress related studies that have looked at personality and/or situational predictors of job burnout (e.g., Chay, 1993; Duckitt, 1984; Frew & Bruning, 1987; Jackson et al., 1987).

For each of the three components of job burnout, a hierarchical multiple regression analysis was performed by entering each set of characteristics in a predefined, a priori, order based on theory and past empirical research. For all analyses, the demographic characteristics set was placed first. For subsequent analyses, the ordering of the situational and personality characteristics sets was dependent upon the hypothesis being tested. This statistical procedure calculates an R^2 upon the addition of each new set. Thus, the R^2 for all the independent variable sets was analyzed into unique increments in the proportion of each job burnout component due to the addition of each additional set to those higher in the hierarchy.

Chapter Summary

This chapter described the research methodology and design used to test the hypotheses presented in Chapter II. A careful selection of a representative sample comprised of human service professionals was implemented. These participants were asked to voluntarily complete a cross sectional, self-report survey instrument that was administered on site at their workplace.

The survey instrument was comprised of six sections, including a demographics section whose measures were used as control measures. All the situational, personality, and job burnout measures used were carefully selected based on their psychometric soundness. A description of the statistical techniques used were also outlined, with the main technique being hierarchical analysis of sets. A detailed description of the results of the data analyses follows.

CHAPTER IV

RESULTS

Several data analysis techniques were employed in this study and are presented here. First, data screening techniques were used, including tests for outliers and normality assumptions. Second, an analysis of the sample's demographic characteristics is presented. Third, descriptive statistics were calculated, including internal reliabilities and intercorrelations among the variables. Fourth, the model was simplified by using canonical correlation techniques. Lastly, the simplified model was tested by using hierarchical analysis of sets for each of the three job burnout components. Also presented, is a post hoc power analysis.

Data Screening

Prior to conducting any analyses, the data were carefully screened. In particular, each variable was checked for missing data and outliers. Since the percentage of missing data was less than one percent for each variable, the mean substitution technique was used. This technique replaces the missing data with the mean value of the remaining data values for that same variable. This technique allows the use of all possible data which, in turn, preserves statistical power (Roth, 1994). The data were also checked for any significant outliers in order to determine whether all points should be included (see Orr, Sackett, & Dubois, 1991). Since there were no outliers detected, all data were included in subsequent analyses. Next, the assumptions of multivariate analysis were tested. These assumptions include normality, linearity, and homoscedasticity (Berry, 1993; Hair et al., 1992). To test these assumptions, histograms and scatter plots were used for a visual analysis. Additionally, tests for kurtosis (a measure of the peakedness or flatness of a distribution) and skewness (a measure of the symmetry of a distribution) were used for a numerical analysis (Hair et al., 1992). Role ambiguity and negative affectivity showed positive skewness. By using logarithmic transformations this skewness was reduced.

A final data screening technique was employed to test for differences among the two offices prior to combining the data. Chi-square analysis indicated that distributions of the job burnout components did not differ significantly between the two offices (χ^2 ranged from 11.09 ($p = .09$) to 2.89 ($p = .82$)). Only a few significant differences were found based on demographic characteristics. Chi-square statistics for gender ($\chi^2 = 5.48$, $p = .02$) and race ($\chi^2 = 5.48$, $p = .00$) were found to be significant. The effects of these demographic characteristics, as well as all the other demographic characteristics, were controlled for in the canonical correlations and hierarchical regression analysis. A closer look at these demographic characteristics is presented next.

Demographic Characteristics

Table 6 presents the demographic characteristics of the total sample. As expected in a social services setting, the majority (73.2%) of the sample is female. The average age

Table 6

Demographic Characteristics
(N = 149)

Characteristic	**Percent**
Gender	
Female	73.2
Male	26.8
Age (Average = 40.6)	
< 40 Years	43.7
⇩ 40 Years	56.3
Race/Ethnic Background	
Hispanic	38.3
Caucasian/White	25.5
Black/African-American	18.1
Asian/Pacific-Islander	15.4
Other	2.7
Education Level	
High School	10.7
Some College	37.6
Associate's/Technical Degree	16.8
4-Year College Degree	25.5
Graduate Degree	9.4
Tenure in the Organization (Average = 7.3)	
< 7 Years	55.8
⇩ 7 Years	44.2
Marital Status	
Married	55.0
Not Married	45.0
Dependent Children Living at Home	
Yes	59.5
No	40.5

of the respondents is 40.6 years and the average number of years employed in the organization is 7.3. Due to the location of where the survey was administered, the racial/ethnic background of the sample is mixed, with the largest percentage being Hispanic (38.3%). Just slightly over one-third (34.9%) have earned a college degree. Slightly over one-half (55.0%) are married. Also, over one-half (59.5%) have dependent children living at home. How these demographic characteristics correlate with the other variables in the study is presented next.

Descriptive Statistics

Means, standard deviations, internal reliabilities (coefficient alphas), and intercorrelations of all the variables included in this study are presented in Table 7. Internal reliabilities ranged from a low of .65 for role overload to a high of .91 for organizational support. These reliabilities are sufficient to produce valid interpretations of subsequent analyses (Nunnally & Bernstein, 1994).

A close look at the intercorrelations revealed that organization tenure and position tenure appeared very highly correlated ($r = .76$, $p < .001$); thus, position tenure was eliminated from the model to avoid multicolinearity. Based on these correlations, no other variables showed high multicolinearity. An additional test for multicolinearity was used by calculating variance inflation factors (VIF). Since no VIF values were greater than 10, multicolinearity was not a concern for this model (Hair et al., 1992).

In general, the correlations among the main independent and dependent variables were as directionally expected, with only communal orientation not showing a significant

Table 7

Descriptive Statistics/Intercorrelation Matrix
(N = 149)

		Mean	Std. Dev.	Alpha	1 (Age)	2 (Ed.)	3 (Gen.)	4 (R–W)	5 (R--B)	6 (R--H)	7 (R--A)	8 (Org.)	9 (Pos.)	10 (MS)
	Demographic Variables													
1	Age	40.63	9.35	—										
2	Education (Ed.)	2.85	1.19	—	.20*									
3	Gender (Gen.)^{a,b}	0.73	0.44	---	.19*	.20*								
4	Race--White (R--W)^{a}	0.26	0.44	---	.31**	.09	.10							
5	Race--Black (R--B)^{a}	0.18	0.39	—	-.03	.00	-.25*	-.28**						
6	Race--Hispanic (R--H)^{a}	0.38	0.49	—	-.23*	-.28**	-.04	-.46**	-.37**					
7	Race--Asian (R--A)^{a}	0.15	0.36	—	-.03	.23*	.16	-.25*	-.20*	-.34**				
8	Organization Tenure (Org.)	7.29	5.45	—	-.12	.13	-.12	.11	.17*	-.11	-.14			
9	Position Tenure (Pos.)	5.10	4.14	---	-.11	.11	-.05	.04	.06	.06	-.24*	.76**		
10	Marital Status (MS)^{a,b}	0.55	0.50	—	-.13	.09	.24*	-.09	-.14	.10	.12	-.12	-.25*	
11	Children (Child)^{a,b}	0.60	0.49	—	-.19*	-.16	.03	-.46**	.10	.25*	.09	-.08	-.03	.30**
	Situational Variables													
12	Role Overload (RO)	10.62	3.27	.65	-.06	.12	-.15	-.14	.12	-.04	.10	.01	.02	.09
13	Role Ambiguity (RA)	17.60	8.13	.87	-.06	.02	-.04	.11	.25*	-.16*	-.21*	.19*	.18*	-.03
14	Role Conflict (RC)	30.36	11.49	.86	.02	-.02	.00	.25*	.04	-.11	-.22*	.25*	.21*	.04
15	Organizational Support (OS)	56.57	19.90	.91	.01	-.10	.08	-.09	-.16	.10	.17*	-.17*	-.18*	-.08
	Personality Variables													
16	External Work Locus of Control (WLC)	43.66	11.42	.80	.02	.09	-.12	.03	.04	-.01	-.07	.09	.11	.12
17	Organization-Based Self-Esteem (OBSE)	37.97	8.48	.89	.07	-.05	.03	-.02	-.15	.06	.13	-.11	-.18*	-.04
18	Communal Orientation (CO)	39.89	5.70	.68	-.09	.12	-.11	.12	-.12	.05	-.10	-.08	.01	.04
19	Negative Affectivity (NA)	3.76	2.87	.80	-.14	.04	-.06	.12	-.02	-.03	-.06	.22*	.18*	.01
	Job Burnout Variables													
20	Emotional Exhaustion (EE)	25.50	12.47	.90	-.02	.05	-.05	-.04	.08	-.20*	.21*	.19*	.24*	.10
21	Depersonalization (DEP)	10.53	6.67	.76	.14	-.06	.06	.06	.02	-.15	.12	.11	.15	.15
22	Personal Accomplishment (PA)	32.73	8.35	.75	.08	.07	-.06	.07	.03	-.13	.02	.01	-.00	-.13

[a] Spearman correlations calculated for categorical data; all others calculated with Pearson correlations.
[b] Dummy variables with: 1 = female, 0 = male; 1 = married, 0 = not married; 1 = children, 0 = no children

* $p < .05$
** $p < .001$

Table 7 (Continued)

Descriptive Statistics/Intercorrelation Matrix
(N = 149)

		Mean	Std. Dev.	Alpha	11 (Child)	12 (RO)	13 (RA)	14 (RC)	15 (OS)	16 (WLC)	17 (OBSE)	18 (CO)	19 (NA)	20 (EE)	21 (DEP)
	Demographic Variables														
1	Age	40.63	9.35	—											
2	Education (Ed.)	2.85	1.19	—											
3	Gender (Gen.)[a,b]	0.73	0.44	—											
4	Race–White (R–W)[a]	0.26	0.44	—											
5	Race–Black (R–B)[a]	0.18	0.39	—											
6	Race--Hispanic (R--H)[a]	0.38	0.49	—											
7	Race--Asian (R--A)[a]	0.15	0.36	—											
8	Organization Tenure (Org.)	7.29	5.45	—											
9	Position Tenure (Pos.)	5.10	4.14	—											
10	Marital Status (MS)[a,b]	0.55	0.50	—											
11	Children (Child)[a,b]	0.60	0.49	—											
	Situational Variables														
12	Role Overload (RO)	10.62	3.27	.65	.06										
13	Role Ambiguity (RA)	17.60	8.13	.87	-.01	.22*									
14	Role Conflict (RC)	30.36	11.49	.86	-.12	.08	.52**								
15	Organizational Support (OS)	56.57	19.90	.91	-.04	-.20*	-.52**	-.36**							
	Personality Variables														
16	External Work Locus of Control (WLC)	43.66	11.42	.80	.05	.11	.35**	.27**	-.37**						
17	Organization-Based Self-Esteem (OBSE)	37.97	8.48	.89	-.11	-.12	-.54**	-.37**	.59**	-.34**					
18	Communal Orientation (CO)	39.89	5.70	.68	-.07	-.04	-.12	.08	.05	-.11	.16*				
19	Negative Affectivity (NA)	3.76	2.87	.80	-.10	.09	.27*	.33**	-.31**	.23*	-.25*	.09			
	Job Burnout Variables														
20	Emotional Exhaustion (EE)	25.50	12.47	.90	.11	.34**	.30**	.36**	-.41**	.23*	-.40**	.04	.45**		
21	Depersonalization (DEP)	10.53	6.67	.76	.04	.21*	.27*	.29**	-.33**	.27**	-.33**	-.19*	.32**	.52**	
22	Personal Accomplishment (PA)	32.73	8.35	.75	-.06	-.05	-.26*	-.03	.33**	-.30**	.32**	.30**	-.19*	-.16	-.20*

[a] Spearman correlations calculated for categorical data; all others calculated with Pearson correlations.

[b] Dummy variables with: 1= female, 0 = male; 1 = married, 0 = not married; 1 = children, 0 = no children

* $p < .05$
** $p < .001$

association with emotional exhaustion, and role overload and role conflict not showing a significant association with personal accomplishment. These results provide partial support for hypotheses 1-6. Further testing of these hypotheses was completed by conducting canonical correlation analysis.

Canonical Correlation Analysis

Canonical correlation analysis (CCA) is a multivariate statistical tool that facilitates the analysis of a model when multiple independent, as well as dependent, variables are involved. Thus, CCA was used to simplify the original model. Table 8 shows the ten steps entered into the CCA. Steps 1-4 comprise the demographic variables, Step 5 comprises the situational variables, Step 6 comprises the personality variables, and Steps 7-10 comprise the interaction of situational and personality variables. In each successive step, the effects of the previous steps are controlled for. CCA yields a maximum number of canonical functions equal to number of variables in the smallest data set, with the first pair of variates providing the largest possible intercorrelation between the two sets (Hair et al., 1992).

Based on the CCA, marital status and number of dependent children as a combined step were not found to be significant ($r = .17$, $p = .57$). Additionally, all four of the steps involving interaction terms were not found to be significant (correlations ranged from .22 to .33, with p-values ranging from .83 to .08). Thus, these two demographic variables and all the interaction terms were dropped from the model and were not included in the hierarchical analysis of sets.

Table 8

Canonical Correlation Analyses

Steps/Independent Variables	Canonical Function	Canonical Correlation	Canonical R^2	F-value	p-value	Findings*
Step 1: Education, Gender, Age	1	0.29	0.08	1.9	0.05	Significant
	2	0.17	0.03	1.1	0.34	
	3	0.05	0.00	0.32	0.57	
Step 2: Race	1	0.34	0.11	2.01	0.02	Significant
	2	0.20	0.04	1.13	0.35	
	3	0.08	0.01	0.41	0.67	
Step 3: Organization Tenure	1	0.24	0.06	2.69	0.05	Significant
Step 4: Marital Status, Number of Dependent Children	1	0.17	0.03	0.80	0.57	Not Significant
	2	0.07	0.01	0.38	0.68	
Step 5: Situational Variables	1	0.59	0.35	6.91	0.00	Significant
	2	0.35	0.12	2.99	0.01	
	3	0.04	0.00	0.12	0.89	
Step 6: Personality Variables	1	0.45	0.20	4.34	0.00	Significant
	2	0.37	0.14	3.37	0.00	
	3	0.02	0.00	0.03	0.97	
Step 7: Role Overload x Personality Variables	1	0.31	0.09	1.64	0.08	Not Significant
	2	0.27	0.05	1.15	0.34	
	3	0.02	0.00	0.04	0.96	
Step 8: Role Ambiguity x Personality Variables	1	0.33	0.11	1.65	0.08	Not Significant
	2	0.17	0.03	0.95	0.46	
	3	0.12	0.02	0.98	0.38	
Step 9: Role Conflict x Personality Variables	1	0.22	0.05	0.61	0.83	Not Significant
	2	0.11	0.01	0.28	0.95	
	3	0.04	0.00	0.10	0.91	
Step 10: Org. Support x Personality Variables	1	0.22	0.05	0.74	0.71	Not Significant
	2	0.14	0.02	0.49	0.82	
	3	0.07	0.01	0.31	0.74	

* Based on a p-value of 0.05 or lower.

Hierarchical Analysis of Sets

To examine the effects of the personality and situational variables, and the remaining demographic variables, separate hierarchical regression analyses were performed for each of the job burnout components. These results are shown in Tables 9a-11b. For all analyses, the demographic variables set was entered into the model first. These demographic variables were not the primary variables of interest in the study; thus, by entering them into the model first, their effects were held constant or controlled when subsequent sets were entered into the model.

For tables 9a, 10a, and 11a, the four situational variables were entered into the model at the second step while the four personality variables were entered last. This ordering allowed the full effect of the personality variables set to be viewed by controlling for both the demographic and situational variables sets. In particular, high correlations between role ambiguity and self-esteem ($r = .54$, $p \Leftrightarrow .01$) and organizational support and self-esteem ($r = .59$, $p \Leftrightarrow .01$) signaled the need to control for the effects of the situational variables on the personality variables and vice versa. For all three job burnout components, the ΔR^2 for the situational variables set, after controlling for the demographic variables set, was found to be significant. These same results held true when the personality variables set was added to the model, after controlling for both the demographic and situational variables sets.

