THE EFFECT OF JOB CHARACTERISTICS AND PERSONALITY CHARACTERISTICS
UPON EXPERIENCED BURNOUT AMONG RESIDENTIAL CHILD CARE WORKERS:
TEST OF A CAUSAL MODEL OF BURNOUT

By

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THE EFFECT OF JOB CHARACTERISTICS AND PERSONALITY CHARACTERISTICS UPON EXPERIENCED BURNOUT AMONG RESIDENTIAL CHILD CARE WORKERS: TEST OF A CAUSAL MODEL OF BURNOUT

By

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This study tested a causal model of burnout. Early research on burnout focused upon job conditions as causal factors related to burnout. The theoretical model proposed in this study predicted that not only characteristics of the job but also personality characteristics of the individual would affect an individual's experience of burnout.

Personality characteristics used in testing this model were defined as level of ego development as measured by Loevinger's Washington University Sentence Completion Test, behavioral flexibility as measured by the Interpersonal Disposition Inventory, and vocational interest pattern as measured by Holland's Vocational Preference Inventory. Job characteristic variables were defined as age of patient population, diagnosis of patient population, and scores on the Job Diagnostic Survey scales of Meaningfulness of Work, Responsibility for Outcome, Knowledge
of Results and General Satisfaction. A criterion measure of Burnout was developed from scores obtained on the Maslach Burnout Inventory.

Additional predictions were made predicting a positive relationship between the amount of Sick Leave taken and burnout and a positive relationship between a subject's self-report measure of burnout and an independent rating made by a coworker.

One hundred child care workers employed in a residential treatment facility for the mentally retarded and the emotionally disturbed were used as subjects. A path analysis was performed to test the proposed model. The obtained path model supported the theoretical model proposed. Direct effects on Burnout were found for the job characteristic variables of Age of Population, Diagnosis of Population, Meaningfulness of Work, Knowledge of Results, and General Satisfaction and for the personality characteristic variable of Ego Development. The direction of the effect of Ego Development on Burnout was inconsistent with the predicted negative correlation; discussion was offered explaining this finding in accordance with Loevinger's theory of ego development. Significant indirect effects were found when correlations between pairs of variables were decomposed.

A significant relationship was found between the amount of Sick Leave taken and scores on the Emotional Exhaustion—Frequency scale of the MBI. No significant results were found between a subject's self-report rating on burnout and a rating made by a coworker.

Suggestions for future research were offered, specifically regarding choice of personality and job characteristic variables to be used in testing future theoretical models of burnout.
CHAPTER I
INTRODUCTION

Theories of Job Satisfaction:
The Effects of Job Characteristics
and of Personality Characteristics
of the Worker

In recent years, an increase in the problem of alienation from work has given impetus to a number of research studies in the area of industrial psychology and organizational behavior with focused interest on how job characteristics influence job satisfaction and work performance of the individual (Turner and Lawrence, 1965; Hackman and Lawler, 1971; Hackman and Oldham, 1974, 1975; Sims, Szilagyi, and Keller, 1976). For nearly 50 years industrial psychology and managerial research was devoted to using a "scientific management approach" to work and thus to the development of job simplification, specialization, standardization, and routinization. This approach was precipitated by the felt need for simplification due to job conditions of the early 1900s. A dramatic shift in theory and in focus of the research related to job characteristics and job satisfaction occurred in the late 1950s and early 1960s. The consequences of work simplification have been documented by a number of researchers over the last 25 years as being less salubrious than had originally been intended (Hackman and Lawler, 1971). Simple, routine, nonchallenging jobs once thought to be necessary for optimal worker motivation, productivity, and satisfaction have been
found to lead to high employee dissatisfaction, to increased absenteeism, to high turnover rates, and to difficulties in supervising and in managing employees.

These findings led to experimental research which sought to enlarge various jobs in order to determine the effect of making a job more challenging and meaningful upon the worker’s level of satisfaction and productivity. For the most part, this body of research produced successful results (Ford, 1969; Hulin and Blood, 1968). Procedural and methodological difficulties in many of these studies, most of which were case studies lacking adequate experimental control, tended to make the generality of their findings questionable (Hulin and Blood, 1969). In addition, these early studies of job enlargements were developed for the most part without the support of a conceptual or theoretical framework.

Hackman and Lawler (1971), working to remedy the problems inherent in job design and job enlargement research conducted without a theoretical foundation, proposed a conceptual framework from which they were able to generate testable hypotheses. These authors reviewed the earlier work of Turner and Lawrence (1965) who developed operational measures of six "requisite task attributes" which they had determined on an a priori conceptual basis to be positively related to a worker's satisfaction with his job and to his work attendance. These six factors, (a) variety, (b) autonomy, (c) required interaction, (d) optional interaction, (e) knowledge and skill required, and (f) responsibility, were developed into a summary measure known as the Requisite Task
Attribute Index (RTA Index) by formulating a linear combination of the separately measured attributes. The RTA Index was then used to assess the relationship between attributes of the job and worker job satisfaction and attendance. When empirical data failed to fully support the hypothesis that jobs which were high on the RTA Index would have higher job satisfaction and lower absenteeism, Turner and Lawrence (1965) explained the differences between the two samples of workers in their reactions to jobs high on the RTA Index as due to the effects of differences in the sociocultural backgrounds of the two groups.

Additional data to support Turner and Lawrence's proposition were provided by the research of Blood and Hulin (1967) and Hulin and Blood (1968). These authors hypothesized that an important moderating factor in determining a worker's response to his/her job makeup is alienation from the traditional work norms which characterize the middle class. Empirical data from their research supported this proposition (Blood and Hulin, 1967) and led these authors to postulate a three-dimensional response system which considers interrelationships among worker alienation, job level, and satisfaction with work.

Based on the findings of Turner and Lawrence (1965) and Blood and Hulin (1967), Hackman and Lawler (1971, p. 261) concluded "that certain characteristics of the employees themselves must be taken into account simultaneously with the characteristics of their jobs in order to generate valid predictions about the behavioral and affective responses of employees at work." From this premise, they developed a conceptual framework based primarily on expectancy theory of motivation.
as defined in the works of Lewin (1938) and Tolman (1959) and designed to test the question "what is it about people that moderates the way they react to their jobs?" Propositions based on expectancy theory were developed which addressed the specific problem of how worker motivation can be enhanced through the designs of jobs (Hackman and Lawler, 1971). These included the main hypothesis that individuals who are capable of higher order need satisfaction, i.e., the need for personal growth or feelings of worthwhile accomplishment versus the need for financial security or social status, will experience such satisfaction when they feel that they have, as a result of their own efforts, accomplished something they believe to be worthwhile and meaningful.

Hackman and Lawler (1971) also proposed three general job characteristics which are essential for establishing internal work motivation which is in turn necessary for developing congruence between individual need for satisfaction and organizational goal achievements. These are (a) conditions of the job must permit a worker to feel personally responsible for an identifiable and meaningful part of the work, (b) the job must provide work outcomes which are intrinsically meaningful or experienced as worthwhile by the worker, and (c) the job must provide feedback about performance effectiveness.

Thus, based on their propositions derived from expectancy theory of motivation, these authors proposed that under specifiable conditions it would be possible to achieve simultaneously high employee satisfaction and high employee effort, i.e., motivation toward organizational goals. It is both the presence of a worker's desire for a
higher order need satisfaction coupled with specific job conditions, which bring about the satisfaction of these needs (by rewarding the worker for working hard and effectively toward organizational goals) that establish and sustain worker satisfaction and motivation.

Hackman and Lawler (1971) proposed that the job characteristics of "autonomy," "task identity," "variety," and "feedback" would serve to enhance the intrinsic motivation of a worker to perform. It was their theoretically based belief that jobs high on measured autonomy would allow a worker to feel that he or she owns or is responsible for the outcome of his or her work and that work would be experienced as meaningful to the extent that it involves doing a "whole piece" of work (task identity) and to the extent that the worker has been given the opportunity to use his or valued skills and abilities (variety). They also defined as critical the provision of feedback from the job either from performing the task itself and deriving immediate satisfaction or frustration from one's performance of from feedback coming from others such as supervisors or coworkers. Hackman and Lawler recognized that the most critical aspect of feedback is that it be presented in a form that is believable to the worker.

In line with their proposal that feedback needs to be believable to the worker, Hackman and Lawler (1971) made the important distinction between objective job characteristics and perceived job characteristics as they affect attitudes and behaviors of the worker. This point is critical in the understanding of theory and in the interpretation of research findings dealing with job satisfaction and accordingly has been
referred to by other researchers investigating workers' reactions to their jobs (Sims, Szilagyi, and Keller, 1976). Hackman and Lawler (1971) pointed out that for all job characteristics it is not their objective state which affects an employee's attitude and behavior, but rather how they are experienced or perceived by the employee.

In an empirical test of their conceptual framework of the relationship between job characteristics, individual differences in need strength, worker motivation, job satisfaction, job performance, and absenteeism on the job, Hackman and Lawler (1971) conducted an extensive research project using employees of an eastern telephone company as subjects. Measures of the six job dimensions of variety, autonomy, task identity, feedback, dealing with others, and friendship opportunities, adapted with minor revision from Turner and Lawrence's task attributes, were developed (Turner and Lawrence, 1965). The last two dimensions—"dealing with others," i.e., the degree to which a job requires employees to deal with other people, either customers, other employees, or both, and "friendship opportunities," i.e., the degree to which a job allows employees to talk with one another on the job and to establish informal relationships with other employees—were included by Hackman and Lawler for the purpose of assessing the effect of the interpersonal characteristics of job design on the individual worker. A measure of level of need satisfaction for workers, was developed on an a priori basis, and predictions were stated regarding expected relationships between the job characteristics as measured by the four core dimensions and the dependent variables of satisfaction, performance, and absenteeism.
The results of this extensive investigative effort suggested the presence of important interdependencies among the characteristics of individual workers and the characteristics of their jobs. Hackman and Lawler concluded that past theories and research dealing with job design, i.e., the scientific management approach and the job enlargement theory, had attached insufficient importance to the interaction between the individual and job characteristics in assessing workers' affective and behavioral reactions to jobs. This study also showed that an individual's higher-order need strength affects the relationship between job level and job satisfaction. High-level jobs, defined as such to the extent that the four core dimensions of variety, autonomy, task identity, and feedback are present, were found to be more positively responded to by workers with relatively high "higher-order need satisfaction." When jobs are described as being high on all four core dimensions, the workers reported (a) experiencing pressure to take personal responsibility for their own work and to do high-quality work; (b) intrinsic motivation to perform was high; (c) ratings on performance quality and overall performance effectiveness were high; (d) job satisfaction and job involvement were high. One incidental, but nevertheless important, finding from this study was that while an employee's perceptions of his or her job are of central importance in affecting job attitudes and behaviors, the major determinant of an employee's perceptions of his or her job is the objective composition of the job itself.

As a follow-up to Hackman and Lawler's (1971) comprehensive investigation, several measurement tools have been developed to measure
job characteristics and their effects on the worker (Hackman and Oldham, 1975; Sims, Szilagyi, and Keller, 1976). The most widely used of these instruments is the Job Diagnostic Survey (JDS). This instrument was developed for the purpose of providing a means of diagnosing existing jobs to determine if and how they might be redesigned to improve employee motivation and productivity and to evaluate the effects of job changes on employees. Based on the theory proposed by Turner and Lawrence (1965) and extended by Hackman and Lawler (1971), the JDS provides measures of objective job dimensions, individual psychological states resulting from these dimensions, affective reactions of employees to the job and work setting, and individual growth need on the job. More detailed information describing the JDS and its empirical properties will be presented in the next chapter.

The research devoted to understanding the interaction between job design, its effect on job satisfaction and worker productivity has for the most part been confined to industrial or business settings. For example, Saric (1978, 1979) found in the Saab-Scania experiments that worker productivity and worker satisfaction improved when a "nuclei production system" was introduced which allowed individuals working on the assembly of the Saab 99 automobile to exercise some control over their work conditions toward the purpose of improving their working environment, their working methods, and the finished product of their work, thus allowing them to experience greater feelings of autonomy. The success of this new production model which differed from the traditional assembly line system, in that consideration was given to the
human component of the production system and to the impact this component has upon the system's efficiency and productivity, has by Saric's report dramatically changed the Swedish automobile industry.

Another major area of research in the business and industrial sector has been occupational stress. Many of the earlier studies conducted in this research area were concerned with the physiological consequences of prolonged occupational stress (Cooper and Marshall, 1976; Kasl and Cobb, 1970; Caplan, Cobb, Van Harrison, and Pinneau, 1975). Critical analysis of many of these studies revealed severe methodological flaws and limited theoretical proposals. The need to define adequately the stressors studied, and to broaden the type of predictor variables studied, led to the examination of factors beyond job conditions for a more comprehensive understanding of occupational stress (Caplan, Cobb, Van Harrison, and Pinneau, 1975).

In line with the work of Hackman and Lawler (1971), MacNeil (1981) has pointed out the significant theoretical changes that have emerged gradually in the history of occupational stress theory. Simplistically stated, theories of occupational stress have moved from a narrow scope in which only job-intrinsic factors were considered and included in theoretical models of occupational stress, to a broader conceptualization of occupational stress as a combined effect of intrinsic job factors, extrinsic job factors, and the Person-Environment Fit in a theory that proposed that job stress might be more usefully viewed as an interaction of the personality of the individual worker and the work environment itself.
Closely related to the theory and research pertaining to the interrelationship of job characteristics and individual's characteristics as they affect work-related attitudes and behavior has been the work of John Holland. Holland (1973) over a period of 20 years has proposed and refined, through empirical support, a theory of careers which, in its applied form, has been used to aid individuals in solving the various vocational problems, i.e., vocational choice, job change, retirement, they may encounter throughout life.

Developed in the tradition of personality typologies, Holland's theory differs from most others in that (a) it has been developed and revised in response to empirical data, (b) it is a typology of both persons and environment, (c) degrees and patterns of resemblance to a model were substituted for all-or-none distinctions thus allowing for more effective coping with the complexities of human behavior, (d) all major concepts of the theory have been given empirical definition, and (d) a single spatial model in the form of a hexagon has been employed to coordinate and to depict concisely all concepts in the theory.