For tables 9b, 10b, and 11b, the order of entry for the situational and personality variables sets was reversed, with the personality variables set entered in Step 2 and the

Table 9a

Results of Hierarchical Analysis of Sets for Emotional Exhaustion
(Order of Entry: Demographic Variables, Situational Variables, Personality Variables)

Steps/Variables Entered	**B**	**T-value**	**p-value**	**R^2**	**ΔR^2**	**F-value**	**Findings***
Step 1							
Education	-0.68	-0.76	0.23	.0003			Not Significant
Gender	-0.95	-0.39	0.35	.0029			Not Significant
Age	-0.12	-0.98	0.16	.0029			Not Significant
Race--White	-7.94	-1.25	0.11	.0048			Not Significant
Race--Black	-6.83	-1.04	0.15	.0076			Not Significant
Race---Hispanic	-	-1.68	0.05	.0861			Significant
Race--Asian	10.52	0.00	0.50	.0862			Not Significant
Organization Tenure	0.03	2.40	0.01	.1223			Significant
Demographic Variables Set	0.49				.0361	5.77	Significant
Step 2							
Education	-.80	-1.06	0.15	.0003			Not Significant
Gender	-.62	-0.30	0.38	.0029			Not Significant
Age	-.02	-0.15	0.44	.0029			Not Significant
Race--White	-5.64	-1.05	0.15	.0048			Not Significant
Race--Black	-4.41	-0.78	0.22	.0076			Not Significant
Race---Hispanic	-5.83	-1.08	0.14	.0861			Not Significant
Race--Asian	5.83	1.03	0.15	.0862			Not Significant
Organization Tenure	0.21	1.18	0.12	.1223			Not Significant
Role Overload	1.23	2.99	0.00	.2209			Significant
Role Ambiguity	-1.54	-0.29	0.38	.2703			Not Significant
Role Conflict	0.31	3.39	0.00	.3313			Significant
Organizational Support	-0.19	-3.79	0.00	.3952			Significant
Situational Variables Set Added					.2728	15.34	Significant
Step 3							
Education	-0.18	-0.25	0.40	.0003			Not Significant
Gender	-0.56	-0.28	0.39	.0029			Not Significant
Age	0.05	0.46	0.32	.0029			Not Significant
Race--White	-7.07	-1.41	0.08	.0048			Not Significant
Race--Black	-4.28	-0.81	0.21	.0076			Not Significant
Race---Hispanic	-6.50	-1.30	0.10	.0861			Not Significant
Race--Asian	4.37	0.82	0.21	.0862			Not Significant
Organization Tenure	0.13	0.76	0.23	.1223			Not Significant
Role Overload	1.25	3.25	0.00	.2209			Significant
Role Ambiguity	-5.15	-1.00	0.16	.2703			Not Significant
Role Conflict	0.20	2.32	0.01	.3313			Significant
Organizational Support	-0.11	-1.97	0.03	.3952			Significant
Work Locus of Control	0.02	0.20	0.42	.3972			Not Significant
Self-Esteem	-0.31	-2.47	0.01	.4202			Significant
Communal Orientation	0.16	1.12	0.13	.4298			Not Significant
Negative Affectivity	11.49	4.00	0.00	.4915			Significant
Personality Variables Set Added					.0964	6.26	Significant

* Significant for p-values ≤ .05

Table 9b

Results of Hierarchical Analysis of Sets for Emotional Exhaustion (Order of Entry: Demographic Variables, Personality Variables, Situational Variables)

Steps/Variables Entered	B	T-value	p-value	R^2	ΔR^2	F-value	Findings*
Step 1							
Education	-0.68	-0.76	0.23	.0003			Not Significant
Gender	-0.95	-0.39	0.35	.0029			Not Significant
Age	-0.12	-0.98	0.16	.0029			Not Significant
Race–White	-7.94	-1.25	0.11	.0048			Not Significant
Race–Black	-6.83	-1.04	0.15	.0076			Not Significant
Race—Hispanic	-10.52	-1.68	0.05	.0861			Significant
Race–Asian	0.03	0.00	0.50	.0862			Not Significant
Organization Tenure	0.49	2.40	0.01	.1223			Significant
Demographic Variables Set					.0361	5.77	Significant
Step 2							
Education	0.01	0.01	0.50	.0003			Not Significant
Gender	-1.07	-0.51	0.30	.0029			Not Significant
Age	0.04	0.33	0.37	.0029			Not Significant
Race--White	-7.76	-1.45	0.07	.0048			Not Significant
Race--Black	-4.56	-0.82	0.21	.0076			Not Significant
Race—Hispanic	-7.34	-1.39	0.08	.0861			Not Significant
Race–Asian	3.77	0.68	0.25	.0862			Not Significant
Organization Tenure	0.20	1.12	0.13	.1223			Not Significant
Work Locus of Control	0.07	0.88	0.19	.1714			Not Significant
Self-Esteem	-0.47	-4.34	0.00	.2836			Significant
Communal Orientation	0.24	1.52	0.06	.3057			Not Significant
Negative Affectivity	13.97	4.68	0.00	.4019			Significant
Personality Variables Set Added					.2796	15.89	Significant
Step 3							
Education	-0.18	-0.25	0.40	.0003			Not Significant
Gender	-0.56	-0.28	0.39	.0029			Not Significant
Age	0.05	0.46	0.32	.0029			Not Significant
Race–White	-7.07	-1.41	0.08	.0048			Not Significant
Race--Black	-4.28	-0.81	0.21	.0076			Not Significant
Race---Hispanic	-6.50	-1.30	0.10	.0861			Not Significant
Race--Asian	4.37	0.82	0.21	.0862			Not Significant
Organization Tenure	0.13	0.76	0.23	.1223			Not Significant
Work Locus of Control	0.02	0.20	0.42	.1714			Not Significant
Self-Esteem	-0.31	-2.47	0.01	.2836			Significant
Communal Orientation	0.16	1.12	0.13	.3057			Not Significant
Negative Affectivity	11.49	4.00	0.00	.4019			Significant
Role Overload	1.25	3.25	0.00	4561			Significant
Role Ambiguity	-5.15	-1.00	0.16	.4563			Not Significant
Role Conflict	0.20	2.32	0.01	.4766			Significant
Organizational Support	-0.11	-1.97	0.03	.4915			Significant
Situational Variables Set Added					.0896	5.82	Significant

* Significant for p-values ≤ .05

Table 10a

Results of Hierarchical Analysis of Sets for Depersonalization
(Order of Entry: Demographic Variables, Situational Variables, Personality Variables)

Steps/Variables Entered	B	T-value	p-value	R^2	ΔR^2	F-value	Findings*
Step 1							
Education	0.67	1.40	0.08	.0193			Not Significant
Gender	1.77	1.37	0.09	.0203			Not Significant
Age	-0.23	-3.55	0.00	.0530			Significant
Race–White	2.39	0.71	0.24	.0675			Not Significant
Race–Black	1.04	0.30	0.38	.0759			Not Significant
Race—Hispanic	-0.57	-0.17	0.43	.0883			Not Significant
Race--Asian	1.98	0.57	0.28	.0908			Not Significant
Organization Tenure	0.28	2.58	0.01	.1321			Significant
Demographic Variables Set					.1321	2.66	Significant
Step 2							
Education	0.65	1.45	0.08	0193			Not Significant
Gender	1.85	1.52	0.07	.0203			Not Significant
Age	-0.19	-3.12	0.00	.0530			Significant
Race--White	3.21	1.02	0.16	.0675			Not Significant
Race--Black	1.71	0.52	0.30	.0759			Not Significant
Race—Hispanic	1.17	0.37	0.36	.0883			Not Significant
Race–Asian	4.10	1.23	0.11	.0908			Not Significant
Organization Tenure	0.18	1.69	0.05	.1321			Not Significant
Role Overload	0.47	1.94	0.02	.1841			Significant
Role Ambiguity	1.12	0.37	0.36	.2195			Not Significant
Role Conflict	0.10	1.88	0.03	.2423			Significant
Organizational Support	-0.07	-2.25	0.01	.2695			Significant
Situational Variables Set Added					.1374	6.40	Significant
Step 3							
Education	0.73	1.67	0.05	0193			Significant
Gender	1.56	1.31	0.10	.0203			Not Significant
Age	-0.17	-2.78	0.00	.0530			Significant
Race–White	2.83	0.93	0.18	.0675			Not Significant
Race--Black	1.42	0.44	0.33	.0759			Not Significant
Race—Hispanic	0.70	0.23	0.41	.0883			Not Significant
Race--Asian	3.22	1.00	0.16	.0908			Not Significant
Organization Tenure	0.12	1.17	0.12	.1321			Not Significant
Role Overload	0.48	2.06	0.02	.1841			Significant
Role Ambiguity	-2.09	-0.67	0.25	.2195			Not Significant
Role Conflict	0.08	1.52	0.07	.2423			Not Significant
Organizational Support	-0.03	-0.82	0.21	.2695			Not Significant
Work Locus of Control	0.06	1.19	0.12	.2860			Not Significant
Self-Esteem	-0.12	-1.65	0.05	.3070			Significant
Communal Orientation	-0.17	-1.95	0.03	.3216			Significant
Negative Affectivity	3.81	2.19	0.02	.3453			Significant
Personality Variables Set Added					.0757	3.82	Significant

* Significant for p-values ≤ .05

Table 10b

Results of Hierarchical Analysis of Sets for Depersonalization
(Order of Entry: Demographic Variables, Personality Variables, Situational Variables)

Steps/Variables Entered	B	T-value	p-value	R^2	ΔR^2	F-value	Findings*
Step 1							
Education	0.67	1.40	0.08	.0193			Not Significant
Gender	1.77	1.37	0.09	.0203			Not Significant
Age	-0.23	-3.55	0.00	.0530			Significant
Race--White	2.39	0.71	0.24	.0675			Not Significant
Race--Black	1.04	0.30	0.38	.0759			Not Significant
Race---Hispanic	-0.57	-0.17	0.43	.0883			Not Significant
Race–Asian	1.98	0.57	0.28	.0908			Not Significant
Organization Tenure	0.28	2.58	0.01	.1321			Significant
Demographic Variables Set					.1321	2.66	Significant
Step 2							
Education	0.79	1.80	0.04	.0193			Significant
Gender	1.36	1.14	0.13	.0203			Not Significant
Age	-0.17	-2.78	0.00	.0530			Significant
Race–White	2.65	0.86	0.20	.0675			Not Significant
Race--Black	1.35	0.42	0.34	.0759			Not Significant
Race—Hispanic	0.50	0.16	0.43	.0883			Not Significant
Race–Asian	3.16	1.00	0.16	.0908			Not Significant
Organization Tenure	0.14	1.40	0.08	.1321			Not Significant
Work Locus of Control	0.08	1.59	0.06	.1951			Not Significant
Self-Esteem	-0.17	-2.75	0.00	.2585			Significant
Communal Orientation	-0.15	-1.66	0.05	.2668			Significant
Negative Affectivity	4.67	2.71	0.00	.3043			Significant
Personality Variables Set Added					.1722	8.42	Significant
Step 3							
Education	0.73	1.67	0.05	.0193			Significant
Gender	1.56	1.31	0.10	.0203			Not Significant
Age	-0.17	-2.78	0.00	.0530			Significant
Race–White	2.83	0.93	0.18	.0675			Not Significant
Race--Black	1.42	0.44	0.33	.0759			Not Significant
Race---Hispanic	0.70	0.23	0.41	.0883			Not Significant
Race--Asian	3.22	1.00	0.16	.0908			Not Significant
Organization Tenure	0.12	1.17	0.12	.1321			Not Significant
Work Locus of Control	0.06	1.19	0.12	.1951			Not Significant
Self-Esteem	-0.12	-1.65	0.05	.2585			Significant
Communal Orientation	-0.17	-1.95	0.03	.2668			Significant
Negative Affectivity	3.81	2.19	0.02	.3043			Significant
Role Overload	0.48	2.06	0.02	.3306			Significant
Role Ambiguity	-2.09	-0.61	0.25	.3306			Not Significant
Role Conflict	0.08	1.52	0.07	.3420			Not Significant
Organizational Support	-0.03	-0.82	0.21	.3453			Not Significant
Situational Variables Set Added					.0409	2.06	Not Significant

* Significant for p-values ≤ .05

Table 11a

Results of Hierarchical Analysis of Sets for Personal Accomplishment (Order of Entry: Demographic Variables, Situational Variables, Personality Variables)

Steps/Variables Entered	B	T-value	p-value	R^2	ΔR^2	F-value	Findings*
Step 1							
Education	0.33	0.53	0.30	.0062			Not Significant
Gender	-2.48	-1.47	0.07	.0132			Not Significant
Age	0.14	1.60	0.06	.0337			Not Significant
Race–White	-4.69	-1.06	0.14	.0340			Not Significant
Race--Black	-4.55	-1.00	0.16	.0349			Not Significant
Race---Hispanic	-6.38	-1.46	0.07	.0479			Not Significant
Race--Asian	-4.14	-0.92	0.18	.0538			Not Significant
Organization Tenure	-.010	-0.69	0.25	.0570			Not Significant
Demographic Variables Set					.0570	1.06	Not Significant
Step 2							
Education	0.28	0.48	0.31	0062			Not Significant
Gender	-2.16	-1.38	0.09	.0132			Not Significant
Age	0.07	0.85	0.20	.0337			Not Significant
Race–White	-6.07	-1.49	0.07	.0340			Not Significant
Race--Black	-4.58	-1.07	0.14	.0349			Not Significant
Race---Hispanic	-8.92	-2.19	0.02	.0479			Significant
Race–Asian	-7.40	-1.72	0.04	.0538			Significant
Organization Tenure	-0.01	-.06	0.48	.0570			Not Significant
Role Overload	0.21	.-0.66	0.41	.0600			Not Significant
Role Ambiguity	-10.09	-2.55	0.01	.1446			Significant
Role Conflict	0.12	1.75	0.04	.1570			Significant
Organizational Support	0.13	3.48	0.00	.2258			Significant
Situational Variables Set Added					.1689	7.42	Significant
Step 3							
Education	0.35	0.64	0.26	0062			Not Significant
Gender	-1.68	-1.11	0.14	.0132			Not Significant
Age	0.04	0.58	0.28	.0337			Not Significant
Race–White	-5.88	-1.52	0.07	.0340			Not Significant
Race–Black	-4.08	-1.01	0.16	.0349			Not Significant
Race---Hispanic	-8.31	-2.15	0.02	.0479			Significant
Race--Asian	-6.37	-1.55	0.06	.0538			Not Significant
Organization Tenure	0.06	0.49	0.31	.0570			Not Significant
Role Overload	0.19	0.66	0.26	.0600			Not Significant
Role Ambiguity	-5.68	-1.43	0.08	.1446			Not Significant
Role Conflict	0.12	1.78	0.04	.1570			Significant
Organizational Support	0.09	2.24	0.01	.2258			Significant
Work Locus of Control	-0.11	-1.90	0.03	.2585			Significant
Self-Esteem	0.10	1.03	0.15	.2713			Not Significant
Communal Orientation	0.35	3.13	0.00	.3173			Significant
Negative Affectivity	-2.81	-1.27	0.10	.3255			Not Significant
Personality Variables Set Added					.0997	4.88	Significant

* Significant for p-values ≤ .05

Table 11b

Results of Hierarchical Analysis of Sets for Personal Accomplishment
(Order of Entry: Demographic Variables, Personality Variables, Situational Variables)

Steps/Variables Entered	B	T-value	p-value	R^2	ΔR^2	F-value	Findings*
Step 1							
Education	0.33	0.53	0.30	.0062			Not Significant
Gender	-2.48	-1.47	0.07	.0132			Not Significant
Age	0.14	1.60	0.06	.0337			Not Significant
Race--White	-4.69	-1.06	0.14	.0340			Not Significant
Race--Black	-4.55	-1.00	0.16	.0349			Not Significant
Race—Hispanic	-6.38	-1.46	0.07	.0479			Not Significant
Race--Asian	-4.14	-0.92	0.18	.0538			Not Significant
Organization Tenure	-.010	-0.69	0.25	.0570			Not Significant
Demographic Variables Set					.0570	1.06	Not Significant
Step 2							
Education	0.37	0.66	0.26	0062			Not Significant
Gender	-1.78	-1.16	0.12	.0132			Not Significant
Age	0.01	0.93	0.18	.0337			Not Significant
Race--White	-5.50	-1.39	0.08	.0340			Not Significant
Race--Black	-4.49	-1.10	0.14	.0349			Not Significant
Race—Hispanic	-7.61	-1.95	0.03	.0479			Significant
Race--Asian	-5.54	-1.36	0.09	.0538			Not Significant
Organization Tenure	0.06	0.45	0.33	.0570			Not Significant
Work Locus of Control	-0.14	-2.39	0.01	.1525			Significant
Self-Esteem	0.21	2.62	0.00	.2133			Significant
Communal Orientation	0.37	3.27	0.00	.2648			Significant
Negative Affectivity	-2.99	-1.35	0.09	.2746			Not Significant
Personality Variables Set Added					.2176	10.20	Significant
Step 3							
Education	0.35	0.63	0.26	0062			Not Significant
Gender	-1.68	-1.11	0.14	.0132			Not Significant
Age	0.04	0.58	0.28	.0337			Not Significant
Race--White	-5.88	-1.52	0.07	.0340			Not Significant
Race--Black	-4.08	-1.01	0.16	.0349			Not Significant
Race—Hispanic	-8.31	-2.15	0.02	.0479			Significant
Race--Asian	-6.37	-1.55	0.06	.0538			Not Significant
Organization Tenure	0.06	0.49	0.31	.0570			Not Significant
Work Locus of Control	-0.11	-1.90	0.03	.1525			Significant
Self-Esteem	0.10	1.03	0.15	.2133			Not Significant
Communal Orientation	0.35	3.13	0.00	.2648			Significant
Negative Affectivity	-2.81	-1.27	0.10	.2746			Not Significant
Role Overload	0.19	0.66	0.26	.2747			Not Significant
Role Ambiguity	-5.68	-1.43	0.08	.2832			Not Significant
Role Conflict	0.12	1.78	0.04	.2999			Significant
Organizational Support	0.09	2.24	0.01	.3255			Significant
Situational Variables Set Added					.0510	2.49	Significant

* Significant for p-values ≤ .05

situational variables set entered in Step 3. For all three job burnout components, the increase in R^2 when the personality variables set was added, after controlling for the demographic variables set, was significant. When the situational variables set was entered into the model last, the increase in R^2 was significant for emotional exhaustion and personal accomplishment, but not for depersonalization. After controlling for the demographic and personality variables sets, the situational variables set only explained an additional 4.09 percent of the variance in depersonalization. In general, the model explained a significant amount of variance for each of the job burnout components. For emotional exhaustion the explained variance was 49.15 percent, for depersonalization it was 34.53 percent, and for personal accomplishment it was 32.55 percent.

In order to determine which of the two main predictor sets was more strongly associated with each of the job burnout components, a comparison of ΔR^2 for each set was analyzed. These results are shown in Table 12. As illustrated, the ΔR^2 for the personality characteristics set, after controlling for situational and demographic characteristics, was higher than the ΔR^2 for the situational characteristics set, after controlling for personality and demographic characteristics, for all three of the job burnout components. These results are contrary to Hypothesis 7 which posited that the situational characteristics would be more strongly associated with the three job burnout components than the personality characteristics.

In order to test the significance of the characteristics within each of the personality and situational predictor sets, each set's significance as a whole must be proven first

Table 12

A Comparison of ΔR^2 for Situational and Personality Characteristics

Job Burnout Component	ΔR^2 for Situational Characteristics after Controlling for Personality & Demographic Characteristics	ΔR^2 for Personality Characteristics after Controlling for Situational & Demographic Characteristics
Emotional Exhaustion	.0896	.0964
Depersonalization	.0409*	.0757
Personal Accomplishment	.0510	.0997

* ΔR^2 is not significant; all others are significant at $p \leq .05$.

(Cohen & Cohen, 1983). Thus, based on the previous results presented, further analysis of the personality characteristics and all three of the job burnout components was warranted. Further analysis of the situational characteristics and only two of the three job burnout components, emotional exhaustion and personal accomplishment, was warranted. As shown in Table 12, the ΔR^2 after the situational characteristics set was added to the depersonalization model did not prove significant.

The association (either positive, negative, or not significant) between the personality variables and each job burnout component is shown in Table 13, while the association between the situational variables and each job burnout component is shown in Table 14. These summary results provide partial support for Hypotheses 1-6. One result worth noting is that the association between role conflict and personal accomplishment

Table 13

A Summary of the Association Among Job Burnout Components and Personality Characteristics

	JOB BURNOUT COMPONENTS		
Personality Characteristics	**Emotional Exhaustion**	**Depersonalization**	**Personal Accomplishment**
Self-Esteem	Negative	Negative	Not Significant
Communal Orientation	Not Significant	Negative	Positive
External Locus Of Control	Not Significant	Not Significant	Negative
Negative Affectivity	Positive	Positive	Not Significant

Table 14

A Summary of the Association Among Job Burnout Components and Situational Characteristics

	JOB BURNOUT COMPONENTS		
Situational Characteristics	**Emotional Exhaustion**	**Depersonalization***	**Personal Accomplishment**
Role Ambiguity	Not Significant	Not Significant	Not Significant
Role Conflict	Positive	Not Significant	Positive+
Role Overload	Positive	Not Significant	Not Significant
Organizational Support	Negative	Not Significant	Positive

* The situational characteristics set as a whole was not significant.
+ This association was originally hypothesized as negative.

was found to be positive (T = 1.78, p = .04), whereas this association was originally hypothesized to be negative.

In order to determine which of the characteristics within each of the personality and situational variables set contributed the most to each of the job burnout components, separate hierarchical regressions were analyzed for each variable. The variable under consideration was placed last in the model. Thus, all previously entered variables were controlled for in order to determine each variable's unique contribution to the model.

For emotional exhaustion (see Table 15), the personality characteristics of negative affectivity and self-esteem contributed a significant increase in R^2. The only situational characteristic that did not prove significant was role ambiguity. Overall, negative affectivity proved to be the strongest predictor, explaining 6.17 percent of the variance in emotional exhaustion.

Table 15

Explained Variance for Emotional Exhaustion: Contribution of Each Characteristic

Characteristic	**ΔR^2 ***	**F-value**	**Findings+**
Personality Characteristics			
Negative Affectivity	.0617	16.02	Significant
Self-Esteem	.0235	6.10	Significant
Communal Orientation	.0048	1.26	Not Significant
Locus of Control	.0002	0.04	Not Significant
Situational Characteristics			
Role Overload	.0406	10.54	Significant
Role Conflict	.0208	5.39	Significant
Organizational Support	.0150	3.88	Significant
Role Ambiguity	.0039	1.00	Not Significant

* ΔR^2 was calculated after controlling for all independent variables included in the hierarchical regression analysis.

+ Findings based on $p \leq .05$.

For depersonalization (see Table 16), locus of control was the only personality characteristic not found to be significant. In terms of the situational variables, role overload was the only characteristic found to be significant. Overall, negative affectivity

Table 16

Explained Variance for Depersonalization: Contribution of Each Characteristic

Characteristic	**ΔR^2 ***	**F-value**	**Findings****
Personality Characteristics			
Negative Affectivity	.0237	4.78	Significant
Communal Orientation	.0189	3.81	Significant
Self-Esteem	.0136	2.74	Significant
Locus of Control	.0070	1.42	Not Significant
Situational Characteristics			
Role Overload	.0211	4.26	Significant***
Role Conflict	.0115	2.32	Not Significant
Organizational Support	.0033	0.66	Not Significant
Role Ambiguity	.0022	0.45	Not Significant

* ΔR^2 was calculated after controlling for all independent variables included in the hierarchical regression analysis.

** Findings based on $p \leq .05$.

*** Although significant based on its individual contribution, the set as a whole was not significant.

proved to be the strongest predictor, explaining 2.37 percent of the variance in depersonalization.

For personal accomplishment (see Table 17), communal orientation and locus of control were found to be significant personality characteristics, while organizational support and role conflict were found to be significant situational characteristics. Overall, communal orientation proved to be the strongest predictor, explaining 4.99 percent of the variance in personal accomplishment.

Post Hoc Power Analysis

In this section, the statistical power of both significant and nonsignificant results is presented. Additionally, the required sample size to achieve the recommended power

Table 17

Explained Variance for Personal Accomplishment: Contribution of Each Characteristic

Characteristic	ΔR^2 *	F-value	Findings+
Personality Characteristics			
Communal Orientation	.0499	9.77	Significant
Locus of Control	.0185	3.61	Significant
Negative Affectivity	.0082	1.61	Not Significant
Self-Esteem	.0054	1.06	Not Significant
Situational Characteristics			
Organizational Support	.0257	5.03	Significant
Role Conflict	.0161	3.16	Significant
Role Ambiguity	.0105	2.06	Not Significant
Role Overload	.0022	0.43	Not Significant

* ΔR^2 was calculated after controlling for all independent variables included in the hierarchical regression analysis.

+ Findings based on $p \leq .05$.

level of .80 at an alpha-level of .50 (Cohen, 1988) is also presented. These results are presented in Table 18 and are based on the CCA presented in Table 3 and formulas described in Cohen (1988).

Power levels for all but one of the significant variable sets exceeded 0.80. For organization tenure, a significant variable set, the power level was 0.72, which is close to the desired power level of 0.80. The demographic variable set of marital status and number of dependent children had a power level of only 0.40. To reach a power level of .80, given its effect size, a sample of 335 would have been needed.

Table 18

Post Hoc Power Analysis

Steps/Variables Entered		Power α = .05	Required Sample Size for Power = .80 α = .05
Step 1:	Education, Gender, Age	0.85	-----
Step 2:	Race	0.94	-----
Step 3:	Organization Tenure	0.72	175
Step 4:	Marital Status, Number of Dependent Children	0.40	335
Step 5:	Situational Variables	>0.99	-----
Step 6:	Personality Variables	>0.99	-----
Step 7:	Role Overload x Personality Variables	0.90	-----
Step 8:	Role Ambiguity x Personality Variables	0.94	-----
Step 9:	Role Conflict x Personality Variables	0.45	293
Step 10:	Organizational Support x Personality Variables	0.58	222

Two of the interaction term sets, role overload x personality variables and role ambiguity x personality variables, had power levels exceeding the 0.80 threshold, but did not prove to be significant. This implies low effect sizes for these interaction terms (Cohen, 1988). The other two interaction term sets, role conflict x personality variables and organizational support x personality variables, had below minimum power levels of 0.45 and 0.58. Samples sizes of 293 and 222 would have been needed to have found any significance given their effect sizes.

Chapter Summary

This chapter presented the results of the statistical procedures employed in analyzing the data. First, data screening techniques were described The mean substitution technique was used to replace missing data. No outliers were detected and no significant multicolinearity problems were uncovered. In addition, no significant violations of the assumptions of multivariate models were noted. Next, the demographic characteristics of the sample were presented, with the majority of the sample being female. A presentation of descriptive statistics was next, with intercorrelations among the main independent and dependent variables following in their expected direction.

More sophisticated testing of the model occurred next with canonical correlation analysis. This analysis helped to simplify the model. In particular, nonsignificant results for the interactions were found; thus, they were eliminated from further analysis. The simplified model was further tested with hierarchical analysis of sets. This regression technique resulted in the finding that personality characteristics appear to be more strongly associated with the three components of job burnout than the situational characteristics. Table 19 presents a summary of the results presented here as they relate to each hypothesis. Further discussion of these results is presented in the next, and final, chapter.

Table 19

Summary of Results

Hypothesis	Results*
H1a: Self-esteem will be negatively associated with emotional exhaustion.	S
H1b: External locus of control will be positively associated with emotional exhaustion.	NS
H1c: Communal orientation will be negatively associated with emotional exhaustion.	NS
H1d: Negative affectivity will be positively associated with emotional exhaustion.	S
H2a: Self-esteem will be negatively associated with depersonalization.	S
H2b: External locus of control will be positively associated with depersonalization.	NS
H2c: Communal orientation will be negatively associated with depersonalization.	S
H2d: Negative affectivity will be positively associated with depersonalization.	S
H3a: Self-esteem will be positively associated with personal accomplishment.	NS
H3b: External locus of control will be negatively associated with personal accomplishment.	S
H3c: Communal orientation will be positively associated with personal accomplishment.	S
H3d: Negative affectivity will be negatively associated with personal accomplishment.	NS
H4a: Role ambiguity will be positively associated with emotional exhaustion.	NS
H4b: Role conflict will be positively associated with emotional exhaustion.	S
H4c: Quantitative role overload will be positively associated with emotional exhaustion.	S
H4d: Organizational support will be negatively associated with emotional exhaustion.	S

S: Supported
NS: Not Supported
+: Significant results, but in the opposite direction as hypothesized.

Table 19 (Continued)

Summary of Results

Hypothesis	Results*
H5a: Role ambiguity will be positively associated with depersonalization.	NS
H5b: Role conflict will be positively associated with depersonalization.	NS
H5c: Quantitative role overload will be positively associated with depersonalization.	NS
H5d: Organizational support will be negatively associated with depersonalization.	NS
H6a: Role ambiguity will be negatively associated with personal accomplishment.	NS
H6b: Role conflict will be negatively associated with personal accomplishment.	NS+
H6c: Quantitative role overload will be negatively associated with personal accomplishment.	NS
H6d: Organizational support will be positively associated with personal accomplishment.	S
H7a: The association between situational characteristics and emotional exhaustion will be stronger than the association between personality characteristics and emotional exhaustion.	NS+
H7b: The association between situational characteristics and depersonalization will be stronger than the association between personality characteristics and depersonalization..	NS+
H7c: The association between situational characteristics and personal accomplishment will be stronger than the association between personality characteristics and personal accomplishment..	NS+

S: Supported
NS: Not Supported
+: Significant results, but in the opposite direction as hypothesized.

CHAPTER V

DISCUSSION

This chapter presents an in-depth analysis of the results presented in the previous chapter. Included are discussions pertaining to each of the seven hypotheses. These findings lead to a discussion of their implication for theorists and practitioners. The limitations of this study are presented next with discussions concerning each of the major validity threats. Next is an offering of future research directions for those interested in expanding our basic understanding of job burnout.

Analysis and Implications of Findings

The following discussion of this study's findings and implications can be categorized into four sections: (1) personality predictors, (2) situational predictors, (3) personality versus situational predictors, and (4) the interaction of personality and situational predictors.

Personality Predictors

The personality predictor set as a whole showed a significant relationship with each of the three job burnout components, providing strong proof that dispositional effects are important in predicting job burnout. A discussion of the four personality predictors, self-esteem, locus of control, communal orientation, and negative affectivity, and each one's association with the three job burnout components follows.

Self-esteem

Hypothesis 1a predicted that self-esteem would be negatively associated with emotional exhaustion. This hypothesis was supported, which implies that individuals with high levels of self-esteem are likely to experience low levels of emotional exhaustion. This same association with depersonalization was also supported as predicted in Hypothesis 2a. Thus, individuals with high self-esteem tend to experience low levels of depersonalization.

In contrast, Hypothesis 3a, which predicted that self-esteem would be positively associated with personal accomplishment was not supported in this study. Although the intercorrelation between the two showed a strong negative association ($r = -.40$, $p < .01$), the hierarchical analysis, which controlled the effects of the situational variables, did not support this relationship. Thus, these results suggest that self-esteem and personal accomplishment may be related through a third variable, such as organizational support whose intercorrelations with both self-esteem ($r = .59$, $p < .01$) and personal accomplishment ($r = -.41$, $p < .01$) were very strong.

In general, the relationship between self-esteem and the three components of job burnout supports previous findings. In particular, McMullen and Krantz (1988) and Bhagat and Allie (1989) also found significant associations with emotional exhaustion and depersonalization, but not with personal accomplishment. Thus, it appears that high levels of self-esteem may be able to mitigate the effects of emotional exhaustion and depersonalization, but do not have any effect on personal accomplishment. This implies that regardless of whether individuals perceive their worth within the organization (i.e., organization-based self-esteem) as high or low, this does not affect their perception of their accomplishments in dealing with their clients (i.e., personal accomplishment).

Although self-esteem is a fairly stable trait, it is not unchangeable (House et al., 1996; Pierce et al., 1989). Thus, organizations may want to consider taking steps to improve an individual's self-esteem. This would help reduce the possible detrimental effects of emotional exhaustion, such as illness and absenteeism (Maslach 1982a, 1982b), as well as the negative implications of depersonalization, such as an uncaring attitude toward clients.

Locus of Control

Although the intercorrelations among locus of control and the three components of job burnout were all significant, the hierarchical regression analyses showed significance only with personal accomplishment. Hypotheses 1b and 2b, which predicted that external locus of control would be positively associated with emotional exhaustion and depersonalization, were not supported in this study. Thus, the prediction that externals would incur more emotional exhaustion and depersonalization than internals was not found in this particular sample. Among the four personality characteristics, locus of control was the only one lacking a significant association with depersonalization.

In contrast, Hypothesis 3b, which predicted that external locus of control would be negatively associated with personal accomplishment was supported. For this particular component of job burnout, externals do appear to respond more strongly to job stressors than internals, resulting in lower levels of personal accomplishment.