Holland's theory is best summarized by the four working assumptions which he describes as "the heart of the theory" (Holland, 1973). Holland proposed that (1) most people in our culture can be categorized as one of six personality types: realistic, investigative, artistic, social, enterprising, or conventional; (2) there are also six types of environments, identically labeled, each of which is defined by the type of personality inhabiting it; (3) people seek out environments which will let them exercise their skills and abilities, express their attitudes
and values and take on agreeable problems and roles; (4) a person's behavior is determined by the interaction between his or her personality and the characteristics of his or her environment.

In defining a "type," Holland (1973) stresses that it is a model against which we can measure the real person, as well as a codifying system that allows us to summarize what we know about people in a given group. Each "type" represents the characteristic results of an interaction between a variety of cultural and personal forces including parents, peers, social class, culture, and the physical environment.

Holland's personality profile or pattern takes into account the complexity of personality; to categorize people as a single type is too simplistic. There are, using Holland's six-category scheme, 720 possible personality patterns. Finally, in considering the interactive effects of personality type and environment type on human behavior, Holland proposed that outcomes such as vocational choice, job changes, vocational achievement, personal competence, and educational and social behavior might be predicted.

Holland's personality types and his environmental models have each been outlined and elaborated in detail (Holland, 1966, 1973) both theoretically and empirically. Holland (1973) developed a comprehensive plan applying his theoretical formulations which can be used to assess vocational, educational, and social behavior longitudinally explaining stability and change in personal behavior, as well as adding ongoing data to aid in the understanding of person-environment interactions. Again, he synthesized his thinking and understanding into a series of
testable hypotheses which form the foundation of his theoretical presentation of stability and change in person-environment interaction. Although more applicable to vocational behavior, Holland proposed that the following formulations are also applicable to educational and social behavior:

1. A person finds his or her environment reinforcing and satisfying when the environmental pattern resembles his or her personality pattern.

2. Friendships and teaching and therapeutic relationships are also dependent upon the "fit" between an individual's personality pattern and that of his or her friend, student, or patient or his or her human environment as defined by that specific interaction.


4. Incongruence can be resolved by the individual in three ways: seeking a new and congruent environment, remaking his or her present environment, or by changing his or her behavior.

Extensive empirical research has been conducted testing the hypotheses proposed by Holland's theory (Holland, 1973). Holland, reviewing the evidence obtained in the test of his theory, concluded that basically the different personality types appear to grow up, perceive occupations, search for occupations, move among occupations, and
behave in accordance with theoretical expectations. The environmental models have use in characterizing educational and occupational environments. Environmental definitions based on types seem to include many physical and nonpsychological aspects of an environment. To a limited degree types appear to be influenced by their environments.

The literature pertaining to industrial, organizational, and managerial psychology, has traditionally focused upon research designed to assess job characteristics, worker characteristics, and cause as well as consequence of job satisfaction (Locke, 1969). It has only been in recent years that other professional communities have borrowed from and built upon the body of empirical knowledge obtained from the research conducted in the business and industrial sectors. The acknowledgment of the prevalence of occupational stress and feelings of alienation among human service workers, especially among members of the mental health profession, has served to move the scientific community to assess job characteristics, job satisfaction, and job performance among these workers with the goal of remedying the ineffectual and inefficient delivery of services, a chronic condition plaguing agencies and organizations providing human care services. Occupational stress and job dissatisfaction, although not synonymous with the condition of burnout, are closely associated with it. Burnout is a syndrome that has very recently become a popular subject for essays and discussion although not yet a widely researched phenomenon. In the following section, a review of the theories and research of burnout will be presented.
Burnout

Definition and Theories

Various authors have articulated formal definitions of burnout in the short time that it has been in the public eye. Freudenberger (1975, 1977) was one of the first to offer a definition and a theory of origin of burnout. His conceptualization of burnout began with a dictionary definition of the word—"to fail, to wear out or become exhausted by making excessive demands on energy, strength or resources" (1975, p. 73).

Maslach, who is responsible for one of the first reliable and well-validated instruments to measure burnout, i.e., the Maslach Burnout Inventory, defined burnout as "the emotional exhaustion resulting from the stress of interpersonal contact" (Maslach, 1978a, p. 56), "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people work'" (Maslach and Jackson, 1979, p. 59). In her definitions of burnout, Maslach (1978b) has often focused upon the resulting detachment in worker-client relationships that dehumanizes the client and decreases worker effectiveness.

Other authors have defined burnout as "the progressive loss of idealism and enthusiasm, of purpose and energy experienced by an individual as a result of the conditions of his or her work" (Edelwich and Brodsky, 1980, p. 14), as "a debilitating psychological condition affecting individuals who work in high-stress (often human service) jobs brought on probably by the accumulative effects of prolonged stress" (Shannon and Saleebey, 1980, p. 464) or as "a syndrome of inappropriate
attitudes towards clients and toward self, often associated with uncomfortable physical and emotional symptoms . . . [with] deterioration of performance as a frequent side effect of the syndrome" (Kahn, 1978, p. 61). Pines, Aronson, and Kafry (1981, p. 15) have defined burnout as "the results of constant or repeated emotional pressure associated with an intense involvement with people over long periods of time."

The common variables which seem to occur in every definition of burnout are (1) prolonged job-related stress which results in (2) emotional exhaustion which in turn precipitates (3) unfavorable physiological and psychological symptoms. In addition, job stress as defined by the burnout theorists and researchers generally involves direct interpersonal interaction with others.

Paine (1981) proposed the need to differentiate the basic terms used in burnout. Frequently, researchers use the global term of burnout to mean something altogether different from what others might understand it to be. Therefore, Paine proposed the following classificatory labels be applied as they fit the condition under investigation: "Burnout Stress Syndrome," defined as the identifiable cluster of feelings and behaviors most commonly found in stressful or highly frustrating work environments; "Burnout Mental Disability," defined as the often serious and clinically significant pattern of personal distresses and diminished performances, or more simplistically stated, the end state of burnout; and, "Burnout Process," defined as the sequence of stages or phrases occurring in individuals. It is recognized that each stage may have different indications of distress and, possibly, different disabilities
associated with it and thus may represent an entirely separate syndrome.

For the most part, the current literature on burnout is atheoretical. Much of the literature has focused on establishing that the condition of burnout does in fact exist, in defining symptoms of the syndrome, in suggesting possible causes of burnout, and, finally, in offering preventative measures and remedial techniques for coping with burnout. A few researchers have proposed theories to explain the origin and the course of burnout.

Maslach and Jackson (1981), who directed their research to individuals involved in "people-work," suggested a three-factor theory of burnout. The initial phase is characterized by emotional exhaustion and feelings of being unable to function with affective or psychological involvement on the job. This phase may be followed by the development of negative, cynical attitudes and feelings about one's clients, although the authors note that this dehumanized perception of clients is not an inevitable consequence of emotional exhaustion. [It is noted that the tendency among human service professionals to develop negative attitudes toward their clients has been documented by others (Ryan, 1971; Wills, 1978).] A third factor in burnout proposed by Maslach and Jackson is the evaluation of self in negative terms, particularly with regard to work with one's clients. In this phase, an individual feels unhappy with himself and dissatisfied with his perceived accomplishments on the job.

Aware of the paucity of research on and theorizing about burnout, Maslach and Jackson (1981) postulated a specific syndrome of burnout
and developed a specific instrument to assess experienced burnout in individuals. The scale, known as the Maslach Burnout Inventory (MBI) will be described in greater detail in the following chapter. Basically this instrument was designed to tap feelings of "Emotional Exhaustion," "Depersonalization," and "Personal Accomplishment" experienced in burnout.

Edelwich and Brodsky (1980), also recognizing the special intensity and characteristics assumed by burnout when it occurs in the human services or helping professions, postulated a stage theory of burnout, outlining five stages through which an individual passes in experiencing burnout. The first four stages are classified as stages of "disillusionment" by the authors; the last is defined as a stage of intervention.

Edelwich and Brodsky labeled the first stage of burnout "Enthusiasm," a stage which is characterized by the initial feelings of high hope, high energy, and too frequently unrealistic expectations which accompany a new job or a new position. This stage is followed by the stage of "Stagnation," which refers primarily to the process of becoming stalled following the initial burst of enthusiasm; often during this stage, the individual recognizes that it is not as easy as had been anticipated to see or to assess the results of one's labors.

The stage of "Frustration," the core of burnout, follows the stage of "Stagnation." During this phase of burnout, the individual begins to question his or her effectiveness in doing the job as well as the value of the job itself. At this point, a person has three alternatives in the form of responses to burnout—(1) a negative reaction which
produces a frenzy of self-destructive and essentially unproductive over-activity resulting in total burnout; (2) a positive response which involves use of feelings of frustration as a springboard out of burnout by taking responsibility for confronting the issues and taking action that may bring about change; and (3) withdrawal, the most common response, which does not allow for direct expression of frustration and inevitably creates the fourth stage of burnout, "Apathy."

When an individual has reached the stage of "Apathy," he or she has become immobilized with anger and frustration, is unable to come up with constructive alternatives to job problems, puts in the minimal required time on the job, avoids challenges and new experiences, and seeks mainly to avoid endangering the security he or she has obtained in his or her position, security that compensates, albeit inadequately, for job satisfaction. In essence, Apathy is characterized by those who give up but do not leave. Intervention is most difficult at this stage.

The fifth stage in Edelwich and Brodsky's (1980) theoretical model of burnout is "Intervention," or the initiation of actions either consciously determined or not, either constructive or not, to break the cycle of disillusionment and thus interrupt the process of burnout. These authors warn against false interventions such as "the workshop high," or the "changing-jobs-but-nothing-else" approaches which are based on the assumption that burnout can be dealt with once and for all with a single solution and which ignore the reality of burnout as an ever-present condition that must be coped with through an ongoing process of prevention and adjustment.
An emergent theory of burnout has been proposed by Meyer (1980) who also recognized that burnout has not often been considered within a theoretical framework. Meyer looked at the developmental process of burnout from the theoretical perspectives of adult development and of organizational structure. Using a qualitative research approach, interview data obtained from mental health professionals were analyzed for an understanding of the social dynamics of burnout and from this material the phenomenon of burnout was incorporated into a growth development theory. Meyer's study yielded three major conclusions about burnout: (1) two separate and distinct stages occur in the development of burnout—an experiencing stage and a reaction stage; (2) burnout is a natural socialization process; (3) burnout has a predictable taxonomy of reactive characteristics.

Meyer's research also suggested that burnout cannot be avoided and that it must be managed. He proposed that it is the unmanaged interactional phenomenon between the individual's adult development and organization socialization that causes the burnout reaction.

More recently, Cherniss (1980, 1981) has proposed a theoretical model for burnout which identifies burnout as a process beginning with stress and ending with a coping behavior which involves psychological withdrawal. Cherniss's model proposed that when demands exceed resources, stress occurs; when the individual experiences stress he or she reacts by first acting directly on the source of stress. If these direct actions fail, the individual resorts to techniques of stress management, i.e., relaxation exercises, meditation, physical exercise.
If these coping techniques are ineffective, the individual may withdraw psychologically from the job. Thus within this theoretical framework, burnout may be viewed as an adaptive coping strategy. Cherniss has acknowledged that the product of such a coping strategy is destructive for both the individual and the organization and has proposed prevention and intervention strategies for handling burnout; these will be outlined in a separate action.

Kamis (1981) proposed a conceptual model of burnout based on an epidemiological understanding of the condition. She suggested that burnout can best be understood as a result of historically compiled events and variables that can be grouped into three domains—predisposing, precipitating, and intervening variables. Predisposing variables consist of both determined variables or the "givens" with regard to risk factors or stressors in any given job, i.e., difficult clients to serve such as terminally ill children or retarded patients, and potentially changeable variables such as an ineffective work system, inadequate training for the job, or a lack of success criteria. These predisposing "risk" variables represent the independent variables of the model.

The second group of variables is also considered risk variables and is considered by Kamis as the first set of intervening variables within her model. This set of variables is associated with precipitating burnout and includes both developmental, i.e., stages within one's career, and situational, e.g., budget cuts, procedural changes, or personal crisis.

In the third domain is the second level of intervening variables, or perpetuating variables. These are assumed under headings of "skills"
and "support." Skills include such factors as intelligence, ego strength, and problem-solving skills, while support refers to the availability of specific support systems such as family, coworkers, supervisory support.

It is the sum of variables in each of these domains that determines whether an individual experiences burnout or its opposite labeled in the occupational literature as "good quality of work life." The higher the number of risk variables present in domain I and II and the lower the number of skills and support available to the individual, the greater the probability of burnout. Kamis (1981) proposed that her model be evaluated through experimental studies and/or through statistical procedures, e.g., path analysis, toward the practical goal of obtaining data that will allow both individuals and organizations to predict and to prepare for burnout, either through prevention or intervention.

MacNeil (1981) has suggested that much of the theoretical and methodological work needed for the scientific study of burnout already exists within the occupational stress literature. In fact, he has proposed that burnout be viewed as a special case of occupational stress, rather than considering it a distinct and separate phenomenon. MacNeil pointed out that researchers in the area of burnout can learn from the mistakes made by researchers of occupational stress; most basically, he suggested that burnout can benefit from the knowledge gained in the evolution of occupational stress theory as it moved from a singular focus on either the person or the job to a more comprehensive model that incorporated the concept of person-environment fit. Finally, MacNeil (1981) observed that none of the theoretical models developed to date
have considered the effects of general life stressors, either upon the process or the syndrome of burnout.

**Symptoms and Correlates of Burnout**

Much of the burnout literature lists the symptoms or warning signals of burnout (Freudenberger, 1975, 1977; Maslach, 1978a, 1978b; Maslach and Pines, 1977; Maslach and Jackson, 1979, 1981; Mattingly, 1977; Daley, 1979). These symptoms can be grouped into two separate categories—physical symptoms and psychological/behavioral symptoms.

The physical symptoms of burnout may include chronic feelings of exhaustion and fatigue; suffering from frequent headaches; being unable to shake a cold; feeling physically run down; suffering from gastrointestinal disturbances; weight loss, sleep disturbance, and physical manifestations commonly associated with depression and anxiety (Freudenberger, 1975). In essence, burnout may cause an individual to become psychosomatically involved in one or more ailments. Along these same lines, physical symptoms or repercussions from burnout may also involve the effects of increased use and abuse of alcohol, the increased use of tranquilizers, and increased intake of caffeine and nicotine (Maslach and Jackson, 1981).