Although these findings add to the inconsistent results found in past studies investigating the relationship between locus of control and job burnout (e.g., Byrne, 1994; Chay, 1993; Brookings et al., 1985), the one job burnout component that has consistently shown a strong association with locus of control has been personal accomplishment. Externals tend to take less control of situations and are, therefore, more likely to perceive lower levels of personal accomplishment than internals. This information may be useful to employees who seek to improve their feelings of personal worth in their dealings with their clients. It may be that externals' perceptions of their accomplishments are lower than perceived by the recipients of their services. Thus, feedback from recipients, such as satisfaction surveys, may help to increase levels of personal accomplishment among externals.

Communal Orientation

Hypothesis 1c predicted that communal orientation would be negatively associated with emotional exhaustion. This hypothesis was not supported based on either the correlational analysis or the hierarchical regression analysis. This finding implies that an individual's level of desire or felt need to help others is not predictive of emotional exhaustion.

In contrast, communal orientation was found to be strongly associated with depersonalization and personal accomplishment. Hypothesis 2c predicted that communal orientation would be negatively associated with depersonalization. The support of this hypothesis implies that individuals employed in a helping profession who have low levels of communal orientation may experience high levels of depersonalization. The support of Hypothesis 3c, which predicted that communal orientation would be positively associated with personal accomplishment, implies that individuals with high levels of communal orientation may experience high levels of personal accomplishment. Among all the personality characteristics, communal orientation showed the strongest association with personal accomplishment.

These findings support Holland's (1985) theory of career choice whereby people should select careers that match their personalities. In terms of communal orientation, individuals that do not possess high levels of this personality characteristic should likely not enter into careers that require a helping orientation such as social services, teaching, or nursing. If they do enter these types of professions then they may experience high levels of depersonalization and low levels of personal accomplishment which could, in turn, lead to a later career change. Thus, individuals seeking a career that matches their personality should consider analyzing their level of communal orientation prior to entering into any helping-oriented profession. Organizations that want to reduce turnover should consider assisting their employees in their career development and management by assessing communal orientation in order to better match available helping-oriented jobs to those individuals who have the right personality for the job.

Negative Affectivity

Hypothesis 1d predicted that NA would be positively associated with emotional exhaustion, while Hypothesis 2d predicted that NA would be positively associated with depersonalization. Both hypotheses were strongly supported, with NA showing the strongest association among the personality characteristics with both these components. These results were found after partialling out the effects of all the other independent variables in the model. Thus, individuals who tend to focus on the negative aspects of themselves and their environment are likely to experience high levels of emotional exhaustion and depersonalization.

In contrast, Hypothesis 3d predicted that NA would be negatively associated with personal accomplishment. This hypothesis was not supported, implying that a person's tendency to view things negatively may not affect their personal feelings concerning their own accomplishments. These results mirror the findings of Iverson et al. (1994) who also found NA to be negatively associated with emotional exhaustion and depersonalization, but had no significant association with personal accomplishment.

Employees having a high NA disposition may perceive themselves as having high levels of emotional exhaustion and depersonalization, even in the absence of organizational role stressors (Chen & Spector, 1991). Organizations need to be aware of this because even if changes are made to jobs and/or organizational factors that are thought to affect job burnout, employees with high NA may not perceive these changes as useful. An organization's main concern should likely be that if a large number of NA individuals complain about their workplace, this general negative mood may spread to other individuals in the organization which, in turn, may lead to higher perceived levels of stressors and strains, such as job burnout, in the workplace than actually exist.

Situational Predictors

The situational predictor set as a whole showed a significant relationship with two of the job burnout components, emotional exhaustion and personal accomplishment. The lack of significance between this predictor set and depersonalization negated the need to analyze the individual associations between each characteristic and this component. A discussion of the four situational predictors, role ambiguity, role conflict, quantitative role overload, and organizational support, and each one's association with the three job burnout components follows.

Role Ambiguity

Role ambiguity's positive association with emotional exhaustion and depersonalization, as predicted in Hypotheses 4a and 5a, and its negative association with personal accomplishment, as predicted in Hypothesis 6a, were not supported in this study. Although significant intercorrelations with each job burnout component were calculated, once the other variables in the model were partialled out, the results of the hierarchical regressions revealed nonsignificant associations between role ambiguity and all three of the job burnout components. Among the four situational predictors, role ambiguity was the only characteristic not significantly associated with emotional exhaustion.

Although several studies have revealed significant relations between role ambiguity and job burnout, most of these studies were based on simple correlational analysis (e.g., Schwab & Iwanicki, 1982; Schwab et al., 1986) or used a composite burnout measure (e.g., Drory & Shamir, 1988). Other studies have used a composite measure of role stress (role ambiguity, role conflict, and role overload), making it impossible to determine the separate effects of each (e.g., Brookings et al., 1985). More recent studies that have used more sophisticated statistical techniques have supported the association between role ambiguity and emotional exhaustion and depersonalization, but not with personal accomplishment (e.g., Lee & Ashforth, 1993a, 1993b). In general, these results, and those of this study, support the belief that job burnout is more strongly associated with role conflict than role ambiguity.

Role Conflict

Hypothesis 4b predicted that role conflict would be positively associated with emotional exhaustion. This hypothesis was supported, implying that high levels of role conflict may lead to high levels of emotional exhaustion. In contrast, Hypothesis 4c, which predicted that role conflict would be positively associated with depersonalization, was not supported. This implies that individuals who must meet conflicting role demands do not necessarily take this stress out on their own clients.

Hypothesis 4d predicted that role conflict would be negatively associated with personal accomplishment. The theoretical basis for this prediction stems from the notion that the lack of agreement between roles may result in an individual's perception that his or her effectiveness is diminished. In this study, the opposite results were found. Individuals experiencing high role conflict also experienced high personal accomplishment. It is possible that this result stemmed from measurement error or the specific measures used in this study. Another possibility is that an individual's daily need to juggle a number of roles, as is the case for the eligibility technicians in this study, leads to a perception of greater, not less, accomplishment.

Since the correlation between role ambiguity and role conflict has been consistently high (in this study $r = .52$, $p < .01$), it may prove more parsimonious to use only one of the two variables. Using a combined measure, as have the majority of the researchers to date, does not provide the detail needed to analyze the separate relations among the variables. In any case, role conflict has shown to have a consistent positive relationship with emotional exhaustion. Thus, organizations should try to reduce this conflict so that the outcomes of emotional exhaustion, such as absenteeism and turnover, may be reduced.

Quantitative Role Overload

Hypothesis 4c predicted that quantitative role overload would be positively associated with emotional exhaustion. This hypothesis was supported, implying that individuals may feel drained and exhausted if they perceive they have too much workload. This perception may persist despite evidence that their actual (versus perceived) workload is not significantly large. Among all the situational characteristics, role overload was the strongest situational predictor of emotional exhaustion.

In contrast, Hypothesis 5c, which predicted a positive association between role overload and depersonalization, was not found to be significant because the situational characteristics set as a whole was not found to be significant (see Table 10b). Hypothesis 6c, which predicted a negative association between role overload and personal accomplishment, also did not prove significant. This implies that employees' perceptions of their workload do not necessarily affect their perceptions of their own personal accomplishments in dealing with their clients. These findings are similar to those of Schwab et al. (1986) and Jackson et al. (1987) who also found significant associations between role overload and emotional exhaustion and role overload and depersonalization, but nonsignificant results between role overload and personal accomplishment.

Based on these findings, it is important for organizations to reduce perceived workloads to levels that do not overload their employees. This may be a difficult task to accomplish in light of reduced staffs and budget constraints. Providing additional organizational support may be an easier alternative.

Organizational Support

Hypothesis 4d, which predicted that organizational support would be negatively associated with emotional exhaustion, was supported. This finding suggests that employees who perceive high levels of support from their organization are likely to experience low levels of emotional exhaustion. As posited by Hypothesis 6d, organizational support was also found to be a significant predictor of personal accomplishment. This suggests that employees who feel high levels of organizational support also feel a greater sense of personal accomplishment. Among all the situational predictors of personal accomplishment, organizational support was the strongest. These findings should help persuade organizations to more openly value and appreciate their employees.

In contrast, Hypothesis 5d, which predicted that organizational support would be negatively associated with depersonalization, was not supported. Thus, employees' perceptions of their organizations' support may not reflect on their attitudes and dealings with their clients.

Although social support, in general, has shown to be a strong predictor of job burnout, only two other studies are known to have used organizational support specifically. Lee and Ashforth (1993a and 1993b) found organizational support to be significantly associated with emotional exhaustion and depersonalization, but not with personal accomplishment. These results do not collaborate completely with the results found here; thus, additional research is needed to determine organizational support's true potential as a predictor of all three job burnout components.

Personality Versus Situational Predictors

Hypotheses 7a, 7b, and 7c predicted that the association between situational characteristics and the three components of job burnout would be stronger than the association between personality characteristics and the three components of job burnout. The results support the opposite conclusion. For all three components, the personality predictor set contributed a larger ΔR^2, after controlling for the effects of all other independent variables in the model, than did the situational predictor set.

It could also be that personality characteristics more strongly predict certain job burnout components, while situational characteristics more strongly predict others. For example, in this study, three of the four personality characteristics were significantly associated with depersonalization while only one of the situational characteristics revealed a significant association with this component. For emotional exhaustion, three of the four situational characteristics were significantly associated with this job burnout component, while just two of four personality characteristics had significant relations. Thus, based on the number of significant associations found, it could be that personality characteristics more strongly predict depersonalization, while situational characteristics more strongly predict emotional exhaustion. Additional research is needed before any definitive conclusions can be made.

These results reemphasize the importance of including dispositions, particularly personality characteristics, in the study of job burnout. It appears that past researchers (e.g., Burke et al., 1984; Cherniss, 1980b; Pines & Aronson, 1988) argued in favor of situational factors over personality factors prematurely. Indeed, dispositional effects in the study of job burnout are not a "mirage" as Davis-Blake and Pfeffer (1989) would like to believe. The findings here suggest that individuals do bring certain predispositions with them into an organization and that these dispositions will surface regardless of the situations in which they are placed. Therefore, the changes that organizations implement in order to counter job burnout may be futile.

In general, the model, with all independent variables included, accounted for significant variances in each of the dependent variables. For emotional exhaustion, the total R^2 was 49.15 percent, for depersonalization it was 32.55 percent, and for personal accomplishment it was 35.53 percent. While these percentages are high, they still leave room for a number of additional variables that are predictors of job burnout. These different percentages also reiterate the need to look at the three job burnout component and the predictors of each separately (Jackson et al., 1987). While questions still remain as to whether personality or situational characteristics are the stronger predictor of burnout, research investigating how these two sets of characteristics interact to predict burnout has raised even more questions.

The Interaction of Personality and Situational Characteristics

None of the interactions among the personality and situational characteristics set proved to be significant. As McClelland and Judd (1993) contend, field researchers are at a disadvantage compared to experimentalists in their ability to detect interaction effects because they are using a less controlled environment. Data collected in field research normally has less variability than data collected in an experimental setting; thus, detecting interactions among the independent variables becomes increasingly difficult. Moreover, Schneider (1983) has warned that extremes of persons and situations rarely exist together in work settings, which may result in insignificant findings.

Two recommendations McClelland and Judd (1993) make are (1) accept higher Type I error rates, and (2) increase the number of observations. If a higher Type I error rate (i.e., $\alpha = .10$) was used in this study, then the interaction of role overload x personality characteristics and role ambiguity x personality characteristics would have been considered significant (see Table 8). But McClelland and Judd warn that higher error rates are not normally acceptable in published journal articles.

The second recommendation, increasing the sample size, may have helped detect interaction effects for role conflict x personality and organizational support x personality, but all available subjects were included here. Thus, future studies investigating interaction effects in job burnout research should carefully consider a larger sample size than the 149 subjects available for this study. The difficulty inherent in detecting interaction effects in this study is one of many limitations to be discussed next.

Limitations and Validity Issues

Acknowledgment of the limitations of this study are needed so that readers may use caution when interpreting the results. The knowledge of these limitations will also assist in making future research related to job burnout more robust. Four categories of limitations, based on the four validity types of (1) statistical conclusion validity, (2) internal validity, (3) construct validity, and (4) external validity, are presented. These categories are based on those described by Cook and Campbell (1979), Cook, Campbell, and Peracchio (1990), and Mitchell (1985).

Statistical Conclusion Validity

Statistical conclusion validity is concerned with factors that would lead researchers to make incorrect statistical inferences. The concerns in this study focus on four factors: (1) statistical power, (2) the reliability of the measures, (3) the assumption of statistical tests, and (4) error rate problems based on the number of tests.

Statistical Power

In order to diminish the likelihood of finding nonsignificant results, a power analysis was computed prior to conducting this study. Although a sample adequate to reach a power level of .80 was used, it still was not large enough to find significance for all the hypotheses tested. Based on the post-hoc power analysis (see Table 18), exceptions to adequate power levels were found for several of the interactions tested. Thus, a limitation of this study, in relation to detecting significant interaction terms, is the size of the sample used.

Reliability of the Measures

While the questionnaires were administered in a standardized format for all participants, and the questions themselves were pretested for clarity, there is always the potential for measurement error. In general, the internal reliabilities of the measures were adequate, but two measures, role overload and communal orientation, had coefficient alpha levels below .70. While the association with these variables and certain components of job burnout were found to be significant, higher internal reliability levels may have resulted in greater significance, as well as significance for those hypotheses not supported.

Measures for role overload and communal orientation both contained negatively worded statements. It may have been that participants had difficulty with these statement; thus, the internal reliability levels were slightly low.

Assumptions of Statistical Tests

The assumptions for the statistical tests used in this study were analyzed and no major violations were found. For example, no outliers or severe problems with multicolinearity were found. Thus, the violation of the assumptions of statistical tests does not appear to be a threat to the statistical conclusion validity of this study.

Error Rate Problems

If a large number of variables are included in a study, it is likely that some will be significantly correlated simply by chance (Cook & Campbell, 1979; Mitchell, 1985). To avoid this potential limitation, sets were used to reduce the chance of a Type I error (Cohen & Cohen, 1983). Additionally, the support or non-support of the hypotheses tested was based on canonical correlation and hierarchical regression, both of which used sets. The use of simple intercorrelations among the variables, which often contradicted the results of the hierarchical regression analyses, was used mainly to look at possible multicolinearity. True associations among the variables, after controlling the effects of related variables, was based on the hierarchical regression analysis. Thus, error rate problems do not appear to be a threat to the validity of this study.

Internal Validity

In a correlational study, internal validity is concerned with the possibility that an unexpected third variable, or some spurious situational event, may be the reason for significant associations (Mitchell, 1985). Although it is impossible to eliminate all possible third variables in a cross-sectional, correlational study such as this one, a number of precautions were taken to limit this potential threat. Based on a thorough literature review, only those situational and personality characteristics deemed as true predictors of job burnout were selected for inclusion in this study. Additionally, individual demographic characteristics that have been found to have a significant association with job burnout were measured and statistically controlled so that their effects would not cause spurious associations among the true variables of interest. In order to rule out any spurious event, discussions with the administrator over the two offices where the data collection occurred indicated that there had been no unusual occurrences. Despite these precautions, the lack of control during the collection of the measures in a field setting is still a potential limitation of this study.

Construct Validity

Construct validity is concerned with the degree to which the measures selected actually represent the constructs of interest. The use of a single method to collect all variables (e.g., a self-report questionnaire), and the use of a single source (e.g., the eligibility technicians) to obtain all the data leads to two potential limitations in this study:

(1) common method variance, and (2) single-source bias. A brief explanation of these potential limitations, as well as the reasons why these design features were used follows.

Common method variance is a potential problem in correlational research because it can lead one to erroneously infer a substantive relationship between two variables exists. This incorrect conclusion stems from the fact that the two variables share a common form of measurement, i.e., a self-report questionnaire. Thus, it is difficult to know whether correlations between them are due to the actual variables of interest, the method variance, or both (Spector, 1994). Single-source bias, which is bias attributable to information obtained from the same source, is considered to be a special case of common method variance (Avolio, Yammarino, & Bass, 1991). Bias occurs because any defect in the source may contaminate all the measures obtained (Podsakoff & Organ, 1986).

As detailed by a number of researchers (e.g., Mitchell, 1985; Podsakoff & Organ, 1986; Sackett & Larson, 1991), factors which may contribute to common method variance and single-source bias include (1) the transient mood state of the respondents, (2) systematic differences in the respondents' style such as consistency motif, (3) social desirability, (4) demand characteristics of the research setting, and (5) overlap in content between measures. Approaches to mitigate common method variance and single-source bias fall into two general categories: (1) remedial approaches such as statistical and post hoc remedies, and (2) procedural, or preplanned, methods. The approach taken in this study was to implement, where appropriate, a number of procedural methods.

Two procedural approaches, escalating the unit of analysis used and separation of measurement, had been considered for this study, but did not appear to be feasible methods. Escalating the unit of analysis entails taking individual responses and grouping them into departments or sub-unit levels of analysis. This approach was not appropriate for this study because job burnout is based on an individual level of analysis. Additionally, escalating the unit of analysis significantly reduces the sample size of the study as well as the power of the statistical test to be used (Podsakoff & Organ, 1986).

The second approach, collecting some of the measures at different times or places, or by different methods and/or sources was not possible due to the constraints placed on this researcher by the consenting organization. Moreover, the crucial variables needed to be collected by the same source, i.e., the eligibility technicians, because it was their perceptions that were relevant to answering the research questions, and not the perceptions of their co-workers, superiors, or subordinates that were of interest. Indeed, Sackett & Larson (1991) contend that a given source may truly be the only appropriate source for a given set of variables.

There were also a number of legitimate reasons for using only a self-report questionnaire to assess all of the constructs of interest. First, job burnout is a psychological state and is best assessed by an individual's self-reported feelings and perceptions. Second, personality data, like the traits of interest in this study, are more frequently and easily gathered through the use of self-reports Third, respondents' perceptions of their external environment, such as quantitative role overload and organizational support, are more adequately measured through self-reports. Lastly, the simplest and fastest way to gather demographic information is through the use of self-reports. Podsakoff and Organ (1986) and Spector (1994) contend that these are legitimate and widely accepted reasons for using self-reports in organizational research. Moreover, Schmitt (1994) asserts that the most important issue is whether the proposed self-report measure actually does provide a representative measure of the intended constructs. Indeed, Sackett and Larson (1991) assert that "the use of poor operationalizations of a construct to eliminate the threat of method variance solves one problem at the expense of a more serious one" (p. 474).

Despite the use of a single method and a single source to obtain measures of the constructs of interest, a number of precautions were taken to limit these possible threats to this study's construct validity. Spector (1987) contends that method variance may be more pronounced with the use of single item measures or poorly designed scales. No single items were included in the proposed survey instrument, and as has been previously described, each measure has been rigorously evaluated in terms of its psychometric qualities. In particular, the MBI has been shown to be unrelated to measures of social desirability (Maslach & Jackson, 1986). Mitchell (1985) and Podsakoff and Organ (1986) also recommend that if multiple constructs are assessed on the same instrument, different formats should be used. As previously described, a number of different scaling formats were used in this instrument, not only in terms of numerical responses, but also in terms of the verbal descriptions as well. These design formats should have helped to reduce the possibility of consistency bias.

In summary, one simply cannot maximize on all possible dimensions related to research design and methodology (Mitchell, 1985). For example, including additional measures of each construct may increase construct validity, but this would be at the expense of lengthening the questionnaire and possibly causing fatigue and response bias. Moreover, obtaining data from multiple sources would help reduce same-source bias, but if the additional sources represent poor measures of the constructs then nothing has actually been gained from this extra effort. The most important issue is whether the methodology proposed adequately answers the research questions addressed and the hypotheses to be tested. Despite the potential limitations involved, it is strongly believed that the use of a self-report questionnaire, coupled with the use of a single data source, was truly the most appropriate research methodology for this study.

External Validity

External validity is concerned with the extent to which the study's findings can be generalized across different populations, and settings and times. These two categories can be grouped as (1) population validity, and (2) ecological validity (Neale & Liebert, 1986).

In terms of population validity, this study purposely used a sample of helping professionals. Thus, while the results may be generalized to other similar helping professionals, it is not likely that they should be generalized to all helping professionals or those employed in non-helping professions. Another possible threat to population validity focuses on self-selection and volunteer-bias. While over 85 percent of the employees in the two offices participated in this study, it is uncertain if the results would have been significantly different had the total population participated.

In terms of ecological validity, one is determining whether the findings can be generalized from one context to another. While the personality characteristics should generally remain stable over time, this may not be true of the situational characteristics and the job burnout measures. With organizational changes and interventions, the situational characteristics and job burnout measures may change over time. Since this was not a longitudinal study, the results found here focus on only the present time and should not be generalized to other time periods. Another possible threat to the ecological validity of the study is the location of where the data was collected. With the racial/ethnic makeup of the population used, it is not certain whether the results found can be generalized to other areas where differences are likely to be found among a study's participants. The issue of racial/ethnic background is certainly one largely unexplored avenue for future research.

Directions for Future Research

Despite the existence of hundreds of published studies which have explored the phenomenon of job burnout, there are still several gaps in the literature. In order to fill these gaps, the following directions for future research are offered. This is not an inclusive list, but instead, focuses on two main research areas: (1) predictors of job burnout and (2) methodological issues.

Predictors of Job Burnout

Although the results of this study emphasize the importance of personality predictors of job burnout, additional research is needed to test the significance of the predictors chosen. For example, this is only the second known study that has used communal orientation as a personality variable, with both studies showing it to have a significant association with job burnout. More studies are needed to verify its true importance in the job burnout literature.

More research is also needed to test the significance of other possible personality predictors. In particular, positive affectivity, a distinct construct from NA, has proved to be a significant predictor of job satisfaction (George, 1991). It may, therefore, prove to be a significant predictor of job burnout as well. Future research is also warranted concerning the relationship among the dimensions of the five-factor model of personality (extraversion/introversion, friendliness/hostility, consciousness, neuroticism/emotional stability, and intellect) and the three components of job burnout.

Part of the difficulty inherent in using personality predictors is the lack of meaningful theories available to help guide researchers in their selection of which personality characteristics to include. These theories also need to incorporate situational variables and the interactions among personality and situational variables (House et al., 1996).

Although there appears to be endless list of situational characteristics that could be correlates of job burnout, role overload, role conflict, and social support appear to be the most consistent. Others, such as job autonomy and control, have also proved significant (Shirom, 1989). What is still not known is which of these factors interact with one another, as well as with other personal characteristics. What is also lacking is a greater understanding of how situational, personal, and family characteristics interact. It is surprising that so few studies have tackled the now popular issue of work-family conflict in relation to job burnout. Maslach and Jackson (1985) and Drory and Shamir (1988) found significant relationships among family/life variables and the job burnout components; thus, the interaction of work and family is a research stream in the burnout literature that needs further investigation.

In terms of demographic characteristics, the issue of race/ethnic background has received far less attention than other characteristics such as gender and age. In the early stages of burnout research, Maslach and Jackson (1984, 1985) investigated the differences in burnout levels between Caucasian and African American employees and found that Caucasians experienced higher levels of emotional exhaustion. Subsequent studies have largely ignored the effect of demographic variables and as such, the issue of race/ethnic background has not received a great deal of attention. With an emphasis on diversity in the workplace, it would seem that this demographic characteristic's association with job burnout would prove useful to many organizations. Part of the difficulty in exploring this characteristic is the type of sample prevalent for exploration in most helping professions. The majority of the samples used in the burnout literature have consisted of Caucasian females. A concerted effort would be needed to get adequate samples made up of individuals of different racial/ethnic backgrounds to make any concrete comparisons.

Methodological Issues

Several areas of additional research are needed related to a number of methodological issues including the level of analysis used, the use of non-helping samples and the MBI, and the lack of longitudinal and qualitative studies. A brief discussion of each follows.

Researchers interested in burnout have looked almost exclusively at the individual employee. It is likely that there are additional theoretical possibilities of defining burnout at other levels of analysis such as the group/work team, department, or entire organization (Shirom, 1989). For example, Sonnentag, Brodbeck, Heinbokel, and Stolte (1994) used the work team as their level of analysis and found significant results between group-related variables, such as competition and cooperation, and levels of job burnout.

Just as the individual has been used almost exclusively in job burnout research so, too, have samples of helping professionals. Many researchers have argued that burnout should not be a term used exclusively for these employees, but has a broader meaning for other employees as well (e.g., Cordes, 1989; Garden, 1985, 1987; Reichel & Neumann, 1993; Sonnentag et al., 1994). Cordes (1989) used a sample of human resource professionals, Garden (1985, 1987) used graduate students, Reichel and Neuman (1993) used management executives, and Sonnentag et al. (1994) used technical professions. All found significant levels of burnout among these individuals, but either had difficulty using the MBI (Cordes, 1989) or used a different measure of burnout or developed their own (e.g., Garden, 1985, 1987; Reichel & Neumann, 1993; Sonnentag et al. 1994). Thus, a need exists for a measure of burnout for non-helping professionals or revisions to the MBI are needed so that it can be used as a universal measure of burnout.

A limitation of this study, and the majority of studies that have investigated burnout, is the use of a cross-sectional design which does not allow one to claim cause-effect results. This is claim that is more appropriate to make with the implementation of a longitudinal design. After Shirom (1989) argued for the inclusion of longitudinal studies in burnout research, several researchers answered this call (e.g., Cherniss, 1992; Corrigan et al., 1994; Leiter, 1990; Savicki & Cooley, 1994). These studies reiterate the need to look at burnout longitudinally to determine if, and how, it can be reduced and which factors are most relevant in making these changes over time.

Another call for future burnout research has been to incorporate more qualitative studies (Maslach, 1993) into the design process. Early burnout research used this approach with Maslach and Jackson (1986) developing the MBI based on detailed interviews with a number of helping professionals. Cherniss (1980a, 1980b) also used a qualitative approach to develop his original model of burnout. Since that time only two known qualitative studies have been published (see Cherniss, 1992; Kahn, 1993). Both of these studies, as compared to quantitative studies, provide a deeper look into the reasons why employees may burn-out and how burnout symptoms can be eliminated.

Chapter Summary

The major finding of this study is that personality characteristics are important to the prediction of job burnout and should be given equal status along with situational characteristics. This finding, in addition to the others presented, led to implications for theorists and practitioners. It was suggested that theorists use large enough sample sizes when investigating interaction terms so that their chances of finding significance are enhanced. Most significantly for practitioners is the suggestion that organizations should choose their interventions strategies carefully. In some cases, organizational changes may not be cost effective if the stronger predictor is personality related.

The limitations of this study were categorized into the four main validity types of statistical conclusion validity, internal validity, construct validity, and external validity. The biggest potential threats revolve around the detrimental effects of a possible third variable (internal validity) and the use of a single source for information and a self-report questionnaire (construct validity).

Although job burnout has received a great deal of attention, there are still a number of directions for future research that would make this area of knowledge more complete. These directions include the investigation of (1) additional personality characteristics, (2) the interaction of work and family characteristics, and (3) race/ethnic background as a demographic predictor of burnout. In addition, it is also recommended that a more universal job burnout scale be devised, one that could be used for helping professions, as well as for non-helping professions.

APPENDIX A

RESEARCH QUESTIONNAIRE

University of North Texas

College of Business Administration
Department of Management

April 16, 1996

Dear Participant:

I truly appreciate your time and involvement in this research project, which is being conducted as part of the requirements for me to earn my Ph.D. in Management from the University of North Texas.

Your honest responses to each statement are extremely important to this project's outcome. You can be assured of complete confidentiality--no individual responses will be published and the raw information will be accessible only to me and other University of North Texas faculty on my research committee.

The attached packet contains six sections addressing various topics related to your job and your attitude toward work in general. The entire survey should take approximately 20-30 minutes to complete. It is very important that you respond to each statement or question.

If you should have any questions or concerns please call me at (817) 565-3140. Thank you again for your time and effort.

Sincerely,

Helen Caudill

Helene Caudill

Please note that this project has been reviewed and approved by the University of North Texas Committee for the Protection of Human Subjects.

P.O. Box 13677 • Denton, Texas 76203-6677
817-565-3140 • Dallas-Fort Worth Metro: 817/267-3731 • FAX 817/565-4394 • TDD 800-735-2989

SECTION 1: YOUR OPINION ABOUT WORK IN GENERAL: For the following statements, please indicate how much you agree or disagree with each by circling the appropriate number, ranging from "1" (Disagree Very Much) to "6" (Agree Very Much).

	Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
1. A job is what you make of it.	1	2	3	4	5	6
2. On most jobs, people can pretty much accomplish whatever they set out to accomplish.	1	2	3	4	5	6
3. If you know what you want out of a job you can find a job that gives it to you.	1	2	3	4	5	6
4. If employees are unhappy with a decision made by their boss, they should do something about it.	1	2	3	4	5	6
5. Getting the job you want is mostly a matter of luck.	1	2	3	4	5	6
6. Making money is mostly a matter of good fortune.	1	2	3	4	5	6
7. Most people are capable of doing their jobs well if they make the effort.	1	2	3	4	5	6
8. In order to get a really good job you need to have family members or friends in high places.	1	2	3	4	5	6
9. Promotions are usually a matter of good fortune.	1	2	3	4	5	6
10. When it comes to landing a really good job, who you know is more important than what you know.	1	2	3	4	5	6
11. Promotions are given to employees who perform well on the job.	1	2	3	4	5	6
12. To make a lot of money you have to know the right people.	1	2	3	4	5	6
13. It takes a lot of luck to be an outstanding employee on most jobs.	1	2	3	4	5	6
14. People who perform their jobs well generally get rewarded for it.	1	2	3	4	5	6
15. Most employees have more influence on their supervisors than they think they do.	1	2	3	4	5	6
16. The main difference between people who make a lot of money and people who make a little money is luck.	1	2	3	4	5	6

SECTION 2: INFORMATION ABOUT YOUR WORK ASSIGNMENTS:

Part A: For the statements in Part A, please indicate how true or false each condition applies to you by circling the appropriate number, ranging from "1" (Very False) to "7" (Very True).

	Very False						Very True
1. I have to do things that should be done differently.	1	2	3	4	5	6	7
2. I work on unnecessary things.	1	2	3	4	5	6	7
3. I receive an assignment without the proper manpower to complete it.	1	2	3	4	5	6	7
4. I receive an assignment without adequate resources and materials to execute it.	1	2	3	4	5	6	7
5. I work with two or more groups who operate quite differently.	1	2	3	4	5	6	7
6. I have to ignore a rule or policy in order to carry out an assignment.	1	2	3	4	5	6	7
7. I receive incompatible requests from two or more people.	1	2	3	4	5	6	7
8. I do things that are apt to be accepted by one person and not accepted by others.	1	2	3	4	5	6	7
9. I know exactly what is expected of me.	1	2	3	4	5	6	7
10. I feel certain about how much authority I have.	1	2	3	4	5	6	7
11. Clear, planned goals and objectives exist for my job.	1	2	3	4	5	6	7
12. I know that I have divided my time properly.	1	2	3	4	5	6	7
13. I know what my responsibilities are.	1	2	3	4	5	6	7
14. Explanation is clear of what has to be done.	1	2	3	4	5	6	7

Part B: For the statements in Part B, please indicate how strongly you agree or disagree with each by circling the appropriate number, ranging from "1" (Strongly Disagree) to "5" (Strongly Agree).

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I am given enough time to do what is expected of me in my job.	1	2	3	4	5
2. It often seems like I have too much work for one person to do.	1	2	3	4	5
3. The performance standards on my job are too high.	1	2	3	4	5

SECTION 3: YOUR PERSONAL EVALUATION CONCERNING YOUR WORK PERFORMANCE/ACTIONS:

Part A: For the statements in Part A, please indicate how strongly you agree or disagree with each by circling the appropriate number, ranging from "1" (Strongly Disagree) to "5" (Strongly Agree).

	Strongly Disagree				Strongly Agree
1. I count around here.	1	2	3	4	5
2. I am taken seriously.	1	2	3	4	5
3. I am important.	1	2	3	4	5
4. I am trusted.	1	2	3	4	5
5. There is faith in me.	1	2	3	4	5
6. I can make a difference.	1	2	3	4	5
7. I am valuable.	1	2	3	4	5
8. I am helpful.	1	2	3	4	5
9. I am efficient.	1	2	3	4	5
10. I am cooperative.	1	2	3	4	5

Part B: For the statements in Part B, please indicate how characteristic of yourself or your personal beliefs each one is by circling the appropriate number, ranging from "1" (Extremely Uncharacteristic of Me) to "5" (Extremely Characteristic of Me).