Kahn (1978) reviewed research findings pertaining to job-induced stress in his efforts to understand burnout and to develop ways of preventing it and remedies for it. He looked at the physiological effects of on-the-job role conflict as defined by work overload (both qualitative—work that is too difficult for the individual—and quantitative—too much work). Kahn found work overload to be related to
elevations in cholesterol level and to chronic elevations in heart rate. Mattingly (1977) pointed out that health problems begin or intensify during burnout and that not only illness but also accidents and injuries may increase as a direct result of burnout.

The psychological and behavioral symptoms of burnout are more extensive and afforded greater elaboration in the literature. Freudenberger (1975, 1977) has pinpointed the following psychological and behavioral manifestations of burnout: (1) a cynical, negative attitude about self and others, (2) a tendency to be inflexible and almost rigid in thinking which leads to a close cognitive set for consideration of change or innovation, (3) emotional distancing from clients as reflected in the use of intellectualized terms or jargon of the profession to refer to clients, (4) development of a paranoid-like attitude, feeling suspicious that workers and supervisors are trying to make life more difficult (5) edginess, quickness to anger, (6) development of a know-it-all attitude of superiority which borders on the condescending, (6) significant social withdrawal from others, offering little in the way of communication, (8) or the opposite, becoming overly social, spending most of the working day socializing rather than working, (9) limiting the amount of direct contact with clients, (10) expressing feelings of boredom with work and with life outside work, (11) verbalizing a sense of helplessness and hopelessness, (12) a deterioration in the quality of home life, with an increase in marital discord and parent-child conflicts, and (13) an increase in absenteeism, psychosomatic complaints, and the frequency of actual illnesses. Freudenberger (1977, p. 91) noted that
"the symptoms of burnout manifest themselves in every area of the worker's life: his functioning with clients; his relationships to the agency; and his life outside the agency."

Mattingly (1977), expanding Freudenberger's major observations on the symptoms of burnout, suggested that burnout is a subtle pattern of symptoms, behaviors, and attitudes that are unique for each person. Mattingly stresses the vague, inarticulated personal distress experienced by an individual that generally signals the onset of burnout. Along with these feelings of personal-professional dissatisfaction come feelings of growing fatigue. Feeling inadequate and doubting his or her clinical skill, a worker may in his or her own frustration become less understanding and empathic and may act at times in a way that is not congruent with his or her self-image. Another symptom of burnout was labeled by Mattingly as "a diminishing distinction" between the psychological needs of the person being cared for and those of the worker, as well as between the time and place for work and for personal life. Finally, she identified the "narrowing and rigidification of perception" as a well-documented effect of excessive exposure to stress and, therefore, as a symptom of burnout. This symptom is evidenced in an overly strict adherence to rules and regulations, inflexibility in thinking, resistance to change, use of an evaluative vocabulary to refer to clients, and an overestimation of one's authority and capabilities coupled with excessive reliance on scheduled routine.

Maslach (1976, 1978b) emphasized the development of a dehumanization orientation toward clients or patients as a primary symptom of
burnout. The lack of training in the art of "detached concern," i.e., establishing some psychological distance from the client or patient while still maintaining a concern for his or her well-being (Lief and Fox, 1963), leaves workers in most of the helping professions unprepared to cope with the chronic emotional stress experienced in their work. As a result, they experience a loss of concern for the people with whom they are working; they may develop a cynical, dehumanized perception of their clients. Frequently this perception of others leads to viewing the client or patient as deserving of and as wholly responsible for his problems. Maslach and Pines (1977) reviewing the theoretical literature on dehumanization cite Buber's (1958) observation that the person who dehumanizes others experiences less emotion, less empathy, and fewer personal feelings and thus dehumanizes himself or herself as well.

Maslach (1976) has also found that people experiencing burnout reported more feelings of personal distress and "mental illness," as well as feelings that they had become "bad" people who were cold and callous. People in burnout frequently seek therapy or counseling, perceiving themselves as "crazy" for the feelings they are experiencing and feeling that they are alone and the only one experiencing these feelings. Many people report increased marital and family conflict as a direct result of job burnout (Maslach, 1976; Maslach and Jackson, 1979). It has been suggested that the desire for solitude that follows a stressful day with clients often comes at the expense of family and friends.

Research on burnout suggests that the syndrome can lead to a deterioration in the quality of care or service that is provided by the individual worker (Maslach, 1976, 1978a, 1979; Maslach and Jackson,
1979, 1981; Maslach and Pines, 1977; Freudenberger, 1975, 1977). Daley (1979), using a job-stress model to explain the effects of burnout, recognizes that in its early stages job stress may be functional representing a challenge to the worker, increasing motivation and productivity. As frustration and tension increase or persist over a long period, the effects of burnout appear, with the worker devoting a high percentage of his or her energy to stress management. As a result, work performance becomes disorganized and worker effectiveness is decreased. Daley addressed the problem of a high rate of turnover among many of the human services professions, i.e., child welfare workers, by observing that a high turnover rate represents both a loss of resources in the time and money invested in the training of the worker who is leaving, as well as a reduction in the effectiveness of service delivery.

The consequences of burnout, originating with the individual worker, may have far-reaching effects on the organizational system of which the individual is a member. Edelwich and Brodsky (1980) proposed that burnout is a highly contagious condition, spreading from one worker to another and more critically from worker to client or patient.

**Causes of Burnout**

Most theories or explanations of burnout have focused upon the characteristics of the job as the basic causative factor in burnout. Maslach (1976, 1978a) has emphasized that the dysfunctional effects of burnout emanate from job stress rather than from selective personality factors of the individual. She maintained that the source of burnout lies more with the situation than with the people engaged in the situation and
she urged that efforts toward understanding and modifying burnout be directed at the social and situational sources of job-related stress (Maslach, 1978a). Pines, Aronson, and Kafry (1981) discussed the "causal locus" of burnout (or where the individual perceives the cause and attributes the blame) and the effect this has on an individual's reaction to burnout. They distinguished between a "dispositional attribution" in which the individual identifies the cause of burnout as due to a characterological weakness or inadequacy in themselves and a "situational attribution" or seeing the cause as largely a function of the situation. These authors noted that in their work, they have found that a vast majority of causes of burnout lie in the situation. At the same time, they acknowledged that people experience burnout differently and that they react and cope with burnout differently, just as they approach the inevitable stresses of life and work in very unique, individually different ways.

In addition to the problems created by understanding burnout through a person-centered evaluation, i.e., burnout is caused by "bad people," Maslach (1978a) suggested that the problem is exacerbated by pluralistic ignorance regarding expectations of the role of the helping professional with respect to the professional's feelings and behaviors. The feelings experienced in burnout are counter to those prescribed for the role of helper, causing few people to share their feelings with others and therefore to feel they are the only ones experiencing burnout.

Specific job conditions or job characteristics contributing to burnout have been delineated by various authors (Freudenberger, 1975,
1977; Mattingly, 1977; Edelwich and Brodsky, 1980; Daley, 1979; Warnath and Shelton, 1976; Emener, 1979; Pines and Kafry, 1978). In many cases, these job conditions are in contrast to the expectations held by the individual upon entering the "world of work." It has been suggested that the disillusionment which may lead to burnout among many members of the various helping professions is a direct result of the individual realizing that the abstract ideals taught in their graduate training do not exist in the reality of their work situation (Warnath and Shelton, 1976). This discrepancy between the ideal and the real has been addressed by members of the nursing profession in their efforts to understand and remediate burnout among nurses. Kramer (1974) refers to the consequences of this real-ideal split as "reality shock." When new graduates recognize that what they learn in school and what is actually practiced in work settings are often not the same, they experience what Kramer labeled a professional-bureaucratic work conflict. It is this conflict which leads to "reality shock" characterized by total rejection of new surroundings or a regression marked by a total preoccupation with the past or how things were during their training. To the other extreme, "reality shock" may lead to a total rejection of what was learned during training resulting in the neophyte becoming a super efficient bureaucratic technician.

Storlie (1979), also focusing upon the effects of burnout in the nursing profession, explained burnout as "a condition which follows a confrontation with reality in which the human spirit is pitted against circumstances intractable to change" (p. 2108). Storlie refers to the
resulting condition as "professional autism" or a state in which "mandated actions are performed but the emotional investment that transforms a task into an art form is missing" (p. 2108).

Warnath and Shelton (1976) proposed that the discrepancy between graduate school idealism and on-the-job reality is particularly evident in counseling centers of academic institutions. These authors cited as frequent causes of disillusionment, which in turn lead to burnout, the lack of clearcut solutions to problems, the fact that frequently counselors are allotted only enough time to work only with those areas of their clients' lives in need of help at the moment, high client turnover, the "waiting-list pressure" creating a cost-effectiveness bind in which the counselor feels his or her professional ideals are pitted against bureaucratic realities and isolation from other professionals.

Emener (1979) suggested that burnout among rehabilitation counselors as well as other helping professionals is caused by responsibility without necessary resources to get the job done, and lack of meaningful recognition for one's efforts and accomplishments. Edelwich and Brodsky (1980) attribute the conflict between the individual's high aspirations and enthusiasm and the deflating constraints of reality presented on the job as a major source of burnout. Other frustrating conditions of the job include low pay, upward mobility only through administrative channels thus moving away from peoplework and toward paperwork, lack of clear criteria for measuring accomplishments, inadequate funding and organization support for programs, and inefficient use of resources for effective delivery of services.
Mattingly (1977), defining the structure of stress in clinical child care work, identified conflicts between intrapersonal needs and job conditions specific to child care work which frequently create stress. One inherent stress-producing conflict in child care work exists in the worker's need and requirement to give emotionally and physically to the children in his or her care and the realization that he or she can never give enough. Other sources of stress and frustration include random and inconsistent experiences of success with the child care worker frequently not being able to remain involved with a child long enough to be rewarded by seeing a resolution of the child's difficulties and the inevitable role conflict present in child care work represented by the conflict between providing the child with necessary clinical care and meeting requirements of the agency or institution necessary for continued functioning as such.

Daley (1979) recognized that tangible rewards for doing the job as well as objective measures of success or failure are noticeably absent in the human care professions. Pines and Kafry (1978) listed job conditions such as working with involuntary clients; being exposed to neverending crises or emergency situations; facing counterpressures from the three subsystems of the client, the organization, and the profession; poor working relationships between the professional worker and his or her administrator; poor or inadequate supervision and leadership; and bureaucratic inertia, as being contributing factors to burnout.

A few authors have also considered burnout from an intra-individual perspective, looking at personality characteristics of the
individual which lead to and/or perpetuate the condition of burnout. Freudenberger (1975, 1977) considered both conditions of job and characteristics of the worker in his conceptualization of burnout. He described basic personality types in the human or social service area who are more prone to burnout. One of the most frequently observed types is the "dedicated and committed worker" who characteristically takes on too much, for too long, and too intensely. These individuals tend to be "overcommitted," a condition Freudenberger describes as that of experiencing a total emotional or intellectual bondage to a certain idea or course of action. "Authoritarian" burnout is experienced by the personality type who needs to be in control and therefore cannot or will not delegate responsibility, refusing to let go of his or her power or control. These individuals burn out because they must do it all themselves, without help or assistance. Another high-risk candidate for burnout is the worker who uses the job to compensate for an unsatisfactory life away from work. These individuals become overcommitted to their work to make up for an inadequate or unfulfilling home life. They frequently merge with the agency or institution to the extent that they suffer a significant loss of self.

Pines and Kafry (1978) suggested that those very attributes that make some people interested in and qualified for work in the human or social service fields are also characteristics which make them more vulnerable to the emotional pressures involved in such work. They proposed that most people entering the human services professions are oriented more toward people than things and that they therefore value
themselves most for their sympathy, understanding, and helpfulness to others. The occupational hazard inherent in this orientation and exacerbated by the expectations and conditions of the helping professions results in an emotional depletion of the worker, who frequently must give in his or her work far more than he or she receives.

Storlie (1979) considering the individual's contributions to the process of burnout decided that the condition of burnout is a highly personal happening within the individual, representing a collapse of the "human spirit." She suggested that in order to germinate, burnout requires a susceptible host whom she describes as "the idealistic worker." Storlie concluded that the best antidote to burnout is an "inner strength" which enables the individual to hold some inner part of him- or herself inviolate despite external reality. She proposed that only this inner sense of autonomy coupled with assertive actions will be successful in combating burnout.

The Research

A review of the existing literature dealing with the syndrome of burnout reveals that there have been surprisingly few empirical studies to test the specific hypotheses offered by theoreticians about burnout, its origin, symptoms, and consequences. Most of the research has been conducted only within the last three to four years; however, it is recognized that as the syndrome of burnout has become a popular topic for discussion and consideration, not only within the scientific community but also with the general public, the research efforts devoted to testing its theories have escalated and will continue to do so.
Job Characteristics Research

Maslach and her associates have accumulated the largest pool of research data on burnout. Much of these data were obtained during the construction and the validation of the Maslach Burnout Inventory (Maslach and Jackson, 1979, 1981; Maslach and Pines, 1977). The final form of the MBI was developed from the analysis of data obtained from a sample of 1,025 subjects, a variety of health and service occupations which included police, counselors, teachers, nurses, social workers, psychiatrists, psychologists, attorneys, physicians, and agency administrators. The actual results of the psychometric analyses measuring the degree of reliability and validity of the MBI will be discussed in the next chapter; however, it is pointed out here that the MBI has been proven to have both high reliability and validity as a measure of burnout.

Barad (1979) in a survey study of 845 public contact employees of the Social Security Administration tested several hypotheses formulated by Maslach and her colleagues in their earlier writings (Maslach, 1976; Maslach and Pines, 1977) and as a result provided substantial support for the construct validity of the MBI. Barad (1979) found high burnout scores on the MBI to be significantly related to an expressed interest in leaving the job within a year and/or a desire to spend less time working directly with the public. Further data analysis indicated that employees who took frequent work breaks scored higher on the frequency dimension of Depersonalization than employees who took fewer work breaks; employees with very large caseloads, i.e., over 40 persons per day, scored high on Emotional Exhaustion and Depersonalization and low
on Personal Accomplishments; and employees who perceived themselves as not having much autonomy and independence in carrying out their work had higher scores on Emotional Exhaustion and Depersonalization than workers who felt they had more autonomy.