	Extremely Uncharacteristic of Me				Extremely Characteristic of Me
1. When making a decision, I take other people's needs and feelings into account.	1	2	3	4	5
2. I'm not especially sensitive to other people's feelings.	1	2	3	4	5
3. I don't consider myself to be a particularly helpful person.	1	2	3	4	5
4. I believe people should go out of their way to be helpful.	1	2	3	4	5
5. I don't especially enjoy giving help to others.	1	2	3	4	5
6. I often go out of my way to help another person.	1	2	3	4	5
7. I believe it's best not to get involved taking care of people's personal needs.	1	2	3	4	5
8. I'm not the sort of person who often comes to the assistance of others.	1	2	3	4	5
9. When people get emotionally upset, I tend to avoid them.	1	2	3	4	5
10. I believe that people should keep their troubles to themselves.	1	2	3	4	5

Part C: For the statements in Part C, please circle whether you feel they are true or false.

	True	False
1. I often find myself worrying about something.	T	F
2. My feelings are hurt rather easily.	T	F
3. Often I get irritated at little annoyances.	T	F
4. I suffer from nervousness.	T	F
5. My mood often goes up and down.	T	F
6. I sometimes feel "just miserable" for no good reason.	T	F
7. I am easily startled by things that happen unexpectantly.	T	F
8. I often lose sleep over my worries.	T	F
9. Minor setbacks sometimes irritate me too much.	T	F
10. There are days when I'm "on edge" all of the time.	T	F
11. I am too sensitive for my own good.	T	F

SECTION 4: YOUR PERCEPTIONS CONCERNING SUPPORT RECEIVED FROM YOUR ORGANIZATION: For the following statements, please indicate how strongly you agree or disagree with each by circling the appropriate number, ranging from "1" (Strongly Disagree) to "7" (Strongly Agree).

	Strongly Disagree						Strongly Agree
1. My organization values my contribution to its well-being.	1	2	3	4	5	6	7
2. If my organization could hire someone to replace me at a lower salary it would do so.	1	2	3	4	5	6	7
3. My organization fails to appreciate any extra effort from me.	1	2	3	4	5	6	7
4. My organization strongly considers my goals and values.	1	2	3	4	5	6	7
5. My organization would ignore any complaint from me.	1	2	3	4	5	6	7
6. My organization disregards my best interests when it makes decisions that affect me.	1	2	3	4	5	6	7
7. Help is available from my organization when I have a problem.	1	2	3	4	5	6	7
8. My organization really cares about my well-being.	1	2	3	4	5	6	7
9. Even if I did the best job possible, my organization would fail to notice.	1	2	3	4	5	6	7
10. My organization is willing to help me when I need a special favor.	1	2	3	4	5	6	7
11. My organization cares about my general satisfaction at work.	1	2	3	4	5	6	7
12. If given the opportunity, my organization would take advantage of me.	1	2	3	4	5	6	7
13. My organization shows very little consideration for me.	1	2	3	4	5	6	7
14. My organization cares about my opinions.	1	2	3	4	5	6	7
15. My organization takes pride in my accomplishments at work.	1	2	3	4	5	6	7
16. My organization tries to make my job as interesting as possible.	1	2	3	4	5	6	7

SECTION 5: YOUR PERSONAL FEELINGS PERTAINING TO JOB-RELATED ISSUES: For the following statements, please indicate how *often* or how *frequently* you feel each one by circling the appropriate number, ranging from "0" (Never) to "6" (Every Day).

	Never	A Few Times A Year Or Less	Once A Month Or Less	A Few Times A Month	Once A Week	A Few Times A Week	Every Day
1. I feel emotionally drained from my work.	0	1	2	3	4	5	6
2. I feel used up at the end of the workday.	0	1	2	3	4	5	6
3. I feel fatigued when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
4. I can easily understand how my clients feel about things.	0	1	2	3	4	5	6
5. I feel I treat some clients as if they were impersonal objects.	0	1	2	3	4	5	6
6. Working with people all day is really a strain for me.	0	1	2	3	4	5	6
7. I deal effectively with the problems of my clients.	0	1	2	3	4	5	6
8. I feel burned out from my work.	0	1	2	3	4	5	6
9. I feel I'm positively influencing other people's lives through my work.	0	1	2	3	4	5	6
10. I've become callous toward people since I took this job.	0	1	2	3	4	5	6
11. I worry that this job is hardening me emotionally.	0	1	2	3	4	5	6
12. I feel energetic.	0	1	2	3	4	5	6
13. I feel frustrated by my job.	0	1	2	3	4	5	6
14. I feel I'm working too hard on my job.	0	1	2	3	4	5	6
15. I don't really care what happens to some clients.	0	1	2	3	4	5	6
16. Working with people directly puts too much stress on me.	0	1	2	3	4	5	6
17. I can easily create a relaxed atmosphere with my clients.	0	1	2	3	4	5	6
18. I feel exhilarated after working closely with my clients.	0	1	2	3	4	5	6
19. I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
20. I feel like I'm at the end of my rope.	0	1	2	3	4	5	6
21. In my work, I deal with emotional problems very calmly.	0	1	2	3	4	5	6
22. I feel clients blame me for some of their problems.	0	1	2	3	4	5	6

SECTION 6: DEMOGRAPHIC INFORMATION: For the questions below, please fill in each blank or check the appropriate response category.

1. Number Of Years You've Been Employed By The Department of Social Services: ______________

2. a. Title Of Your Current Position: ______________
   b. Number Of Years You've Been In Your Current Position: ______________

3. Your Current Employment Status:
   ______ (1) Part Time; Average Number Of Hours Worked Per Week: ________
   ______ (2) Full Time

4. Average number of clients you process each week:
   ______ (1) Number of Cases
   ______ (2) Number of Intakes
   ______ (3) Other, Please Specify: ______________

5. The Highest Level Of Education You Have Completed:
   ______ (1) High School
   ______ (2) Some College
   ______ (3) Associate's/Technical Degree
   ______ (4) Four-year College Degree
   ______ (5) Graduate Degree
   ______ (6) Other, Please Specify: ______________

6. Your Gender:
   ______ (1) Female
   ______ (2) Male

7. Please Select The Category Below Which You Feel Most Closely Identifies You:
   ______ (1) Caucasian/White (Non-Hispanic)
   ______ (2) African American/Black (Non-Hispanic)
   ______ (3) Hispanic
   ______ (4) Asian or Pacific Islander
   ______ (5) American Indian or Alaskan Native
   ______ (6) Other, Please Specify: ______________

8. Your Marital Status:
   ______ (1) Married
   ______ (2) Never Married
   ______ (3) Divorced/Separated
   ______ (4) Other, Please Specify: ______________

9. The Number Of Dependent Children Living At Home With You:
   ______ (1) None
   ______ (2) One or Two
   ______ (3) Three or More

10. Your Current Age: ______________

11. Would you be willing to be interviewed at a later time? If so, please include your name and work or home telephone number:
    Name: ______________
    Telephone Number: (_____)______________

12. Do you have any additional comments?
    ____
    ____
    ____

Thank you very much for your time.

APPENDIX B

POWER ANALYSIS

```
-----------------------------Multiple Regression----------------------------
POWER ANALYSIS--LOW EFFECT (.02)

                                 Power Report

B=  4 A=  4 C=  3  R»b=0.020  R»a=0.020  R»c=0.020  f»= 0.0213 df1=     4

    N     Lambda    df2   Alpha        Beta     Power
   50     0.9149     38  0.0100  0.9761627 0.0238373
   50     0.9149     38  0.0500  0.9059147 0.0940853
   50     0.9149     38  0.1000  0.8325499 0.1674501
  100     1.9787     88  0.0100  0.9482360 0.0517640
  100     1.9787     88  0.0500  0.8371354 0.1628646
  100     1.9787     88  0.1000  0.7396436 0.2603564
  200     4.1064    188  0.0100  0.8631862 0.1368138
  200     4.1064    188  0.0500  0.6795760 0.3204240
  200     4.1064    188  0.1000  0.5542147 0.4457853
  300     6.2340    288  0.0100  0.7487999 0.2512001
  300     6.2340    288  0.0500  0.5203754 0.4796246
  300     6.2340    288  0.1000  0.3921083 0.6078917
  400     8.3617    388  0.0100  0.6205873 0.3794127
  400     8.3617    388  0.0500  0.3793922 0.6206078
  400     8.3617    388  0.1000  0.2647984 0.7352016
  600    12.6170    588  0.0100  0.3776008 0.6223992
  600    12.6170    588  0.0500  0.1790773 0.8209227
  600    12.6170    588  0.1000  0.1082012 0.8917988
```

```
------------------------------Multiple Regression----------------------------
POWER ANALYSIS--MEDIUM EFFECT (.15)

                                 Power Report

B=  4 A=  4 C=  3  R»b=0.150  R»a=0.150  R»c=0.020  f»= 0.2206 df1=     4

     N      Lambda     df2   Alpha        Beta      Power
    50      9.4853      38  0.0100  0.6349173 0.3650827
    50      9.4853      38  0.0500  0.3719022 0.6280978
    50      9.4853      38  0.1000  0.2499825 0.7500175
    60     11.6912      48  0.0100  0.5023295 0.4976705
    60     11.6912      48  0.0500  0.2556271 0.7443729
    60     11.6912      48  0.1000  0.1587043 0.8412957
    70     13.8971      58  0.0100  0.3815048 0.6184952
    70     13.8971      58  0.0500  0.1692160 0.8307840
    70     13.8971      58  0.1000  0.0974055 0.9025945
    80     16.1029      68  0.0100  0.2793430 0.7206570
    80     16.1029      68  0.0500  0.1084341 0.8915659
    80     16.1029      68  0.1000  0.0580746 0.9419254
    90     18.3088      78  0.0100  0.1979642 0.8020358
    90     18.3088      78  0.0500  0.0675409 0.9324591
    90     18.3088      78  0.1000  0.0337629 0.9662371
   100     20.5147      88  0.0100  0.1362425 0.8637575
   100     20.5147      88  0.0500  0.0410303 0.9589697
   100     20.5147      88  0.1000  0.0191984 0.9808016
   125     26.0294     113  0.0100  0.0479591 0.9520409
   125     26.0294     113  0.0500  0.0107592 0.9892408
   125     26.0294     113  0.1000  0.0043137 0.9956863
```

```
------------------------------Multiple Regression---------------------------
POWER ANALYSIS--LARGE EFFECT (.35)

                                 Power Report

B=  4 A=  4 C=  3  R»b=0.350  R»a=0.350  R»c=0.020  f»= 1.2500 df1=      4

    N      Lambda     df2   Alpha        Beta      Power
   50     53.7500      38  0.0100  0.0004026 0.9995974
   50     53.7500      38  0.0500  0.0000195 0.9999805
   50     53.7500      38  0.1000  0.0000034 0.9999966
   60     66.2500      48  0.0100  0.0000127 0.9999873
   60     66.2500      48  0.0500  0.0000004 0.9999996
   60     66.2500      48  0.1000  0.0000000 1.0000000
   70     78.7500      58  0.0100  0.0000003 0.9999997
   70     78.7500      58  0.0500  0.0000000 1.0000000
   70     78.7500      58  0.1000  0.0000000 1.0000000
   80     91.2500      68  0.0100  0.0000000 1.0000000
   80     91.2500      68  0.0500  0.0000000 1.0000000
   80     91.2500      68  0.1000  0.0000000 1.0000000
   90    103.7500      78  0.0100  0.0000000 1.0000000
   90    103.7500      78  0.0500  0.0000000 1.0000000
   90    103.7500      78  0.1000  0.0000000 1.0000000
  100    116.2500      88  0.0100  0.0000000 1.0000000
  100    116.2500      88  0.0500  0.0000000 1.0000000
  100    116.2500      88  0.1000  0.0000000 1.0000000
  125    147.5000     113  0.0100  0.0000000 1.0000000
  125    147.5000     113  0.0500  0.0000000 1.0000000
  125    147.5000     113  0.1000  0.0000000 1.0000000
```

```
-----------------------------Multiple Regression----------------------------
POWER ANAL.-MED/LRGE EFFECT (.15/.35)

                              Power Report

B=  4 A=  4 C=  3  R»b=0.150  R»a=0.350  R»c=0.020  f»= 0.3125 df1=     4

      N      Lambda    df2   Alpha       Beta     Power
     50     13.4375     38  0.0100  0.4397784 0.5602216
     50     13.4375     38  0.0500  0.2025078 0.7974922
     50     13.4375     38  0.1000  0.1182303 0.8817697
     60     16.5625     48  0.0100  0.2869642 0.7130358
     60     16.5625     48  0.0500  0.1087432 0.8912568
     60     16.5625     48  0.1000  0.0571592 0.9428408
     70     19.6875     58  0.0100  0.1752304 0.8247696
     70     19.6875     58  0.0500  0.0551578 0.9448422
     70     19.6875     58  0.1000  0.0262788 0.9737212
     80     22.8125     68  0.0100  0.1010877 0.8989123
     80     22.8125     68  0.0500  0.0266712 0.9733288
     80     22.8125     68  0.1000  0.0115844 0.9884156
     90     25.9375     78  0.0100  0.0555195 0.9444805
     90     25.9375     78  0.0500  0.0123814 0.9876186
     90     25.9375     78  0.1000  0.0049268 0.9950732
    100     29.0625     88  0.0100  0.0292120 0.9707880
    100     29.0625     88  0.0500  0.0055482 0.9944518
    100     29.0625     88  0.1000  0.0020314 0.9979686
    125     36.8750    113  0.0100  0.0050176 0.9949824
    125     36.8750    113  0.0500  0.0006562 0.9993438
    125     36.8750    113  0.1000  0.0001981 0.9998019
```

```
------------------------------Multiple Regression----------------------------
POWER ANAL.-MED/LRGE EFFECT (.15/.35)

                                 Power Report

B=  4 A=  4 C=  3  R»b=0.350  R»a=0.150  R»c=0.020  f»= 0.7292 df1=      4

     N     Lambda     df2  Alpha        Beta     Power
    50    31.3542      38  0.0100  0.0338013 0.9661987
    50    31.3542      38  0.0500  0.0054197 0.9945803
    50    31.3542      38  0.1000  0.0017778 0.9982222
    60    38.6458      48  0.0100  0.0066685 0.9933315
    60    38.6458      48  0.0500  0.0007362 0.9992638
    60    38.6458      48  0.1000  0.0002001 0.9997999
    70    45.9375      58  0.0100  0.0011176 0.9988824
    70    45.9375      58  0.0500  0.0000879 0.9999121
    70    45.9375      58  0.1000  0.0000202 0.9999798
    80    53.2292      68  0.0100  0.0001646 0.9998354
    80    53.2292      68  0.0500  0.0000095 0.9999905
    80    53.2292      68  0.1000  0.0000018 0.9999982
    90    60.5208      78  0.0100  0.0000218 0.9999782
    90    60.5208      78  0.0500  0.0000009 0.9999991
    90    60.5208      78  0.1000  0.0000002 0.9999998
   100    67.8125      88  0.0100  0.0000026 0.9999974
   100    67.8125      88  0.0500  0.0000001 0.9999999
   100    67.8125      88  0.1000  0.0000000 1.0000000
   125    86.0417     113  0.0100  0.0000000 1.0000000
   125    86.0417     113  0.0500  0.0000000 1.0000000
   125    86.0417     113  0.1000  0.0000000 1.0000000
```

REFERENCES

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Agho, A. O., Price, J. L., & Mueller, C. W. (1992). Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. Journal of Occupational and Organizational Psychology, 65, 185-196.

Avolio, B. J., Yammarino, F. J., & Bass, B. M. (1991). Identifying common methods variance with data collected from a single source: An unresolved sticky issue. Journal of Management, 17, 571-587.

Bacharach, S. B., Bamberger, P., & Conley, S. (1991). Work-home conflict among nurses and engineers: Mediating the impact of role stress on burnout and satisfaction at work. Journal of Organizational Behavior, 12, 39-53.

Beehr, T. A., & Newman, J. E. (1978). Job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review. Personnel Psychology, 31, 665-699.

Beer, J., & Beer, J. (1992). Burnout and stress, depression and self-esteem of teachers. Psychological Reports, 71, 1331-1336.

Belcastro, P. A., Gold, R. S., & Hays, L. C. (1983). Maslach Burnout Inventory: Factor structures for samples of teachers. Psychological Reports, 53, 364-366.

Berry, W. D. (1993). Understanding regression assumptions. Newbury Park, CA.: Sage Publications.

Bhagat, R. S., & Allie, S. M. (1989). Organizational stress, personal life stress, and symptoms of life strains: An examination of the moderating role of sense of competence. Journal of Vocational Behavior, 35, 231-253.

Boumans, N. P. G., & Landeweerd, J. A. (1992). The role of social support and coping behaviour in nursing work: main or buffering effect? Work & Stress, 6, 191-202.

Bowers, K. S. 1973. Situationism in psychology: An analysis and a critique. Psychological Review, 80: 307-336.

Breaugh, J. A., & Colihan, J. P. (1994). Measuring facets of job ambiguity: Construct validity evidence. Journal of Applied Psychology, 79, 191-202.

Brief, A. P., Burke, M. J., George, J. M., Robinson, B. S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress? Journal of Applied Psychology, 73, 193-198.

Brockner, J. (1988). Self-esteem at work: Research, theory, and practice. Lexington, MA.: D.C. Heath & Co.

Brookings, J. B., Bolton, B., Brown, C. E., & McEvoy, A. (1985). Self-reported burnout among female human service professionals. Journal of Occupational Behaviour, 16, 143-150.

Brookings, J. B., Chacos, K. M., Hightower, S. E., Howard, M. E., Jr., & Weiss, C. (1985). Work environment and burnout in two social service agencies. Journal of Health and Human Resources Administration, 8, 311-320.

Burisch, M. (1993). In search of theory: Some ruminations on the nature and etiology of burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 75-94). Washington DC: Taylor & Francis.

Burke, R. J. (1989). Toward a phase model of burnout: Some conceptual and methodological concerns. Group & Organization Studies, 14, 23-32.

Burke, R. J., & Greenglass, E. R. (1989). Psychological burnout among men and women in teaching: An examination of the Cherniss model. Human Relations, 42, 261-273.

Burke, R. J., Shearer, J., & Deszca, E. (1984). Correlates of burnout phases among police officers. Group & Organization Studies, 9, 451-466.

Buunk, B. P., Doosje, B. J., Jans, L., & Hopstaken, L. (1993). Perceived reciprocity, social support, and stress at work: The role of exchange and communal orientation. Journal of Personality and Social Psychology, 65, 801-811.

Byrne, B. M. (1991). The Maslach Burnout Inventory: Validating factorial structure and invariance across intermediate, secondary, and university educators. Multivariate Behavioral Research, 26, 583-605.

Byrne, B. M. (1993). The Maslach Burnout Inventory: Testing for factorial validity and invariance across elementary, intermediate and secondary teachers. Journal of Occupational and Organizational Psychology, 66, 197-212.

Byrne, B. M. (1994). Burnout: Testing for validity, replication, and invariance of causal structure across elementary, intermediate, and secondary teachers. American Educational Research Journal, 31, 645-673.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 56, 81-105.

Caplan, R. D. (1983). Person-Environment fit: Past, present, and future. In C. L. Cooper (Ed.) Stress Research: Issues for the Eighties (pp. 35-78). New York: John Wiley & Sons, Ltd.

Carroll, J. F. X., & White, W. L. (1982). Theory building: Integrating individual and environmental factors within an ecological framework. In W. S. Paine (Ed.) Job stress and burnout: Theory and Intervention Perspectives pp. 41-60. Beverly Hills, CA.: Sage Publications.

Carver, C. S. (1989). How should multifaceted personality constructs be tested? Issues illustrated by self-monitoring, attributional style, and hardiness. Journal of Personality and Social Psychology, 56, 577-585.

Chay, Y. W. (1993). Social support, individual differences and well-being: A study of small business entrepreneurs and employees. Journal of Occupational and Organizational Psychology, 66, 285-302.

Chen, P. Y., & Spector, P. E. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. Journal of Applied Psychology, 76, 398-407.

Cherniss, C. (1980a). Professional burnout in human service organizations. New York: Praeger Publishers.

Cherniss, C. (1980b). Staff burnout: Job Stress in the human services. Beverly Hills, Ca.: Sage Publications.

Cherniss, C. (1992). Long-term consequences of burnout: An exploratory study. Journal of Organizational Behavior, 13, 1-11.

Clark, M. S., Ouellette, R., Powell, M. C., & Milberg, S. (1987). Recipient's mood, relationship type, and helping. Journal of Personality and Social Psychology, 53, 94-103.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd. ed.). Hillsdale, N.J.: Lawrence Erlbaum Associates.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation for the behavioral sciences (2nd. ed.). Hillsdale, N.J.: Lawrence Erlbaum Associates.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. Psychological Bulletin, 98, 310-357.

Constable, J. F., & Russell, D. W. (1986). The effect of social support and the work environment upon burnout among nurses. Journal of Human Stress, 12, 20-26.

Cordes, C. L. (1989). Correlates and generalizability of job burnout. Unpublished doctoral dissertation. University of Missouri, Columbia.

Cordes, C. L., & Dougherty, T. W. (1993). A review and an integration of research on job burnout. Academy of Management Review, 18, 621-656.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. Journal of Applied Psychology, 78, 98-104.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. Psychological Bulletin, 52, 281-302.

Crowne, D., & Marlowe, D. (1964). The approval motive. New York: Wiley.

Davis-Blake, A., & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organizational research. Academy of Management Review, 14, 385-400.

Dignam, J. T., Barrera, M., Jr., & West, S. G. (1986). Occupational stress, social support, and burnout among correctional officers. American Journal of Community Psychology, 14, 177-193.

Dolan, A. (1987). The relationship between burnout and job satisfaction in nurses. Journal of Advanced Nursing, 12, 3-12.

Dougherty, T. W., & Pritchard, R. D. (1985). The measurement of role variables: Exploratory examination of a new approach. Organizational Behavior and Human Decision Processes, 35, 141-155.

Drory, A., & Shamir, B. (1988). Effects of organizational and life variables on job satisfaction and burnout. Group and Organization Studies, 13, 441-455.

Duckitt, J. (1984). Social support, personality and the prediction of psychological distress: An interactionist approach. Journal of Clinical Psychology, 40, 1199-1205.

Eastburg, M. C., Williamson, M., Gorsuch, R., & Ridley, C. (1994). Social support, personality, and burnout in nurses. Journal of Applied Social Psychology, 24, 1233-1250.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. Journal of Applied Psychology, 75, 51-59.

Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. (1986). Perceived organizational support. Journal of Applied Psychology, 71, 500-507.

Eisenstat, R. A., & Felner, R. D. (1984). Toward a differentiated view of burnout: Personal and organizational mediators of job satisfaction and stress. American Journal of Community Psychology, 12, 411-430.

Endler, N. S. (1973). The person versus the situation—A pseudo issue? A response to Akler. Journal of Personality, 41, 287-303.

Endler, N. S., & Hunt, J. M. (1966). Sources of behavioral variance as measured by the S-R Inventory of Anxiousness. Psychological Bulletin, 65, 336-346.

Endler, N. S., & Hunt, J. M. (1968). S-R inventories of hostility and comparisons of the proportions of variance from persons, responses and situations for hostility and anxiousness. Journal of Personality and Social Psychology, 9, 309-315.

Endler, N. S., & Hunt, J. M. (1969). Generalizability of contributions from sources of variance in the S-R inventories of anxiousness. Journal of Personality, 37, 1-24.

Endler, N. S., Hunt, J. M., & Rosenstein, A. J. (1962). An S-R Inventory of Anxiousness. Psychological Monographs, 76, No. 536.

Endler, N. S., & Magnusson, D. (Eds.) (1973). Interactional Psychology and Personality. New York: John Wiley & Sons.

Epstein, S. (1979). The stability of behavior: On predicting most of the people much of the time. *Journal ofPersonality and Social Psychology*, *37*, 1097-1126.

Epstein, S., & O'Brien, E. J. (1985).The person-situation debate in historical and current perspective. *Psychological Bulletin*, *98*, 513-537.

Etzion, D. (1984). Moderating effect of social support on the stress-burnout relationship. *Journal of Applied Psychology*, *69*, 615-622.

Evans, B. K., & Fischer, D. G. (1993). The nature of burnout: A study of the three-factor model of burnout in human service and non-human service samples. *Journal of Occupational and Organizational Psychology*, *66*, 29-38.

Farber, B. (1983). Introduction: A critical perspective on burnout. In B. Farber (Ed.) *Stress and burnout in the human service professions* (pp. 1-22). New York: Pergamon Press.

Farber, B. (1984). Stress and burnout in suburban teachers. *Journal ofEducational Research*, *77*, 325-331.

Ferris, G. R., Frink, D. D., Gilmore, D. C., & Kacmar, K. M. (1994). Understanding as an antidote for the dysfunctional consequences of organizational politics as a stressor. *Journal of Applied Social Psychology*, *24*, 1204-1220.

Fibkins, W. L. (1983). Organizing helping settings to reduce burnout. In B. A. Farber (Ed.). *Stress and burnout in human service professions* (pp. 175-187). New York: Pergamon Press.

Fimian, M. J., & Blanton, L. P. (1987). Stress, burnout, and role problems among teacher trainees and first-year teachers. *Journal of Occupational Behavior*, *8*, 157-165.

Fimian, M. J., Fastenau, P. A., Tashner, J. H., & Cross, A. H. (1989). The measure of classroom stress and burnout among gifted and talented students. *Psychology in the Schools*, *26*, 139-153.

Firth, H., & Britton, P. (1989). Burnout, absence and turnover amongst British nursing staff. *Journal of Occupational Psychology*, *62*, 55-59.

Firth, H., McIntee, J., & McKeown, P. (1985). Maslach Burnout Inventory: Factor structure and norms for British nursing staff. *Psychological Reports*, *57*, 147-150.

Firth, H., McIntee, J., McKeown, P., & Britton, P. G. (1986). Burnout and professional depression: Related concepts? Journal of Advanced Nursing, 11, 633-641.

Frew, D. R., & Bruning, N. S. (1987). Perceived organizational characteristics and personality measures as predictors of stress/strain in the work place. Journal of Management, 13, 633-646.

Frew, D. R., & Sellaro, C. L. (1994). Who responds to stress intervention training? Predicting faithful versus dropout trainees using burnout and demographic factors. Journal of Health and Human Resources Administration, 16, 252-265.

Friedman, H. S., & Kewley-Booth, S. (1988). Validity of the Type A construct: A reprise. Psychological Bulletin, 194, 381-384.

Friesen, D., & Sarros, J. C. (1989). Sources of burnout among educators. Journal of Organizational Behavior, 10, 179-188.

Freudenberger, H. J. (1974). Staff burn-out. Journal of Social Issues, 30, 159-165.

Freudenberger, H. J. (1975). The staff burnout syndrome in alternative institutions. Psychotherapy: Theory, Research, & Practice, 12, 72-83.

Freudenberger, H. J., & Richelson, G. (1980). Burn-out: The high cost of high achievement. Garden City, N.J.: Doubleday.

Funk, S. C. (1992). Hardiness: A review of theory and research. Health Psychology, 11, 335-345.

Funk, S. C., & Houston, B. K. (1987). A critical analysis of the hardiness scale's validity and utility. Journal of Personality and Social Psychology, 53, 572-578.

Fusilier, M. R., Ganster, D. C., & Mayes, B. T. (1987). Effects of social support, role stress, and locus of control on health. Journal of Management, 13, 517-528.

Gaines, J., & Jerimer, J. M. (1983). Emotional exhaustion in a high stress organization. Academy of Management Journal, 26, 567-586.

Gann, M. L. (1979). The role of personality factors and job characteristics in burnout: A study of social service workers. Unpublished doctoral dissertation. University of California, Berkeley.

Ganster, D. C., Fox, M., & Schaubroeck, J. (1990). Negative affectivity as a nuisance factor in stressor-strain relationships: A confirmatory factor analytic approach. Unpublished manuscript.

Ganster, D. C., Fusilier, M. R., & Mayes, B. T. (1986). Role of social support in the experience of stress at work. Journal of Applied Psychology, 71, 102-110.

Ganster, D. C., & Schaubroeck, J. (1991). Work stress and employee health. Journal of Management, 17, 235-271.

Ganster, D. C., Schaubroeck, J., Sime, W. E., & Mayes, B. T. (1991). The nomological validity of the Type A personality among employed adults. Journal of Applied Psychology, 76, 143-168.

Garden, A-M. (1985). Burnout: The effect of personality. Unpublished doctoral dissertation. Massachusetts Institute of Technology.

Garden, A-M. (1987). Depersonalization: A valid dimension of burnout? Human Relations, 40, 545-560.

Garden, A-M. (1989). Burnout: The effect of psychological type on research findings. Journal of Occupational Psychology, 62, 223-234.

George, J. M. (1992). The role of personality in organizational life: Issues and evidence. Journal of Management, 18, 185-213.

Glogow, E. (1986). Burnout and locus of control. Public Personnel Management, 15, 79-83.

Gold, Y. (1984). The factorial validity of the Maslach Burnout Inventory in a sample of California elementary and junior high school classroom teachers. Educational and Psychological Measurement, 44, 1009-1016.

Gold, Y., Bachelor, P., & Michael, W. B. (1989). The dimensionality of a modified form of the MBI for university students in a teacher training program. Educational & Psychological Measurement, 44, 549-561.

Golembiewski, R. T. (1985). Social desirability effects on phases of burn-out: Some data and speculations. Journal of Health and Human Resources Administration, 8, 294-309.

Golembiewski, R. T. (1989). A note on Leiter's study: Highlighting two models of burnout. Group & Organization Studies, 14, 5-13.

Golembiewski, R. T., & Aldinger, R. T. (1994). Burnout and self-esteem: A replication in a military setting. Organization Development Journal, 12, 41-48.

Golembiewski, R. T., & Kim, B. S. (1989). Self-esteem and phases of burnout. Organization Development Journal, 7, 51-58.

Golembiewski, R. T., & Munzenrider, R. (1981). Efficacy of three versions of one burn-out measure: MBI as total score, sub-scale scores, or phases? Journal of Health and Human Resources Administration, 4, 228-246.

Golembiewski, R. T., & Munzenrider, R. (1986). Profiling acute vs. chronic burnout, III: Phases and life events impacting on patterns of covariation. Journal of Health and Human Resources Administration, 9, 173-184.

Golembiewski, R. T., & Munzenrider, R. F. (1988). Phases of burnout: Developments in concepts and applications. New York: Praeger.

Golembiewski, R T., Munzenrider, R. F., & Carter, D. (1983). Phases of progressive burnout and their work site covariates. Journal of Applied Behavioral Science, 19, 461-481.

Golembiewski, R. T., Munzenrider, R. F., & Stevenson, J. G. (1986). Stress in organizations: Toward a phase-model of burnout. New York: Praeger.

Green, D. E., & Walkey, F. H. (1988). A confirmation of the three-factor structure of the Maslach Burnout Inventory. Educational and Psychological Measurement, 48, 579-585.

Green, D. E., Walkey, F. H., & Taylor, A. J. (1991). The three-factor structure of the Maslach Burnout Inventory. Journal of Social Behavior & Personality, 6, 453-472.

Gross, P. R. (1994). A pilot study of the contribution of empathy to burnout in Salvation Army Officers. Work & Stress, 8, 68-74.

Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. Journal of Applied Psychology, 60, 159-170.

Hancock, L. (1995). Breaking point. Newsweek, March 6, 56-61.

Handy, J. A. (1988). Theoretical and methodological problems within occupational stress and burnout research. Human Relations, 41, 351-369.

Hair, J. F., Jr., Tatham, R. L., & Black, W. C. (1992). Multivariate data analysis 3rd ed. New York: Macmillan Publishing Co.

Hintze, J. L. (1993). NCSS: Power analysis and sample size. Kaysville, U.T.: J. L. Hintze.

Hogan, R. T. (1991). Personality and personality measurement. In M. D. Dunnette & L. M. Hough (Eds.) Handbook of Industrial and Organizational Psychology, Volume 2 (pp. 873-919). Palo Alto, CA.: Consulting Psychologists Press, Inc.

Hogan, R., DeSoto, C. B., & Solano, C. (1977). Traits, tests, and personality research. American Psychologist, 32, 255-264.

Holland, J. L. (1985). Making vocational choices: A theory of vocational personalities and work environments. Englewood Cliffs, N. J.: Prentice-Hall.

House, J. S. (1981). Work stress and social support. Reading, MA: Addison-Wesley.

House, R. J., Schuler, R. S., & Levanoni, E. (1983). Role conflict and ambiguity scales: Reality or myth? Journal of Applied Psychology, 68, 334-337.

Hull, J. G., Van Treuren, R. R., Virnelli, S. (1987). Hardiness and health: A critique and alternative approach. Journal of Personality and Social Psychology, 53, 518-530.

Icheisser, G. (1943). Misinterpretations of personality in everyday life and the psychologist's frame of reference. Character and Personality, 12, 145-160.