Maslach and Jackson (1981) testing the hypotheses that the presence of certain job characteristics would be correlated with burnout used the MBI and the Job Diagnostic Survey or JDS developed by Hackman and Oldham (1974, 1975) to obtain data from 91 social service and mental health workers. The JDS provided an assessment of "core" job dimensions established as important for job satisfaction, worker motivation, and productivity (Hackman and Lawler, 1971). Maslach and Jackson found that employees who perceived their jobs as being high on feedback from the job itself reported fewer feelings of emotional exhaustion and depersonalization. Feelings of personal accomplishments on the job were significantly correlated with "task significance" and "experienced meaningfulness of work" while feelings of emotional exhaustion and depersonalization were significantly correlated with low scores on the job dimension of "knowledge of results."

The results from an analysis of subjects' responses on the MBI and JDS using a separate sample of subjects (n = 180, nurses, social service and mental health workers) revealed further information pertaining to the relationship between job characteristics and burnout. From this sample, a significant correlation was obtained between low feelings of social satisfaction on the job, i.e., satisfaction with coworkers' relationships and strong feelings of emotional exhaustion and
depersonalization coupled with weak feelings of personal accomplishment. In addition, data obtained from this sample strongly supported the hypothesis that people experiencing burnout are dissatisfied with opportunities for personal growth and development on the job.

Pines and Kafry (1978) in a study of occupational tedium among social workers attempted a systematic investigation of the various stresses inherent in social service work. They defined tedium as the general experience of physical, emotional, and attitudinal exhaustion. Pines and Kafry implied that tedium, while very much like burnout, was a distinct and separate condition; however, in their report of this study they failed to clarify exactly how the two conditions differ. In later reports (Pines, Aronson, and Kafry, 1981), the distinction between tedium and burnout is stated: burnout results from "emotional pressure associated with intense and prolonged involvement with people" while tedium can be caused by any sort of chronic pressure. While both conditions are generally job related, it has been noted that they may be caused by any source of stress such as stress occurring in various stages of the life cycle or in family roles.

Using tedium as a dependent variable, Pines and Kafry (1978) developed a conceptual framework for explaining its source, proposing two types of stress inherent in social service work—those developing from internal characteristics and those coming from external characteristics of the job. Elements of internal stress involve pressures which impose upon the cognitive capacity and the decision-making mechanism of the individual, while external characteristics of work-related
stress include worker relations, work sharing, support from coworkers, the availability of sanctioned time-out periods and social feedback from supervisors and colleagues.

The results of this study established that both internal and external work characteristics as operationally defined by these authors are significantly related to tedium. Internal characteristics did not prove to be as potent of a correlate as external factors, however, and these characteristics also proved to be less correlated with tedium than with various indices of job satisfaction. External characteristics or those properties of the work environment that serve as support systems for the individual were significantly correlated with tedium and with work satisfaction. This later finding suggests the greater sensitivity of social service workers to the interaction with others as source of both stress and of emotional support than would be expected to be found in other individuals.

Westerhouse (1980), assessing the effects of tenure, role conflict, and role conflict resolution on the work orientation and the experience of burnout among high school teachers, found that the frequency of role conflict is a significant variable in the prediction of burnout and that the frequency of role conflict with students centering around examinations and grades, in contrast with role conflict with colleagues and school administrators, provided the best single-item prediction of burnout in this sample of teachers. Significant relationships were not observed between work orientation, i.e., professional versus bureaucratic, and tenure, role conflict, and burnout.
Thompson (1980) in a study of group home houseparents designed to (a) describe the burnout syndrome more closely, (b) develop a simple and informative tool to measure burnout, and (c) study possible etiological factors of burnout found a significant difference between correlational factors of burnout for male and female subjects; found that men with higher salaries showed higher burnout scores (there was no significant relationship between salary and burnout for women). Male houseparents who were not given input into decision making for admission of a resident to the group home "burned out" more; however, this lack of input did not correlate with female houseparents' burnout scores. Higher education in males was negatively correlated with burnout, but again there was no correlation between burnout and education for women. There was no statistical difference between the amount of time off a worker had and burnout; however, an interesting and significant relationship was found between where time off was spent and burnout. Going to several different places during time off led to burnout more so than did spending time off in one place but away from the group home. Caution in interpretation of Thompson's findings must be offered in view of the lack of statistical validation of the scale used as a purported measure of burnout and in view of the generally weak methodological design.

**Personality Variables Research**

The research on burnout as it may be understand through individual personality characteristics or through behavioral manifestations has been minimal. Maslach and Jackson (1979), in their study of burned-out policemen and their families, found significant correlations between
burnout and interpersonal behavior within the family. Police officers scoring high on Emotional Exhaustion on the MBI were more likely to want to spend time alone rather than with their families. Feelings of depersonalization and low personal accomplishment correlated significantly with perceptions of their children as being emotionally distant. Those officers experiencing burnout were also more likely to get angry with their wives or children. Wives of officers who scored high on the intensity dimension of Depersonalization were more likely to rate their husbands as not sharing the husbands' feelings with the wives and not caring about their wives. Reports of having fewer friends were correlated with high scores on the Depersonalization and Emotional Exhaustion scales and low scores on the Personal Accomplishment scale, as were reports of husband and wife not sharing the same friends.

Gann (1980) in a study designed specifically to assess the role of personality characteristics rather than situational factors in burnout, chose variables believed to be significant for understanding burnout, i.e., impulse control, interpersonal style, understanding, and insight. She used Loevinger's hierarchical model (Loevinger, 1966; Loevinger and Wessler, 1970) of ego development to conceptualize and to assess these dimensions. Gann found that among her sample of female social service workers, High ego level subjects (as assessed by the Washington University Sentence Completion Test) were more positively oriented toward their clients than were Modal ego level subjects. Interactions of ego level and job variable (as measured by the Job Diagnostic Survey) were significantly correlated with measured burnout (Maslach Burnout
Inventory) only for the Emotional Exhaustion factor. In addition, while the job dimensions of feedback, meaningfulness, and accomplishment were negatively correlated with burnout for the sample as a whole, Modal ego level and High ego level subjects did differ on the type of work variables which contributed to experienced burnout. Burnout was more likely to be related to internal experiences of work for the High ego level group and to external or extrinsic factors of work for the Modal ego level subjects.

Maslach and Pines (1977), in a study of child care workers in several day care centers, found significant correlations between various job conditions and burnout (these have been cited in the previous section) and between burnout and one very critical behavioral variable which reduced burnout rates among certain child care staff. They reported that those workers who actively expressed, analyzed, and shared their personal feelings with their colleagues experienced a lower rate of burnout. It was suggested that this behavior served not only as a therapeutic venting of feelings, but also provided an opportunity for the worker to receive constructive feedback and suggestions from colleagues.

On the basis of these research studies, it would appear reasonable to conclude that not only situational variables or job conditions, but also individual attributes or personality characteristics are crucial to the understanding of burnout not only for the individual who must learn to cope as effectively as possible with the condition, but for agencies and organizations who must design work conditions that will decrease the likelihood of burnout.
Prevention and Remediation

Much of the literature on burnout has been devoted to the presentation of preventative or remedial techniques to be used by individuals and by organizations in coping with the syndrome. The effectiveness of these recommended procedures has not been tested empirically. Maslach and Pines (1977) did conduct a questionnaire and interview study of child care personnel in four day care centers which tapped the effectiveness of time-outs, staff-to-child ratio, number of hours worked, program structure, and staff meetings. Each of these variables has been repeatedly considered in recommendations of "organizational attacks" on burnout. Maslach and Pines' findings provided support for the preventative measures suggested by others (Daley, 1979; Freudenberger, 1975; Pines and Kafry, 1978) by showing (1) the ratio of staff to children in the day care centers had a significant impact on perceptions of the job, job satisfaction, and experience of stress and frustration, (2) the number of hours worked was directly related to stress and attitudes about the job and the children, with workers working longer hours and having direct contact with children developing more negative attitudes toward children, (3) the ability to voluntarily withdraw from work when feeling under pressure is an important factor in preventing burnout.

Freudenberger (1975) offered various preventative measures focused primarily at the organizational level. He recommended screening people well before they are employed, being careful to differentiate between realistic and unrealistic dedication in an applicant. Once a worker is
on the job, he suggested that administrators and supervisors rotate functions of workers to provide variety and also to avoid sending the same individual into a crisis situation over and over; limit the number of hours worked, allow for time off; provide workshop and training seminars for continuing education and on-the-job training; and, if necessary, increase the number of staff. Freudenberger advocated the use of physical exercise as a stress reduction technique for the individual worker; he stressed the importance of physical exercise leading to physical exhaustion in order to counteract the effects of the emotional and mental exhaustion characteristic of burnout. He also noted the significance of maintaining a sense of group and of not allowing any group member to become isolated, thus increasing his or her potential for burnout.

In later writings, Freudenberger (1977) and Freudenberger and Robbins (1979) stressed the importance of the individual being aware of his or her own countertransference feelings as a measure against burnout. In line with this, Freudenberger (1977) offered a list of how-to's specifically for child care workers which includes (1) know your motivations for choosing child care work as a profession; (2) balance your energy investment in your work with a life outside; (3) share your thoughts and feelings honestly with your colleagues, both doubts and successes; (4) limit the number of times you are involved in and the duration of crisis intervention work; (5) recognize your own limitations and assets; (6) engage in an ongoing self-analysis; and (7) conduct a periodic self-evaluation and shift from one function to another based upon the results of this evaluation.
Daley (1979) proposed supervisory strategies and organizational strategies for preventing burnout. He recommended that supervisors make timeouts available, facilitate peer support, provide feedback on performance, and assign jobs widely within a worker's ability and according to a principle of progressive difficulty. Organizational strategies include improving training programs, regulating not only workload but difficulty of workload, improving the verbal communication network, and creating a career ladder within the occupational or job level of the direct services worker rather than necessitating a move to an administrative position for career advancement, a move often not desired since it means movement away from direct client contact.

Edelwich and Brodsky (1980), applying the principles of Reality Therapy as developed by Glaser (1975), stress the importance in knowing what responsibilities one does and does not have in handling burnout. They emphasize the difference between being responsible "for" and being responsible "to" clients or patients, pointing out than an individual is only responsible for himself or herself and his or her actions, not for others. A helper may be responsible "to" those he or she serves in that he or she is responsible to help others change; whether or not they actually choose to change is their responsibility. Edelwich and Brodsky offer the following guidelines for coping with burnout: (a) set realistic goals, taking into consideration unpromising prognosis and poor success rates with certain presenting problems; (b) focus on success and not failures, keeping in mind that no one can be all things to all people and that throughout a professional helper's career there will always be
a percentage of failures; (c) focus on the process and not the result, appreciating that the art of "doing" can be as important as the end results; (d) keep a realistic time perspective, don't expect too much too soon; and (e) don't interpret results self-referentially, rather look at your work as a cooperative effort between patient and therapist.

These same authors also urge intervention at the organizational level. They stress the importance of training institutions teaching their students how to modify their expectations before going to work in the field. They recommend that agencies prepare staff members early in their employment by letting them know what they can expect when they experience burnout, and how to recognize and how to deal with the common problems of the job that lead to burnout.

Maslach and Pines (1977), recognizing the psychological costs of burnout to staff members as well as the loss to the agency or organization, stressed the importance of implementing institutional changes that can prevent or reduce burnout. Several factors were identified in their study of day care centers that could either reduce the amount of stress experienced or aid in coping with it. These included reducing the number of hours of direct contacts between worker and client; reducing the number of clients each worker is responsible for; providing formal or informal programs in which staff can get together to share feelings, get advice or support, or to discuss problems; providing avenues for encouraging workers to express, analyze and share their feelings with their colleagues, i.e., formation of social-professional support groups, special staff meetings or workshops; providing training in interpersonal
skills allowing workers to work more effectively in a close relationship with people and making them aware of the importance and relevance of their own psychological functioning to their work.

Cherniss (1981) outlined several strategies for preventing burnout based on his conceptualization of burnout as a coping response used in situations characterized by uncontrollable stress. His model for prevention and intervention in coping with burnout involved five major steps: (1) reduce the external demands that are contributing to stress; (2) reduce the internal demands contributing to stress; (3) increase external resources to aid the individual in coping with stress; (4) increase the individual's internal resources for handling stress; and (5) encourage the development of coping mechanisms that do not involve psychological disengagement.

Based on this model, Cherniss (1981) identified points of intervention within an organization where efforts to prevent or to intervene in burnout would be most effective: (1) staff development in the form of training not only to improve job-related skills but also to teach skills in stress management; (2) the redesign of jobs; (3) training and redevelopment of management to provide administrators and supervisors with skills in helping their employees to develop coping skills for handling stress; (4) the establishment of formal organizational problem-solving sessions to teach individuals' skills in the specific area of problem solving, decision making, and conflict resolution; and (5) the development of well-defined organizational goals and operating philosophies for the organization or agency.
Probably the most helpful factor for coping with burnout has been recognition that the condition does in fact exist. If it is accepted that burnout is an inevitability for most people who choose a career in a helping profession, then it would seem to be critical to have available more empirical research to aid in our understanding of this social-psychological phenomenon and in the development of more effective coping strategies. Although current thinking on burnout proposes that situational or job-related variables precipitate burnout, it would seem prudent that theoretical formulations and research efforts also consider the role of individual personality characteristics as well as the interplay between job conditions and personality characteristics as they relate to burnout. Further thinking should also be directed toward the differentiation of those personality variables that enable an individual to cope more effectively with job-related stress and, therefore, to experience burnout less frequently and less intensely.

**Child Care Work: A Profession Replete with Stress**

The references made throughout the preceding section to the inherent stress present in the human services professions leading to the prevalence of burnout among human services professions applies fully to the child care profession. A review of the literature describing child care work would suggest that this profession epitomizes work conditions which lead to burnout (Birnbach, 1973; Brettschneider, 1977; Helmer and Griff, 1977; Powell, 1977; Barnett and McKelvey, 1980; Sutton, 1977).

Mattingly (1977) in a structural model of stress in child care work, points out that although many of the stressors in the profession
are created by poor training of workers and the absence of societal concern for the welfare of children as reflected in government and agency policies, there are major stress-producing components inherent in child care work which will continue to exist no matter how well trained the workers or how liberal the funding policies. These conditions include frequent bombardment with excessive stimulation, being required to process large amounts of information with great speed, and being faced with the threat of physical and/or psychological abuse. Another major stressor of child care work involves the inevitable role conflict which exists between meeting the needs of the organization. In addition, performing in a "fishbowl," the child care worker is also faced with having his or her level of skill and clinical ability constantly on display for evaluation by supervisors, coworkers, and most important, the children in his or her care.