Iverson, R. D., Olekalns, M., & Erwin, P. J. (1994). Affectivity, organizational stressors and absenteeism: A causal model of burnout and its consequences. 54th Annual Meeting of the Academy of Management.

Iwanicki, E. F., & Schwab, R. L. (1981). A cross validation study of the Maslach burnout inventory. Educational and Psychological Measurement, 41, 1167-1174.

Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. Organization and Human Decision Processes, 36, 16-78.

Jackson, S. E., Schwab, R. L., & Schuler, R. S. (1986). Toward an understanding of the burnout phenomenon. Journal of Applied Psychology, 71, 630-640.

Jackson, S. E., Turner, J. A., & Brief, A. P. (1987). Correlates of burnout among public service lawyers. Journal of Occupational Behaviour, 8, 339-349.

Jayaratne, S., & Chess, W. A. (1983). Job satisfaction and burnout in social work. In B. A. Farber (Ed.). Stress and burnout in the human service professions. (pp. 129-141). New York: Pergamon Press.

Jayaratne, S., & Chess, W. A. (1986). Job stress, job deficit, emotional support, and competence: Their relationship to burnout. Journal of Applied Social Sciences, 10, 135-155.

Jones, J. W. (1980). Preliminary manual: The Staff Burnout Scale for Health Professionals. Park Ridge, IL.: London House Press.

Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. Canadian Psychology, 29, 284-297.

Kahn, R. L. (1978). Job burnout: Prevention and remedies. Public Welfare, 16, 61-63.

Kahn, R. L., & Byosiere, P. (1992). Stress in organizations. In M. D. Dunnette and M Hough (Eds.) Handbook of Industrial and Organizational Psychology, Volume 3 (pp. 571-650). Palo Alto, CA: Consulting Psychologists Press.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). Organizational stress: Studies in role conflict and ambiguity. New York: John Wiley & Sons.

Kahn, W. A. (1993). Caring for the Caregivers: Patterns of Organizational Caregiving. Administrative Science Quarterly, 38, 539-563.

Keinan, G., & Melamed, S. (1987). Personality characteristics and proneness to burnout: A study among internists. Stress Medicine, 3, 307-315.

Kenrick, D. T., & Funder, D. C. (1988). Profiting from controversy: Lessons from the person-situation debate. American Psychologist, Jan: 23-34.

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1-11.

Kobasa, S. C. (1982). Commitment and coping in stress resistance among lawyers. Journal of Personality and Social Psychology, 42, 707-717.

Kobasa, S. C., Maddi, S. R., & Zola, M. A. (1983). Type A and hardiness. Journal of Behavioral Medicine, 6, 41-51.

Koeske, G. F., & Koeske, R. D. (1989). Construct validity of the Maslach Burnout Inventory: A critical review and reconceptualization. Journal of Applied Behavioral Science, 25, 131-144.

Korman, A. K. (1976). Hypotheses of work behavior revisited and an extension. Academy of Management Review, 1, 50-63.

La Rocco, J. M., & Jones, A. P. (1978). Co-worker and leader support as moderators of stress-strain relationships in work situations. Journal of Applied Psychology, 63, 629-634.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.

Lee, R. T., & Ashforth, B. E. (1990). On the meaning of Maslach's three dimensions of burnout. Journal of Applied Psychology, 75, 743-747.

Lee, R. T., & Ashforth, B. E. (1993a). A further integration of managerial burnout: Toward an integrated model. Journal of Organizational Behavior, 14, 3-20.

Lee, R. T., & Ashforth, B. E. (1993b). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. Organizational Behavior and Human Decision Processes, 54, 369-398.

Leiter, M. P. (1989). Conceptual implications of two models of burnout: A response to Golembiewski. Group & Organization Studies, 14, 15-22.

Leiter, M. P. (1993). Burnout as a developmental process: Consideration of Models. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 237-249). Washington DC: Taylor & Francis.

Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. Journal of Organizational Behavior, 9, 297-308.

Levinson, H. (1981). When executives burn out. Harvard Business Review, 59, 73-81.

Maslach, C. (1976). Burned-out. Human Behavior, September: 16-22.

Maslach, C. (1982a). Burnout: The cost of caring. Englewood Cliffs, NJ: Prentice-Hall.

Maslach, C. (1982b). Understanding burnout: Definitional issues in analyzing a complex phenomenon. In W. S. Paine (Ed.), Job stress and burnout (pp. 29-40). Beverly Hills, CA: Sage Publications.

Maslach, C. (1993). Burnout: A multidimensional perspective. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 19-32). Washington D.C.: Taylor & Francis.

Maslach, C. & Jackson, S. E. (1981). The measurement of experienced burnout. Journal of Occupational Behavior, 2, 99-113.

Maslach, C., & Jackson, S. E. (1984). Patterns of burnout among a national sample of public contact workers. Journal of Health and Human Resources Administration, 7, 213-234.

Maslach, C., & Jackson, S. E. (1985). The role of sex and family variables in burnout. Sex Roles, 12, 837-851.

Maslach, C., & Jackson, S. E. (1986). Maslach Burnout Inventory: Manual. (2nd ed.). Palo Alto, CA.: Consulting Psychologists Press.

Maslach, C., & Pines, A. (1977). The burn-out syndrome in the day care setting. Child Care Quarterly, 6, 100-103.

Maslach, C., & Schaufeli, W. B. (1993). Historical and conceptual development of burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 1-16). Washington DC: Taylor & Francis.

Mazen, A. M. M., Hemmasi, M., & Lewis, M. F. (1987). Assessment of statistical power in contemporary research. Strategic Management Journal, 8, 403-410.

McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effect. Psychological Bulletin, 114, 376-390.

McMullen, M. B., & Krantz, M. (1988). Burnout in day care workers: The effects of learned helplessness and self-esteem. Child & Youth Care Quarterly, 17, 275-280.

Meier, S. T. (1984). The construct validity of burnout. Journal of Occupational Psychology, 57, 211-219.

Meier, S. T. (1983). Toward a theory of burnout. Human Relations, 36, 899-910.

Miller, K. I., Ellis, B. H., Zook, E. G., & Lyles, J. S. (1990). An integrated model of communication, stress, and burnout in the workplace. Communication Research, 17, 300-326.

Mischel, W. (1968). Personality and assessment. New York: Wiley.

Mitchell, T. R. (1985). An evaluation of the validity of correlational research conducted in organizations. Academy of Management Review, 10, 192-205.

Neale, J. M., & Liebert, R. M. (1986). Science and behavior: An introduction to methods of research. Englewood Cliffs, N.J.: Prentice-Hall.

Newman, J. E., & Beehr, T. A. (1979). Personal and organizational strategies for handling job stress: A review of research and opinion. Personnel Psychology, 32, 1-43.

Nowack, K. N., & Pentowski, A. M. (1994). Lifestyle habits, substance abuse and predictors of job burnout in professional working women. Work & Stress, 8, 19-35.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory. New York: McGraw-Hill.

Orr, J. M., Sackett, P. R., & Dubois, C. L. Z. (1991). Outlier detection and treatment in I/O psychology: A survey of research beliefs and an empirical illustration. Personnel Psychology, 44, 473-486.

Paine, W. S. (1982). Overview: Burnout stress syndromes and the 1980's. In W. S. Paine (Ed.), Job Stress and Burnout (pp. 11-25), Beverly Hills, CA: Sage Publications.

Parkes, K. R. (1994). Personality and coping as moderators of work stress processes: Models. methods, and measures. Work & Stress, 8, 110-129.

Perlman, B., & Hartman, E. A. (1982). Burnout: Summary and future research. Human Relations, 35, 283-305.

Pervin, L. A., & Lewis, M. (1978). Overview of the internal-external issue. In L. A. Pervin & M. Lewis (Eds.) Perspectives in interactional psychology. New York: Praeger.

Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. (1989). Organization-based self-esteem: Construct definition, measurement, and validation. Academy of Management Journal, 32, 622-648.

Pines, A. (1982). Is a work environment without burnout an impossible goal? In W. S. Paine (Ed.). Job Stress and Burnout (pp. 189-211). Beverly Hills, CA: Sage Publications

Pines, A. (1983). On burnout and the buffering effects of social support. In B. A. Farber (Ed.). Stress and Burnout in the Human Service Professions. (pp. 155-174). New York: Pergamon Press.

Pines, A. (1993). Burnout: An existential perspective. . In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 33-52). Washington DC: Taylor & Francis

Pines, A., & Aronson, E. (1988). Career burnout: Causes and cures. New York: Free Press.

Pines, A., Aronson, E., & Kafry, D. (1981). Burnout: From tedium to personal growth. New York: Free Press.

Pines, A., & Maslach, C. (1978). Characteristics of staff burnout in mental health settings. Hospital & Community Psychiatry, 29, 233-237.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. Journal of Management, 12, 531-544.

Polok, N. A., & Boss, R. W. (1994). The existence of burnout in high technology firms. Journal of Health and Human Resources Administration, 16, 304-331.

Powers, S., & Gose, K. F. (1986). Reliability and construct validity of the Maslach Burnout Inventory in a sample of university students. Educational & Psychological Measurement, 46, 251-255.

Pretty, G. M. H., McCarthy, M. E., & Catano, V. M. (1992). Psychological environments and burnout: Gender considerations within the corporation. Journal of Organizational Behavior, 13, 701-711.

Rafferty, J. P., Lemkau, J. P., Purdy, R. R., & Rudsill, J. R. (1986). Validity of the Maslach Burnout Inventory for family practice physicians. Journal of Clinical Psychology, 42, 488-492.

Reichel, A., & Neumann, Y. (1993). Work stress, job burnout, and work outcomes in a turbulent environment: The case of Israeli executives. International Studies of Management and Organizations, 23, 75-96.

Reilly, N. P. (1994). Exploring a paradox: Commitment as a moderator of the stressor-burnout relationship. Journal of Applied Social Psychology, 24, 397-414.

Riggar, T. F. (1985). Stress burnout: An annotated bibliography. Carbondale. IL.: Southern Illinois University Press.

Riggar, T. F., Godley, S. H., & Hafer, M. (1984). Burnout and job satisfaction in rehabilitation administrators and direct service providers. Rehabilitation Counseling Bulletin, 27, 151- 160.

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. Administrative Science Quarterly, 15, 150-163.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, N.J.: Princeton University Press.

Rosenthal, M. H. (1991). How to win the burn-out game. USA Today, January, 70-72.

Rosse, J. G., Boss, R. W., Johnson, A. E. (1991). Conceptualizing the role of self-esteem in the burnout process. Group & Organization Studies, 16, 428-451.

Roth, P. L. (1994). Missing data: A conceptual review for applied psychologists. Personnel Psychology, 47, 537-560.

Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, whole no. 609.

Rotter, J. (1990). Internal versus external control of reinforcement. American Psychologist, 45, 489-493.

Russell, D. W., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. Journal of Applied Psychology, 72, 269-274.

Sandler, I. N., & Lakey, B. (1982). Locus of control as a stress moderator: The role of control perceptions and social support. American Journal of Community Psychology, 10, 65-80.

Saxton, M. J., Phillips, J. S., & Blakeney, R. N. (1991). Antecedents and consequences of emotional exhaustion in the airline reservations service sector. Human Relations, 44, 583-595.

Savicki, V., & Cooley, E. J. (1994). Burnout in child protective service workers: a longitudinal study. Journal of Organizational Behavior, 15, 655-666.

Schaubroeck, J., Ganster, D. C., & Fox, M. L. (1992). Dispositional affect and work-related stress. Journal of Applied Psychology, 77, 322-335.

Schaufeli, W. B., Enzmann, & Girault, N. (1993). Measurement of burnout: A review. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds), Professional burnout: Recent developments in theory and research (pp. 199-212). Washington DC: Taylor & Francis.

Schmitt, N. (1994). Method bias: The importance of theory and measurement. Journal of Organizational Behavior, 15, 393-398.

Schneider, B. (1983). Interactional psychology and organizational behavior. Research in Organizational Behavior, 5, 1-31.

Schuler, R. S. (1980). Definition and conceptualization of stress in organizations. Organizational Behavior and Human Performance, 25, 184-215.

Schuler, R. S., Aldag, R. J., & Brief, A. P. (1977). Role conflict and role ambiguity: A scale analysis. Organizational Behavior and Human Performance, 20, 111-128.

Schwab, D. P. (1980). Construct validity in organizational behavior. In B. M. Staw and L. L. Cummings (Eds.). Research in organizational behavior, Vol. 2, 3-43.

Schwab, R. L., & Iwanicki, E. F. (1982). Perceived role conflict, role ambiguity, and teacher burnout. Educational Administration Quarterly, 18, 60-74.

Schwab, R. L., & Iwanicki, E. F. (1982). Who are our burned out teachers? Educational Research Quarterly, 7, 5-16.

Schwab, R. L., Jackson, S. E., & Schuler, R. S. (1986). Educator burnout: Sources and consequences. Educator Research Quarterly, 10, 14-30.

Seltzer, J., & Numerof, R. E. (1988). Supervisory leadership and subordinate burnout. Academy of Management Journal, 31, 439-446.

Selye, H. (1983). The stress concept: Past, present, and future. In C. L. Cooper (Ed.) Stress research: Issues for the eighties (pp. 1-20). New York: John Wiley & Sons.

Shirom, A. (1989). Burnout in work organizations. In C. L. Cooper & I. Robertson (Eds.), International review of industrial and organizational psychology (pp. 25-48), Chichester: John Wiley & Sons.

Shore, L. M., & Tetrick, L. E. (1991). A construct validity study of the survey of perceived organizational support. Journal of Applied Psychology, 76, 637-643.

Shore, L. M., & Wayne, S. J. (1993). Commitment and employee behavior: Comparison of affective commitment and continuance commitment with perceived organizational support. Journal of Applied Psychology, 78, 774-780.

Smith, L. (1994). Burned-out bosses. Fortune: 130, no. 2: (July 25): 44-52.

Soderfelt, M, Soderfelt, B., & Warg, L. E. (1995). Burnout in social work. Social Work, 40, 638-646.

Sonnentag, S., Brodbeck, F. C., Heinbokel, T., Stole, W. (1994). Stressor-burnout relationship in software development teams. Journal of Occupational and Organizational Psychology, 67, 327-341.

Spector, P. E. (1987). Method variance as an artifact in self-reported affect and perceptions at work: Myth or significant problem? Journal of Applied Psychology, 72, 438-443.

Spector, P. E. (1988). Development of the Work Locus of Control Scale. Journal of Occupational Psychology, 61, 335-340.

Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. Journal of Organizational Behavior, 15, 385-392.

Spector, P. E., & O'Connell, B. J. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to the subsequent reports of job stressors and job strains. Journal of Occupational and Organizational Psychology, 67, 1-11.

Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. Administrative Science Quarterly, 31, 56-77.

Staw, B. M., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. Journal of Applied Psychology, 70, 469-480.

Stout, J. K., & Williams, J. M. (1983). Comparison of two measures of burnout. Psychological Reports, 53, 283-289.

Szilagyi, Jr., A. D., Sims, Jr., H. P., Keller, R. T. (1976). Role dynamics, locus of control, and employee attitudes and behavior. Academy of Management Journal, 19, 259-276.

Thomas, K. W., & Tymon, Jr., W. G. (1982). Necessary properties of relevant research: Lessons from recent criticisms of the organizational sciences. Academy of Management Review, 7, 345-352.

Topf, M. (1989). Personality hardiness, occupational stress, and burnout in critical care nurses. Research in Nursing & Health, 12, 179-186.

VanYperen, N. W., Buunk, B. P., & Schaufeli, W. B. (1992). Communal orientation and the burnout syndrome among nurses. Journal of Applied Psychology, 22, 173-189.

Watson, D. (1988). Intraindividual and interindividual analyses of positive and negative affect: Their relation to health complaints, perceived stress, and daily activities. Journal of Personality and Social Psychology, 54, 1020-1030.

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

Watson, D., & Pennebaker, J. W. (1989). Health complaints, stress, and distress: Exploring the central role of negative affectivity. Psychological Review, 96, 234-254.

Watson, D., Pennebaker, J. W., & Folger, R. (1987). Beyond negative affectivity: Measuring stress and satisfaction in the workplace. Journal of Organizational Behavior Management, 8, 141-157.

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. Psychological Bulletin, 98, 219-235.

Weiss, H. M., & Adler, S. (1984). Personality and organizational behavior. Research in Organizational Behavior, 6, 1-50.

Zajonc, R. (1980). Feeling and thinking. American Psychologist, 35, 151-175.