Mattingly (1977) suggested that it is important for the child care worker to be able to tolerate ambiguity and to be flexible and innovative in performing their responsibilities. She recognized that as a rule the job descriptions for professional child care workers do not call for rigid patterns of worker behavior, but rather require the worker to be flexible and creative. In line with this thinking, other researchers have established that under conditions of stress, workers often become less flexible and less capable of tolerating ambiguity (McLean, 1974).

Birnbach (1973), outlining those conditions of child care work which precipitate stress and frustration, considered vague job descriptions offered by agency administrators, the conflicts between meeting the
needs of the two often opposite systems of the child and the organization, and what he referred to as, "the inherent dualities" in the role of child care worker. Defining the major job of the child care worker as that of finding the tie between the needs of the agency and those of the child, and, then, helping each to work together and use the other effectively, Birnbach proposed that the child care worker must be able to perform both instrumental and expressive tasks at the same time. He stated that the function of child care worker is such that instrumental and expressive tasks can never be separated; the worker must be able to engage in expressive tasks such as listening, empathizing, and understanding and exploring feelings while at the same time being able to engage in the instrumental tasks of discipline, limit setting, and generally serving as an agent of the institution.

Birnbach (1973) concurred with Mattingly (1977) in describing several common job conditions of the child care worker which create stress. As he defined these job characteristics, they include the expectation of understanding and responding appropriately to an incessant barrage of stimuli; adjusting to moment-to-moment change in activities, behaviors, moods, and group constellation; and making quick decisions and taking action toward problem solving often with only a limited amount of information.

Grossbard (1978) has addressed the issue of the changing role of the child care worker. Noting that the role and responsibilities of child care personnel have become more complex as the concept of residential treatment has evolved to its current status, he stated that the worker often feels torn between contradictory roles and demands. On the
One hand, today's child care worker is expected to exercise professional objectivity and in many ways to serve as an extension of the therapist while at the same time he or she is expected to be natural and spontaneous and to serve as a provider of "undiluted parental involvement." These contradictory role expectations create pressure and stress in many child care workers—stress which often leads to burnout.

The question of what makes an individual a good or an effective child care worker has not been adequately addressed in the behavioral or social science literature. Few empirical studies have been conducted toward the purpose of understanding those personality variables important for effective child care work. Those studies that have addressed this question have generally been motivated by the need for a more formal, scientific method of personnel selection toward the purpose of remedying the costly problem of an extremely high turnover rate in the profession.

Weber (1956) in a paper concerned with the selection and training of workers in institutions for delinquents indicated that the personality traits of emotional maturity, stability, adaptability, personal warmth, initiative, perseverance, leadership, intelligence, freedom from social and religious prejudice, and critical thinking ability are important for effective work with institutionalized youngsters. More recently, research efforts have focused upon delineating those underlying personality variables which have been postulated as serving independently as predictive measures of an effective child care performance (Saunders and Pappanikou, 1970; Davids, Laffey, and Cardin, 1969; Colligan, Goke, and Endres, 1977; Schaefer, 1973; Platt, Mordock, and Dorgan, 1968). The
results of these studies have frequently yielded equivocal or ambiguous results, although support for some hypotheses have been obtained.

Davids, Laffey, and Cardin (1969), in an ambitious experiment designed to assess intellectual and personality factors in effective child care workers, utilized projective techniques (Rorschach, TAT) and formal intelligence measures (select subtests of the Wechsler-Bellevue Intelligence Scale, Form I), along with performance ratings of supervisors to assess personality characteristics and job effectiveness of child care workers. Favorable personality evaluations as determined by supervisors' ratings generally were correlated with favorable ratings of job performance, also made by the supervisor. There was no association found between IQ and either personality or job effectiveness; however, the authors urge caution in interpreting these findings since their entire sample of subjects was above average intellectually. Davids et al. also found that workers who receive more favorable job evaluations tend to rate themselves as higher on alienation and lower on affiliation traits. The authors explain this finding by proposing three possible explanations: (1) these workers are more insightful and less defensive; (2) a certain degree of personal and social maladjustment is desirable in working with emotionally disturbed children; and (3) occurrence of some chance factor, due to the small sample size, which is confounding the data. In analyzing the correlation between supervisors' ratings and the results of the projective measures, there was found to be a correlation between the supervisors' ratings and the results of the projective measures and there was found to be a correlation
between the supervisors' behavior or job performance ratings and the results of projective testing; however, this failed to reach a level of significance. On the basis of this last finding, the authors proposed that indices of personality derived from self-evaluations and from items on an objective personality inventory may well be more predictive of personality attributes and behavioral characteristics as exhibited on the job than are scores or interpretative data derived from projective measures. Subsequent to this study, Davids et al. supported the use of objective personality measures in their assessment of effective child care workers.

Platt, Mordock, and Dorgan (1968), in a research program developed to train child care workers for work in a child care institution for the mentally retarded and/or emotionally disturbed, tested a screening and selection procedure to determine qualified applicants for their program. Using an interview by three mental health professionals, a measure of intelligence (The Wonderlick Personnel Test), a measure of vocational self-concept, a measure of child-rearing attitudes, and several measures of personality functioning (Guilford-Zimmerman Temperament Survey; S.O. Rorschach Test; Zulliger Ink Blot Test), these authors found some significant differences between a group of successful trainees, i.e., those who completed the training program, and a group of unsuccessful trainees, i.e., those who dropped out of the training program.

It was concluded, however, that neither testing per se nor an interview was a reliable predictor of success as child care trainees or workers. Rather, Platt et al. (1968) proposed that the solution to
the problem of selection could best be handled by analysis and synthesis of information obtained from a combination of three factors: (1) references and credentials, (2) job analysis within the specific organization to determine how well the job fits the individual and vice versa, and (3) a personal interview coupled with a basic test battery composed of an IQ measure, personality measures, a vocational interest and preference measure, and a measure of child-rearing attitudes.

Colligan, Goke, and Endres (1977) using a measure of vocational interest (Strong Vocational Interest Blank), a survey of personality characteristics (MMPI) and a measure of intelligence (Shipley-Hartford) hypothesized that data obtained from objective psychological measures would identify people who would later become effective child care workers. A regression equation of seven components was obtained. Only one personality variable, that of ego strength, as measured on the MMPI, was included in the equation for predicting job effectiveness. The remaining six factors were taken from the Strong Vocational Interest Blank and include the occupational factors of teaching, social service, art, writing, musician performance, and social science teacher. Intelligence did not enter into the equation.

Saunders and Pappinakou (1970), also using the MMPI, attempted to determine whether child care workers whose children display behavioral improvement can be psychometrically differentiated from child care workers whose children do not display behavioral improvements. They found that while ratings of staff by each other and ratings of staff by the children in their care were significantly correlated, neither set of
ratings was significantly correlated with ratings of behavioral improvements in the children. Of the MMPI scales, only the Mf scale or the scale measuring masculine and feminine interest and the Hy scale or the hypochondriasis scale were found to be significantly correlated with behavioral improvement, both in a negative direction. That is to say, workers who showed an interest pattern in the direction of the opposite sex, i.e., the more effeminate males and the more masculine females, tended to rate the children in their care as less improved and workers who were more hypochondrical rated their children as less improved. Perhaps the most important conclusion of this study was based on the finding that ratings of performance by supervisors, peers, etc., and behavioral improvement, suggesting effective job performance, are not significantly related. The authors concluded that this finding would bring to question the validity of most research which has used rating techniques as a major criterion of competency.

Finally, Schaefer (1973) constructed the Child Care Scale, based on the Gough's Adjective Check List. An analysis of responses from 14 child care workers yielded a scale of 60 adjectives, half representing qualities an ideal worker should have and the other half describing qualities the worker should not have. Schaefer suggested that preliminary testing of this scale supports its value in discriminating effective from ineffective child care workers. The size of the sample in this study (n = 14) as well as the questionable method of scale construction and validation casts significant doubt upon the predictive virtues of the ACL Child Care Scale. Schaefer urged that further
research using the scale should be conducted before the scale is used with unfaltering confidence.

With increasing efforts directed toward the development of child care work as a "professional" occupation rather than a menial job, much of the literature to date has involved editorialized narratives, suggesting rather than proving the ills inherent in the role of child care worker, and offering prescriptive plans or remedial steps to be taken by either the individual or the institution or both (Mattingly, 1977; Sutton, 1977; Whittaker, 1972; Birnbach, 1973; Larsen, 1973; Shannon and Saleebey, 1980). There is a need for more research designed to assess the role of child care worker more empirically and to develop a profile of personality variables conducive to effective role functioning. More empirical data are needed to better understand the concept of job satisfaction and the capacity for coping with the chronic job-related stress inherent in the role of child care worker.

Theoretical Rationale for Predictions

The review of the literature presented in the preceding section offers evidence to support that there are both "actual" and "perceived" job characteristics which can and do affect an individual's psychological reaction to his or her job. Further, it has been established that there exists a condition known as burnout which generally results from prolonged occupational stress and which has been shown to be especially prevalent among groups of human services personnel. In addition, data have been presented which suggest that other factors such as personality characteristics of the individual worker may also affect not only the
individual's psychological reaction to his or her work but also how he or she experiences burnout.

Based on the theoretical assumptions made and the research findings presented in the current literature on burnout, a theoretical model for understanding job-related burnout was proposed. Essentially, this model proposed that job-related burnout may best be understood in terms of the effect of both characteristics of the job and personality characteristics of the individual worker. A causal model of burnout with temporally sequenced independent variables will be outlined below.

The dependent variable of burnout was operationally defined by performing median splits on the average scores for the scales of Emotional Exhaustion (Frequency and Intensity) and of Depersonalization (Frequency and Intensity) of the Maslach Burnout Inventory (Maslach and Jackson, 1981), creating two classification categories labeled "burnt out" and "not burnt out." Residential child care workers were chosen as the subject pool for this study because they were felt to represent a group of human care service workers who are confronted with persistent and intense occupational stress, and who are thus highly prone to experience job burnout.

The antecedent variable group proposed as first occurring within this model was that of personality characteristics since it was assumed that an individual's personality traits or characteristics will either be developed or will be in the process of developing prior to entering employment. It was proposed that each of the variables assumed under the grouping of "personality characteristics" will have both direct and indirect effects upon the dependent variable of burnout.
Those personality characteristics chosen for the purpose of testing this model were (1) level of ego development, taken here to represent a measure of emotional maturity and emotional stability, characteristics assumed to be effective tools for coping with burnout; (2) behavioral flexibility taken to represent the ability to integrate instrumental or task-oriented behaviors with expressive or nurturant-supportive behaviors, also a characteristic hypothesized to be beneficial in coping with burnout (Birnbach, 1973); and (3) vocational interest pattern representing how well matched an individual's vocational interests are with the vocational interests established as being most endorsed by members of his or her profession, again with the assumption that a close match will be helpful to the individual in coping with burnout.

The group of variables occurring second in order within the proposed causal model were job characteristics taken here to include both "perceived" and "actual" job characteristics. "Perceived" job characteristics were defined in this study as the psychological reaction scales of Experienced Meaningfulness of Work, Feelings of Responsibility for Outcome of Work and Knowledge of Results of Work, and a fourth scale of General Satisfaction measured by the Job Diagnostic Survey (Hackman and Oldham, 1974). "Actual" job characteristics for this study were defined as the age of the patient population, i.e., child, adolescent, adult, and the primary diagnosis of the patient population, i.e., Mentally Retarded or Emotionally Disturbed.

Specific Theoretical Predictions

Level of ego development was assessed by Total Protocol Ratings on Loevinger's Washington University Sentence Completion Test (Loevinger
and Wessler, 1970); behavioral flexibility was determined by scores obtained on the Interpersonal Disposition Inventory, a short form of the PRF-ANDRO scale developed by Berzins, Welling, and Wetter (1977); and an individual's vocational interest pattern was determined by scores received on Holland's Vocational Preference Inventory (Holland, 1978). It was assumed that each of these variables would directly influence the individual's experience of burnout by allowing for the development of more effective coping strategies when confronted with the stress inherent in their job and thus reducing the frequency and the intensity of experienced burnout.

Indirect effects of personality characteristics upon job-related burnout were also proposed by this model. It was assumed here that level of ego development, behavioral flexibility, and vocational interest pattern would directly influence each of the variables assumed under the classification of job characteristics. As they filtered through these job characteristic variables, each of the personality variables named above was assumed to indirectly influence the dependent variable of burnout.

In addition, relationships between the individual personality variables were also assumed. Based on Loevinger's theory of ego development (Loevinger, 1966), it was proposed that level of ego development will affect behavioral flexibility, allowing individuals at higher levels of ego development to more comfortably integrate what may be culturally proscribed as disparate behaviors especially with regard to sex-role functions. In accordance with Holland's theory of vocational choice and of personality (Holland, 1973), it was also assumed that an
individual's vocational interest pattern would be affected directly by his or her level of ego development.

Finally, it was assumed that an individual's vocational interests would be influenced by behavioral flexibility in that individuals who were more capable of integrating discrepant types of behaviors, i.e., nurturant versus instrumental, would express different vocational interests and preferences than would those individuals who were less capable of such a behavioral integration.

Based on the research and theories of job satisfaction (Hackman and Oldham, 1974), it was proposed that an individual's perceptions of how meaningful his or her work is, how responsible he or she is for the outcome of his or her work, how much feedback he or she receives about his or her work, and his or her overall satisfaction with his or her work will directly influence his or her experience of burnout. Further, it was assumed in this model that certain characteristics of the people served such as age and diagnosis would directly affect the individual worker's experience of burnout.

Relationships between job characteristics variables were also assumed. Theoretically, it was proposed that both the age and the diagnosis of the patient population would have a direct influence upon experienced meaningfulness of work, responsibility for outcome of work, knowledge of results of work, and general satisfaction with work. More specifically stated, it was assumed that child care workers working with children would perceive their work differently from workers who served adolescents and adults. Likewise, individuals working with mentally
retarded residents were expected to hold different perceptions about their work than individuals working with residents carrying a primary diagnosis of emotional disturbance. These differences would be reflected in the direct influence that age of population and diagnosis of population have upon the "perceived" job characteristics, or how an individual feels about his job.

Finally, it was proposed that there would be direct relationships between the "perceived" job characteristic variables. Specifically, it was assumed that "experienced meaningfulness of work" would be directly influenced by "feelings of responsibility for outcome of work" and "knowledge of results of work"; that "feelings of responsibility for outcome of work" would be directly influenced by "knowledge of results"; and that "general satisfaction" with work would be directly influenced by "experienced meaningfulness," "feelings of responsibility for outcome," and "knowledge of results."

In summary, a causal model of burnout was proposed which considered the direct and the indirect effects of a set of variables defined as personality characteristics and a set of variables defined as job characteristics upon burnout. This model proposed that burnout be considered a multidetermined condition affected by a combination of attributes or characteristics belonging to the individual and of external or environmental characteristics belonging to the job.

Operational Predictions

Based on the causal model of burnout outlined in the preceding section, the following predictions were made:
1. Each of the antecedent personality characteristics variables of levels of Ego Development as measured by Total Protocol Ratings on Loevinger's Washington University Sentence Completion Test, Behavioral Flexibility as measured by the Interpersonal Disposition Inventory, and Vocational Interest Pattern as measured by Holland's Vocational Preference Inventory, will have a direct positive effect upon the second occurring antecedent variables of Age of Patient Population, Diagnosis of Patient Population, and scores on the scales of Experienced Meaningfulness of Work (JDS1), Responsibility for Outcome (JDS2), Knowledge of Results (JDS3), and General Satisfaction (JDS4) of the Job Diagnostic Survey.

2. The antecedent personality characteristics variables of level of Ego Development as measured by Total Protocol Ratings on Loevinger's Washington University Sentence Completion Test, Behavioral Flexibility as measured by the Interpersonal Disposition Inventory and Vocational Interest Pattern as measured by Holland's Vocational Preference Inventory will have a direct positive effect upon the dependent variable of Burnout here defined by taking median splits of combined scores on the scales: Emotional Exhaustion—Frequency and Intensity and Depersonalization—Frequency and Intensity of the Maslach Burnout
Inventory thus creating classification variables of "burnt out" and "not burnt out."

3. Of the antecedent variables classified as personality characteristics, the following direct effects were predicted between personality variables:
   a. The variable of level of Ego Development as measured by Total Protocol Ratings on Loevinger's Washington University Sentence Completion Test will have a direct positive effect upon the variable of Behavioral Flexibility as measured by the Interpersonal Disposition Inventory and upon the variable of Vocational Interest Pattern as measured by Holland's Vocational Preference Inventory.
   b. The variable of Behavioral Flexibility as measured by the Interpersonal Disposition Inventory will have a direct positive effect upon the variable of Vocational Interest Pattern as measured by Holland's Vocational Preference Inventory.

4. The antecedent job characteristics variables of Age of Patient Population, Diagnosis of Patient Population, and of scores on the Job Diagnostic Survey scales of Experienced Meaningfulness of Work (JDS1), Responsibility for Outcome of Work (JDS2), Knowledge of Results (JDS3), and General Satisfaction (JDS4), will each have
a direct positive effect upon the dependent variable of Burnout, here defined by taking the median split of the scales: Emotional Exhaustion—Frequency, and Emotional Exhaustion—Intensity, and Depersonalization—Frequency, and Depersonalization—Intensity of the Maslach Burnout Inventory thus creating two classification variables of "burnt out" and "not burnt out."

5. Of the antecedent variables classified as job characteristics, the following effects were predicted:

a. The variable Age of Patient Population will have a direct positive effect upon each of the variables of Experienced Meaningfulness of Work (JDS1), Knowledge of Results (JDS3), and General Satisfaction (JDS4), and a direct negative effect upon Feelings of Responsibility for Outcome (JDS4) as measured by the Job Diagnostic Survey.

b. The variable Diagnosis of Patient Population will have a direct positive effect upon the variables of Experienced Meaningfulness of Work (JDS1), Feelings of Responsibility for Outcome (JDS2), Knowledge of Results (JDS3), and General Satisfaction (JDS4) as measured by the Job Diagnostic Survey.

c. The variable of Experienced Meaningfulness of Work (JDS1) as measured by the Job Diagnostic
Survey will be directly and positively affected by both the variables of Knowledge of Results (JDS3) and Feelings of Responsibility for Outcome (JDS2), also measured by the Job Diagnostic Survey.

d. The variable of Knowledge of Results (JDS3) will have a direct positive effect upon the variable of Feelings of Responsibility for Outcome (JDS2), both as measured by the Job Diagnostic Survey.

e. The variable of General Satisfaction (JDS4) will be directly and positively affected by the variables of Experienced Meaningfulness of Work (JDS1), Feelings of Responsibility for Outcome (JDS2), and Knowledge of Results (JDS3), all as measured by the Job Diagnostic Survey.

In addition, the following validation predictions were also made:

6. A behavioral measure of burnout operationally defined as the combined number of Sick Leave days and "Personal Use" days taken by a child care worker in the three-month period prior to participation in this study was predicted to show a direct relationship with the defined burnout criterion of scores on the six scales of the Maslach Burnout Inventory. A direct positive relationship was predicted between the amount of leave taken and
scores on the scales of Emotional Exhaustion—Frequency and Intensity, and Depersonalization—Frequency and Intensity; an inverse relationship was predicted between the amount of leave taken and scores on the Personal Accomplishment—Frequency and Personal Accomplishment—Intensity scales.

7. It was predicted that an individual's self-report of their experienced burnout as measured by scores on all six scales of the Maslach Burnout Inventory will show a positive relationship with ratings of that individual by a coworker on a rating scale known as the Coworker Rating Form, designed as a measure of burnout specifically for this study.
CHAPTER II  
METHOD

Subjects

One hundred child care workers employed by the Devereux Foundation, a residential treatment facility for mentally retarded and/or emotionally disturbed children, adolescents, and adults served as subjects for this study. Employees from the Devereux Branches of Pennsylvania, Connecticut, and Massachusetts were used as subjects. Subjects ranged in age from 20 to 56 with a mean age of 27. All subjects were full-time employees of the Foundation, working at least 40 hours per week in direct service delivery with the residents of the Foundation.

Sex of subjects was equally split with 50 males and 50 females. Table 1 presents a breakdown by sex of the demographic variables of marital status, level of education, age of patient population, and diagnosis of patient population served. No significant sex differences were found for any of the demographic variables or for scores obtained on the Maslach Burnout Inventory, the Vocational Preference Inventory, or the Job Diagnostic Survey scales.

Procedure

Subjects were administered the Maslach Burnout Inventory, the Job Diagnostic Survey, the Washington University Sentence Completion Test, the Interpersonal Disposition Inventory, the Vocational Preference Inventory, and the Coworker Rating Form. All six pencil-paper measures
Table 1. Frequency count by sex for marital status, level of education, age of population, and diagnosis of population

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Level of Education</th>
<th>Age of Population</th>
<th>Diagnosis of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males (N = 50)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single = 34</td>
<td>High School = 3</td>
<td>Child = 4</td>
<td>Mental Retardation = 25</td>
</tr>
<tr>
<td>Married = 16</td>
<td>College = 42</td>
<td>Adolescent = 38</td>
<td>Emotional Disturbance = 24</td>
</tr>
<tr>
<td></td>
<td>Graduate School = 5</td>
<td>Adult = 8</td>
<td></td>
</tr>
<tr>
<td>Females (N = 50)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single = 34</td>
<td>High School = 7</td>
<td>Child = 9</td>
<td>Mental Retardation = 31</td>
</tr>
<tr>
<td>Married = 16</td>
<td>College = 38</td>
<td>Adolescent = 29</td>
<td>Emotional Disturbance = 20</td>
</tr>
<tr>
<td></td>
<td>Graduate School = 5</td>
<td>Adult = 12</td>
<td></td>
</tr>
<tr>
<td>Total (N = 100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single = 68</td>
<td>High School = 10</td>
<td>Child = 13</td>
<td>Mental Retardation = 56</td>
</tr>
<tr>
<td>Married = 32</td>
<td>College = 80</td>
<td>Adolescent = 67</td>
<td>Emotional Disturbance = 44</td>
</tr>
<tr>
<td></td>
<td>Graduate School = 10</td>
<td>Adult = 20</td>
<td></td>
</tr>
</tbody>
</table>
were completed during one testing period lasting approximately two hours. Presentation of measures was counterbalanced by order. Subjects were also asked to complete a Biographical Data Sheet which provided demographic information.

**Measures**

**Job Diagnostic Survey**

The Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1974, 1975) was used in this study to assess the personal affective reactions of individual subjects to their job and to their work setting. The JDS also served to measure general job satisfaction among this sample of child care workers. The JDS was also developed as an instrument to measure (1) objective characteristics of jobs, specifically the degree to which jobs are designed to enhance internal work motivation and the job satisfaction of workers who work at the job and (2) the readiness of individuals to respond positively to enriched jobs or those which have high measured potential for generating internal work motivation. Recently the JDS has been used in research studies to measure the relationship between job satisfaction and individual personality characteristics of employees (Barad, 1979; Gann, 1980; Maslach and Jackson, 1981).

Essentially, the basic theory underlying the construction of the JDS proposed that positive personal and work outcomes, which can be operationally defined as high internal motivation, high work satisfaction, high-quality performance, and low absenteeism and turnover, are obtained when "critical psychological states" are present for any given
employee (Turner and Lawrence, 1965; Hackman and Lawler, 1971). These psychological states include "experienced meaningfulness of one's work," "experienced responsibility for the outcome of one's work," and "knowledge of the results of the work activities." These three psychological states are created by the presence of "core" job dimensions, such as the degree to which a job requires a variety of different activities involving different skills and talents for work completion, the degree to which a job requires completion of a "whole" and identifiable piece of work, and the degree to which a job has substantial impact on the lives or work of other people. Experienced responsibility for work outcome is produced when a job is high on the variable of autonomy, i.e., the degree to which a job provides the employee with substantial freedom, independence, and discretion in work scheduling and in carrying out the work. Knowledge of results is obtained when a job is high on feedback which may be obtained either from the job itself or from other agents such as supervisors or coworkers.

The JDS consists of seven separate sections tapping five major job-related concepts and an eighth section which asks the respondent to provide basic biographical data. Scale items are answered by ratings from the respondent on a five- or seven-point scale.

Psychometric properties of the JDS were determined on the basis of the analysis of responses obtained from 658 employees working on 62 different jobs in seven organizations. The jobs assessed were very heterogeneous consisting of blue collar, white collar, and professional work. Organizations were located in both rural and urban settings in the
eastern, southeastern, and midwestern sections of the United States. Fifty-nine percent of this sample were male; 41% were female. Eighty-nine percent were between the ages of 20 and 50; 35% had graduated from high school, and 14% had graduated from college.

Internal consistency reliabilities of the JDS scales range from a high of .88 (growth need strength in the "would-like" format) to a low of .56 (social satisfaction). The median correlations of the items scored on a given scale with all of the items scored on different scales of the same type of variable (the median off-diagonal correlations) ranged from .12 (task identity) to .28 (growth satisfaction). The median off-diagonal correlations offer some indication of the discriminant validity of the items.

To provide an indirect test of the "objectivity" of employee ratings of their own jobs, an assessment of each of the 62 jobs in the sample on the core job dimensions was made not only by employees but also by their supervisors and researchers. The median ratings of the conditions which had been averaged for each of the three groups (employees, supervisors, observers) for each job were .51 between employees and supervisors; .63 between employees and observers; and .46 between supervisors and observers. Although the ratings of the three groups converged moderately well, these data revealed that some job dimensions (i.e., feedback from agents) yield rather low correlations between ratings of two separate groups.

Between job differences were statistically significant for all of the scales. The JDS scales were found to vary considerably in the
amount of between-job variance present and in the amount of variance present among respondents within the same job; all F-ratios were significant beyond the .01 level. The authors acknowledged that while the F-ratios obtained in this analysis could be considered rough indicators of the sensitivity of the scales to between-job differences for the jobs considered in their sample, the within-job variance is multiply determined with part of the variance attributed to real differences in the same job within a given set of organizational jobs as well as scale unreliability and individual differences of respondents.

The core job dimensions were found to be moderately intercorrelated supporting the results of Hackman and Lawler's (1971) earlier study. Hackman and Oldham (1975) suggested that there is no a priori reason to expect that the job dimensions should be completely independent; they noted that a moderate level of intercorrelations among the core dimensions does not detract from the usefulness of the JDS as a scale measuring separate job dimensions as long as their nonindependence is recognized and accounted for in interpreting the scores of jobs on a given job dimension.

As predicted, the core job dimensions were found to be positively related to measures of work satisfaction and motivation and generally independent of the measures of growth need satisfaction. The measures of the "critical psychological states" were found to be strongly related to those five job dimensions which had been predicted by theory to affect them, i.e., skill variety, task identity, task significance, autonomy, and feedback from the job. Correlations range from .54 to .06, with all but one correlation significant at the .01 level (two tailed).
The substantive validity of the JDS (Hackman and Oldham, 1974) is supported by data showing that the variables measured by the JDS relate to each other and to external criterion variables as predicted by theory. Specifically, the job dimensions were found to relate positively and substantially to the other variables measured by the JDS, i.e., the three critical psychological states, general satisfaction, growth satisfaction, and internal work motivation, and to behavioral measures of absenteeism and supervisory ratings of work performance effectiveness.

For the purpose of this study the psychological reaction scales of the JDS, i.e., Experienced Meaningfulness of Work, Responsibility for Outcome, and Knowledge of Results, along with the General Satisfaction with Work scale were used to define operationally "perceived job characteristics." Means and standard deviations for each of the four scales are presented in Table 2.

Washington University Sentence Completion Test

The Washington University Sentence Completion Test (also known as the Sentence Completion Test of Ego Development) was used in this study (Loevinger and Wessler, 1970; Loevinger, Wessler, and Redmore, 1970) as a means of assessing an individual's level of ego functioning, taken to represent a measure of emotional maturity and emotional stability. The SCT is a 36-item sentence completion test which utilizes a projective approach to assess ego development in a way that is psychometrically simpler to deal with than other projective techniques. The SCT was originally developed and normed on a total female sample. There
Table 2. Means and standard deviations for scales of the Job Diagnostic Survey

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced Meaningfulness of Work (JDS1)</td>
<td>5.19</td>
<td>0.97</td>
</tr>
<tr>
<td>Feelings of Responsibility for Outcome (JDS2)</td>
<td>5.21</td>
<td>0.97</td>
</tr>
<tr>
<td>Knowledge of Results of Work (JDS3)</td>
<td>4.61</td>
<td>1.21</td>
</tr>
<tr>
<td>General Satisfaction with Work (JDS4)</td>
<td>4.17</td>
<td>1.19</td>
</tr>
</tbody>
</table>
are currently seven forms of the test available: three forms for female and four forms for males. Boys' and girls' forms delete and replace those items in the adult forms having either a direct or covert reference to sex.

A scoring manual is available for the women's version of the SCT and recently supplementary scoring manuals have been made available by Loevinger and her colleagues to aid in scoring 13 sentence stems found only on the men's version of the SCT. Items common to the women's version of the test continue to be scored for males by using the women's scoring manual.

The first stage of Loevinger's hierarchical model of ego development is divided into two phases—the presocial or Autistic stage and the Symbiotic stage. The infant's primary task of development during this stage is that of establishing an awareness of self from nonself. Because language does not develop until the end of this stage, researchers are not able to study this stage with verbal projective techniques such as the SCT.

The Impulsive Stage is the second stage of development and is the stage which characterizes early childhood. Individuals functioning in this stage are generally egocentric, dependent, and demanding. People are perceived primarily as objects to supply gratification. Punishment is understood solely as a retaliatory act.

As a child learns to exercise better control over his or her impulses, he or she moves into the Self-Protective Stage, so named because the child having reached this stage exhibits the ability to delay
impulsive behavior only when it is to his or her immediate advantage to do so. Blame tends to be externalized (others or circumstances are at fault) or is attributed to a part of self for which the child owns no responsibility. Control, domination, and competition also characterize this stage.

Movement into the Conformity Stage generally occurs with entry into the first grade. This stage characteristically involves identification with authority and extreme cognitive simplicity, i.e., there is a right and wrong way for everybody all the time. Any behavior that is conventional and approved of socially is right and this is especially applicable to traditional or conventional sex role behaviors. The peer group establishes "the rules" and peer disapproval serves as an extremely potent sanction. Inner feelings are experienced at a very basic, banal level with little differentiation of feeling state. Individual differences are not a focal concern. People functioning at this stage of ego development tend to define themselves or others in socially desirable terms.

The transition from Conformity to the next stage, the Conscientious stage, is marked by a heightened awareness of self and of inner feelings coupled with the emerging capacity to perceive multiple possibilities in any given situation. Rules are now seen to have exceptions or to hold only under certain circumstances. Motives and consequences become more important than rules per se. The sanction of transgression becomes guilt rather than disapproval from others. Interpersonal relationships are understood in terms of feelings and traits rather than
actions. Capacity for self-criticism emerges, and in fact becomes one of the major descriptors of this stage.

The next stage is the Autonomous Stage with the transition from the earlier stage creating in the individual a heightened sense of individuality and a concern for emotional dependence. The moralism of earlier stages begins to be replaced by an awareness of inner conflict; in the transitional stage, this conflict is perceived as only partly internal, with external sources continuing to be attributed at least partial responsibility for the individual's problems. As an individual reaches the Autonomous Stage, conflict is recognized as part of the human condition.

Individuals who have reached this level of development struggle to cope with inner conflicts. Loevinger and Wessler (1970) stressed that it is not that inner conflict is any greater during the Autonomous Stage than at any other stage, but rather that the autonomous person has the courage to acknowledge and to cope with conflict rather than denying it or projecting it into the environment. Of significance interpersonally is the autonomous person's recognition and appreciation of other people's need for autonomy. The autonomous person is concerned with social problems beyond his or her immediate experience and he or she tries to be realistic and objective about himself or herself and others.

The final stage in Loevinger's model is the Integrated Stage. As a rule, no more than 1 percent of most social groups ever reach this highest level of ego development. Essentially, the Integrated Stage contains persons who have gone beyond coping with the conflict to
reconciling conflicting demands, who have renounced the unattainable, who have moved beyond toleration of to cherishing of individual differences and beyond role differentiation to the achievement of a sense of integrated identity.

To assume that the best adjusted people are at the highest stages of ego development is a distortion according to Loevinger (Loevinger and Wessler, 1970). She points out that there are well-adjusted people at all stages, although it is generally accepted that those who remain below the conformist level beyond childhood are generally maladjusted. Loevinger suggests that the sequence in her model of ego development may best be understood as a progression of increasingly deeper problems to be coped with rather than a series of negotiations of solutions.

Statistical properties of the SCT were determined by analysis of data obtained primarily from 543 females ages 12 to 70, drawn from a wide spectrum of the community to approximate a representative sample of socioeconomic and educational level. Supplemental samples were obtained from a sample of 100 Toronto school children and a sample of 150 subjects ranging in age from 18 to 55 and including such diverse groups as applicants for aid to dependent children and graduate students in counseling.

Interrater reliability of item ratings was established using four trained raters assigned to each item of the scale to rate responses of the 543 respondents and four self-trained raters who rated 100 responses taken from the 543 respondents, to each of the 36 items on the
scale. Self-trained raters had trained themselves by reading the scoring manual. Trained raters were allowed to compare ratings, after initially rating items independently and to discuss item ratings which did not agree with those of other raters with the goal of making what is hereafter referred to as a "composite training rating." Self-trained raters were not permitted to discuss their ratings with other raters. Median interrater reliability was found to range from .75 between dyads of trained raters to a .76 between dyads of self-trained raters. Loevinger and Wessler (1970), therefore, concluded that the amount or type of training of raters does not affect the interrater reliability of the SCT.

Measures of internal consistency using a coefficient alpha which was generalized from the Kuder-Richardson Formula-20 yielded correlations from .88 (from item ratings given to 100 protocols by a self-trained rater) to .92 (from item ratings given to 100 protocols by composite trained ratings). An intercorrelation between sums of odd and even item ratings for two self-trained raters indicated that variance in item sums derives primarily from variation in the responding subjects rather than from variations in rater.

Interrater correlations for TPRs using two samples of subjects and again comparing ratings by self-trained and trained raters ranged from .81 to .93 for the original normative sample of 543 females with a median correlation of .86 and from .78 to .93 for a second sample of subjects with a median interrater correlation of .85.

Based on reliability data obtained related to total protocol ratings, Loevinger and Wessler (1970) concluded that (1) use of the
scoring manual developed as a self-training technique for use with the SCT leads to ratings that attain a high degree of interrater reliability and (2) raters whose only training in scoring has been by self-training through reading of the scoring manual are capable of achieving the same degree of reliability and of producing the same overall ratings as were those people trained by individuals who were involved in the construction of the manual.

Factor analytic studies in which four sets of item ratings were each submitted to a principal component analysis, using Hotelling's iterative procedure yielded, in each case, a first component which accounted for 20 percent of the variance and which was found to be essentially identical ($r = .999$) with the sum of the item ratings. From these data Loevinger et al. (1970) concluded (1) the first components are essentially identical regardless of the amount of training of the raters, i.e., self-trained or trained by experts, and (2) the items of the SCT taken together measure a unitary dimension.

Validity studies of the SCT have also been extensive. Support for construct validity has been provided in various research efforts to support a defined sequence of the hierarchical model (Loevinger, 1979); evidence from these studies has not been decisive in supporting a developmental sequence. Loevinger (1979) has proposed that the SCT be validated not as a whole but at each stage noting that evidence of validity pertaining to preconformist stages can be shown by overrepresentations of preconformists in all studies of delinquents and by the relation of specific deviant behaviors to lower ego levels, while evidence for
validity of scores in the postconformist stages consists not so much in measures of specific behaviors as in correlations with attitudes, philosophies of life, insights, etc. Loevinger (1979) has acknowledged that while the SCT has been adequately validated for research, it has not yet been established as valid enough or reliable enough for use as a clinical instrument without supplementary and confirming data.

The original versions of the SCT (Form 9-62 for Women and Form 9-62 for Men) were used in the current study. Separate Total Protocol Ratings on the SCT were derived for each subject by two self-trained raters. The percentage of agreement on TPRs between the two raters was 86 percent for the female subjects' SCTs and 72 percent for the male subjects' SCTs. Of those Total Protocol Ratings on which the raters did not initially agree, only one protocol reflected a level discrepancy that was not within one-half step of agreement. Thus, the percentage of agreement within one-half step was 98 percent for the female protocols and 100 percent for the male protocols. It is noted that these percentages of agreement are consistent with those found by Loevinger in her original sample of "trained" raters (Loevinger and Wessler, 1970).

The lower percentage of rater agreement on male protocols was felt to reflect the lack of a formal manual for those items on the men's form of the SCT which are either identical or similar to items on the women's version. Raters are instructed to extrapolate response ratings from the women's manual when rating the men's protocols. The lack of a manual for the male forms of the SCT has been cited elsewhere (Rafferty, 1972) as a major weakness of the SCT. A breakdown by sex of
the levels of ego development obtained by subjects in this study is presented in Table 3.

**Vocational Preference Inventory**

The Vocational Preference Inventory, a personality inventory composed of 84 occupational titles, was developed by John Holland (1978) and based on his theory that preferences for occupations are expressions of personality. There are 14 representative occupations listed for each of the six scales which coincide with Holland's personality types of Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (Holland, 1973). Respondents are asked to indicate those vocations that appeal to them and those that do not. The higher a person's score on a scale, the greater his or her resemblance to the type that the scale represents. In addition, there are five (Self-control, Masculinity, Status, Infrequency, and Acquiescence) empirically derived scales on the inventory.

Intercorrelations of the VPI scales are only moderately correlated with the exception of the Acquiescence scale which overlaps with all other scales. Factor analytic studies have shown that the dimensions measured by each of the six occupational scales are independent and that those scales with the highest intercorrelations show similar factor loadings (Holland, 1978).

Construct validity has been assessed in numerous research studies (Holland, 1973), the majority of which have yielded positive evidence supporting the theoretical assumptions underlying the six personality types. Weak to moderate relationships have been found when the
Table 3. Frequency count of levels of ego development as measured by Loevinger's Washington University Sentence Completion Test

<table>
<thead>
<tr>
<th>Ego Level</th>
<th>Males (N = 50)</th>
<th>Females (N = 50)</th>
<th>Total (N = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Delta/3</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>I-3</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>I-3/4</td>
<td>23</td>
<td>30</td>
<td>53</td>
</tr>
<tr>
<td>I-4</td>
<td>12</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>I-4/5</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>
VPI scales were correlated with other personality measures, i.e., Enterprising yields a correlation of .36 with the Dominance scale of the California Psychological Inventory with significance at the .01 level; Social correlates .50 with the Cyclothymia factors of the 16PF with significance at the .05 level. Extensive analysis has revealed a clearly defined relationship between the VPI scales and the scales of the Strong Vocational Interests Battery. A cannonical analysis of the VPI scales and 50 SVIB scales found correlations ranging from .41 to .90 for males and from .30 to .83 for females (Holland, 1978). It has been generally accepted that the VPI and the SVIB assess similar dimensions.

Concurrent and predictive validity of the VPI have been established in numerous empirical studies (Holland, 1978). The VPI scales have been found to categorize correctly employed people in a way consistent with the scale meaning, i.e., 42 percent of 400 employed adult males received the correct VPI profile for their occupational group. Other studies (Holland, 1973) have shown the VPI scales to discriminate between college students and graduate students in different major fields of study. The VPI has also been found to be predictive of choice of college major and occupation for one- to two-year intervals and select scales have been shown to be predictive of academic and extra-curricular achievement although these predictions while statistically significant have been recognized by Holland (1978) as generally inefficient. Holland (1978) concludes that evidence for the validity of the VPI shows that the six basic interest scales have moderate validity for
predicting membership in an occupational group and a field of training, however, as personality scales, the reliability of descriptive information provided is usually low.

For the purpose of this study, the Vocational Preference Inventory was used to assess a subject's vocational interest pattern toward the purpose of determining the "fit" of that vocational interest pattern with the pattern listed by Holland (1973) as most representative of the professional group known as child care workers. This vocational pattern or code has been defined as SRE or Social-Realistic-Enterprising (Holland, 1973). Using raw scores to calculate the code types for this sample, it was revealed that no subject in this sample obtained an SRE code on the VPI. Alternative statistical procedures were therefore employed to test the effect of vocational interest pattern upon burnout. Cannonical variate scores representing the best linear combinations of VPI scores as a single variable related to burnout were used. These scores were derived from the SPSS Cancorr subroutine by relating the six VPI scales with the six scales on the Maslach Burnout Inventory.

A VPI group code was determined based on the raw score means obtained from the subjects used in this study. This code was determined as Social-Artistic-Investigative, a vocational interest pattern which according to Holland's The Occupations Finder (Holland, 1973) is generally chosen by individuals employed as clergyman, special education teacher, licensed practical nurse, and speech and hearing clinician.

Interpersonal Disposition Inventory

The Interpersonal Disposition Inventory (IDI) is an 85-item short form of the PRF ANDRO Scale, developed by Berzins, Welling, and
Wetter (1977) by using items from Jackson's Personality Research Form (PRF). The IDI consists of a 29-item Masculinity (MASCUL) scale, a 27-item Femininity (FEMIN) scale, a 20-item SELF-ESTEEM (SE) scale, five items from the PRF infrequency scale to control for careless responding, and four filler items. The theoretical definition of the masculinity and femininity constructs measured by the PRF ANDRO or the IDI were derived from an analysis of Bem's Sex Role Inventory (Bem, 1974). Accordingly, the masculinity construct depicts a dominant-instrumental content theme comprised of items tapping social-intellectual ascendancy, autonomy, and orientation toward risk, and the femininity construct reflects a nurturant-expressive domain with items presenting themes of nurturance, affiliative-expressive concerns and self-subordination.

Although provisional norms for the IDI have been developed, for research purposes, the IDI is generally used to generate four sex role categories by performing median splits of the MASCUL and FEMIN score distributions for the sexes combined, provided that both sexes are accorded equal weight in the calculation of medians. The four sex role categories created by this procedure are designated androgynous (high MASCUL, high FEMIN), masculine-typed (high MASCUL, low FEMIN), feminine-typed (low MASCUL, high FEMIN), and undifferentiated (low MASCUL, low FEMIN).

The MASCUL and FEMIN subscales have been found to be essentially orthogonal. In two large college samples, the correlations between the two subscales were found to be -.05 and -.11 for men and -.16 and -.24
for women (Berzins, Welling, and Wetter, 1977). The SE scale shows a
moderate and positive relation to the MASCUL subscale but little or no
relationship to the FEMIN subscale.

The internal consistency (alpha) coefficients have been sub-
stantial for both subscales. Data gathered from seven separate and
large samples of subjects yielded a median coefficient of .75 for the
MASCUL subscale and a median coefficient of .67 for the FEMIN subscale.
Estimates of temporal stability over a three-week period averaged .81
for both subscales.

Appreciable convergence with their counterparts on the BSRI
(Bem, 1974) and the Personality Attribute Questionnaire (Spence,
Helmreich, and Stapp, 1975) indicated that both the MASCUL and FEMIN sub-
scales embody constructs substantially similar to those found in the
BSRI and the PAQ. This does not suggest, however, that these instru-
ments are interchangeable.

In contrast, correlations between the MASCUL and FEMIN sub-
scales of the IDI and "traditional" Masculinity-Femininity scales
(i.e., Omnibus Personality Inventory Mf Scale; MMPI, Mf Scale) suggest
that the subscales of the PRF ANDRO are quite dissimilar from scales
constructed either on the basis of sex differences in item endorsement
(e.g., the OPI, Mf Scale) or differences between groups differing in
sexual preference (e.g., the MMPI, Mf Scale).

Social desirability has been found to contribute little to
variations in PRF ANDRO or IDI scale scores. It is noted that following
Bem's model (Bem, 1974) most of the items selected for the PRF ANDRO
were positive in tone.
The IDI was used in this study as a measure of behavioral flexibility defined here as the ability to integrate instrumental or task-oriented behaviors with expressive or nurturant-supportive behaviors. This quality, behavioral flexibility, has been identified as necessary for performing effectively in the role of child care worker (Birnbach, 1973) and, therefore, it was hypothesized here that behavioral flexibility would have a direct effect upon experienced burnout.

Scores of behavioral flexibility were established by performing median splits on the MASCUL and FEMIN score distributions for the sexes combined, following the established scoring procedure of the IDI. This procedure created four score categories. Subjects defined in this study as having behavioral flexibility scored high on MASCUL and high on FEMIN; this scoring category is normally referred to as "androgynous" (Berzins, Welling, and Wetter, 1977). There were 27 subjects who fell into this category (males = 14; females = 13). The median score for the MASCUL scale, sexes combined, was 15.96; the median score for the FEMIN scale, sexes combined, was 17.29.

Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) developed by Maslach and Jackson (1981) was designed to assess various phases of the burnout syndrome. Twenty-five items presented in the form of statements about personal feelings or attitudes with each item rated on the dimensions of "frequency" and "intensity" compose the MBI. The frequency scale is labeled at each point and ranges from 1 ("a few times a year or less")
to 6 ("every day"); a separate box is checked if the respondent has never experienced the feeling or attitude described. The intensity scale ranges from 1 ("very mild, barely noticeable") to 7 ("major, very strong"), with points labeled at the end points and at the midpoint of the range. If a respondent has checked "never" for the frequency rating, the intensity scale is not rated.

The MBI was developed from an analysis of 47 items using a two-scale formula; these items were administered to 605 people from a variety of health service occupations. Data obtained from this sample were subjected to a factor analysis using principal factoring with iteration and an orthogonal (varimax) rotation. Ten factors emerged, four of which accounted for over three-fourths of the variance. Items for the final MBI were retained if they had (1) a factor loading greater than .40 on only one of the four factors, (2) a large range of subject response, (3) a very low percentage of subjects checking the "never" response, and (4) a sufficiently high item-total correlation. To confirm the pattern of factors obtained in this preliminary analysis, the new 25-item scale was administered to 420 people in the health and human services professions. The results from the factor analysis on this set of data were very similar to those obtained on the first sample and, therefore, the two samples were combined (n = 1,025) for the final factor analysis of the 25-item MBI.

Factor analysis of the 25-item scale revealed four orthogonal factors accounting for 100 percent of the variance. The three factors with eigenvalues greater than unity are considered subscales of the MBI;
a fourth factor (Personal Involvement) with eigenvalues less than unity is not used as a regular subscale of the MBI although it is sometimes used in research proving to be an interesting variable of burnout.

The subscales of the MBI are (1) the Emotional Exhaustion Scale with items describing feelings of being emotionally exhausted and over-extended by one's work; (2) the Depersonalization Scale with items describing lack of feeling and impersonal responses toward recipients of one's care or service; and (3) the Personal Accomplishment Scale with items describing feelings of competence and successful achievement in one's work with people. A fourth scale, Personal Involvement, measures feelings of personal involvement with people; however, as mentioned above, this scale is not considered a regular subscale of the MBI.

Psychometric properties of the MBI were found to be substantial. Internal consistency (n = 1,025) estimated by Cronbach's coefficient alpha yielded reliability of .76 for frequency and .81 for intensity for the 22 items on the three subscales (Maslach and Jackson, 1981). Split-half reliability for the entire scale was .74 for frequency and .81 for intensity, indicating high internal reliability. Test-retest reliability using two testing sessions separated by two- to four-week intervals was found to be high with all reliability coefficients significant beyond the .001 level suggesting that the MBI is stable over time.

Concurrent validity measured by correlating an individual's MBI score on the three subscales with behavioral ratings made by an individual who knew the respondent well, i.e., spouse, coworker, or
supervisor, also yielded consistently high significant correlations (Maslach and Jackson, 1981). Test of the MBI's discriminant validity proved that burnout is not simply a synonym for job dissatisfaction (Maslach and Jackson, 1981); a comparison of subjects' scores (n = 91) on the MBI and the JDS measure of "general job satisfaction" provided support for this. Furthermore, it has been proven that scores on the MBI are not subject to distortion by a social desirability response set; scores on the MBI (n = 40) were not significantly correlated with scores on the Crowne-Marlowe Social Desirability Scale (Maslach and Jackson, 1981). Although a moderate correlation exists between the Emotional Exhaustion and the Depersonalization Subscales, the Personal Accomplishment Subscale has been found to be independent of the other subscales. Furthermore, the component items of the Personal Accomplishment subscale cannot be assumed to be the opposite of Emotional Exhaustion and/or Depersonalization.

Correlations between the frequency and intensity dimension of each item ranged from .35 to .73 with a mean of .56 (Maslach and Jackson, 1981). These results suggest that while there is a moderate relationship between how often one experiences various feelings and how intensely they are felt, this relationship is far from perfect. Recent research (Gann, 1980; Maslach and Jackson, 1979) has found that these two dimensions are sometimes correlated with different situational and personality variables.

Construct validity was demonstrated in several comparisons of MBI scores with other behavioral variables. Various research efforts
have assessed the correlation between experienced burnout and behavioral responses and feelings states both on the job (Barad, 1979; Maslach and Jackson, 1981) and at home (Maslach and Jackson, 1979). In all cases, correlations were found to be in the direction predicted.

A high degree of burnout as measured by the MBI is reflected in high mean scores on Emotional Exhaustion and Depersonalization and low mean scores on Personal Accomplishment. While normative data are available for the 1,025 subjects used to develop the MBI, as a rule researchers employ comparative analysis of mean scores within their own subject sample, determining relative degrees of experienced burnout as they exist between subjects.

For the purpose of this study, a burnout criterion measure was established by combining the scores of the Emotional Exhaustion—Frequency and the Emotional Exhaustion—Intensity scales and the scores on the Depersonalization—Frequency and the Depersonalization—Intensity scales of the MBI and then performing median splits to create the two categories of "burnt out" and "not burnt out." These four scales were chosen as the criterion measure because they were felt to represent conceptually the effects of burnout as described throughout the theoretical literature (Freudenberger, 1975, 1977; Kramer, 1974; Edelwich and Brodsky, 1980) and the research literature (Maslach, 1976, 1978a, 1978b; Pines and Kafry, 1978; Pines, Aronson, and Kafry, 1981) on burnout. The combined experiences of Emotional Exhaustion and Depersonalization were felt to epitomize the condition of burnout and were therefore chosen rather than the scales of Personal Accomplishment either alone
or in combination with either the Emotional Exhaustion or Depersonalization scales.

In order to validate collapsing the Emotional Exhaustion and the Depersonalization scores into one single score, a factor analysis was performed. The results indicated that the four scales of Emotional Exhaustion—Frequency and Emotional Exhaustion—Intensity, Depersonalization—Frequency and Depersonalization—Intensity all loaded on a single factor. In addition, these four variables accounted for 70 percent of the variance. The scale found to be most representative of Factor I was that of Depersonalization—Frequency. Table 4 presents a breakdown of the results of this classification system by sex, age, marital status, level of education, age of population, and diagnosis of population.

It is noted that scores on the six original Maslach scales were used in statistical procedures testing the relationship of Sick Leave with burnout and the relationship of ratings on the Coworker Rating Form with a subject's scores on scales of the MBI. Table 5 presents the means and the standard deviations of scores obtained by subjects in this study on the six Maslach Burnout Inventory scales.

Coworker Rating Form

The Coworker Rating Form is a 10-item scale developed for this study to provide a measure of burnout that would be independent of a subject's self-report of burnout measured on the Maslach Burnout Inventory. Items for the Coworker Rating Form were taken directly from each of the three scales of the Maslach Burnout Inventory; wording was changed
<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>Marital Status</th>
<th>Level of Education</th>
<th>Age of Population</th>
<th>Diagnosis of Population</th>
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<tbody>
<tr>
<td>N = 38</td>
<td>Males = 20</td>
<td>Single = 28</td>
<td>High School = 1</td>
<td>Child = 6</td>
<td>Mental Retardation = 21</td>
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<tr>
<td></td>
<td>Females = 18</td>
<td>Married = 10</td>
<td>College = 32</td>
<td>Adolescent = 23</td>
<td>Emotional Disturbance = 16</td>
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<tr>
<td>N = 62</td>
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<td>Single = 40</td>
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<td>Child = 7</td>
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<tr>
<td></td>
<td>Females = 32</td>
<td>Married = 22</td>
<td>College = 48</td>
<td>Adolescent = 44</td>
<td>Emotional Disturbance = 28</td>
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<tr>
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<td>Males = 50</td>
<td>Single = 68</td>
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<td>Child = 13</td>
<td>Mental Retardation = 56</td>
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<tr>
<td></td>
<td>Females = 50</td>
<td>Married = 32</td>
<td>College = 80</td>
<td>Adolescent = 67</td>
<td>Emotional Disturbance = 44</td>
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Table 5. Means and standard deviations for scales of Maslach Burnout Inventory

<table>
<thead>
<tr>
<th>Maslach Burnout Scale</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
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<tr>
<td>Emotional Exhaustion—Frequency</td>
<td>2.53</td>
<td>1.15</td>
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<tr>
<td>Emotional Exhaustion—Intensity</td>
<td>3.58</td>
<td>1.43</td>
</tr>
<tr>
<td>Depersonalization—Frequency</td>
<td>1.49</td>
<td>1.13</td>
</tr>
<tr>
<td>Depersonalization—Intensity</td>
<td>1.94</td>
<td>1.51</td>
</tr>
<tr>
<td>Personal Accomplishment—Frequency</td>
<td>4.64</td>
<td>0.98</td>
</tr>
<tr>
<td>Personal Accomplishment—Intensity</td>
<td>5.03</td>
<td>0.89</td>
</tr>
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</table>
to fit the format of this scale. A seven-point scale line was presented for each item; reference labels were provided at both poles and in the center of the rating line. Subjects were instructed to rate an assigned coworker on each of the 10 items. Coworkers were assigned as raters on the basis of the rater's familiarity with their work. Table 6 shows the mean and standard deviation for each item on the Coworker Rating Form.
Table 6. Means and standard deviations of items on Coworker Rating Form

<table>
<thead>
<tr>
<th>Coworker Rating Item</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
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<tr>
<td>1</td>
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<td>1.71</td>
</tr>
<tr>
<td>2</td>
<td>2.21</td>
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</tr>
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<td>3</td>
<td>2.11</td>
<td>1.48</td>
</tr>
<tr>
<td>4</td>
<td>5.11</td>
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<td>5</td>
<td>2.94</td>
<td>1.65</td>
</tr>
<tr>
<td>6</td>
<td>5.09</td>
<td>1.52</td>
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<tr>
<td>7</td>
<td>5.03</td>
<td>1.58</td>
</tr>
<tr>
<td>8</td>
<td>3.70</td>
<td>1.53</td>
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<tr>
<td>9</td>
<td>1.91</td>
<td>1.26</td>
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<tr>
<td>10</td>
<td>5.08</td>
<td>1.31</td>
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</table>
CHAPTER III
RESULTS

It was the major purpose of this study to test a theoretical model which proposes a causal relationship between personality characteristics, job characteristics, and experienced burnout. To test this theory a path analysis was performed. Figure 1 represents the initial path diagram with path coefficients and zero-order correlations presented for each path. The reduced path model is shown in Figure 2.

Path analysis was developed by Wright (1934) as a method to be used in studying the direct and the indirect effects of variables taken as causes upon variables taken as effects. Path analysis has been described as an important tool for theory testing (Kerlinger and Pedhazur, 1973) enabling a researcher to determine whether or not a pattern of correlations for a set of observations is consistent with specific theoretical predictions. Kerlinger and Pedhazur (1973) have noted that path analysis is useful in testing theory but not in generating theory.

Path diagrams (see Figures 1 and 2) are used to display graphically the pattern of causal relationships among a specified set of variables. In a causal model, variables are defined as exogenous, endogenous, and residual. Exogenous variables are those which are assumed to be determined by causes outside the model and, therefore, the variability of an exogenous variable is not considered in testing the
Figure 1. Full path model of burnout
Figure 2. Reduced path model of burnout
model. Endogenous variables are those whose variability is explained either by exogenous variables or by other endogenous variables within the system. Residual variables represent the effect of variables not included in the model; these variables are not generally represented in path diagrams. The causal model presented in this study considered only variables felt to be endogenous to the system. The model presented in this study is a recursive model meaning that the causal flow is unidirectional.

Path coefficients represent the direct effect of a variable taken to be a cause upon a variable taken as an effect. The symbol of a path coefficient is $p$ with two subscripts, the first indicating the effect of the dependent variable and the second representing the independent variable or the cause. Thus, the notation $p_{101}$, as shown in Figures 1 and 2, indicates the direct effects of variable 1, i.e., Ego Development, on variable 10, i.e., Burnout.

Path coefficients are calculated by regressing each endogenous variable of the causal model on all other variables that directly impinge upon it. For example, $p_{41}$ is obtained by regressing variable 4, i.e., Age of Population, on variable 1, i.e., Ego Development. Variables in a causal model are expressed in standardized form (z scores). Application of path analysis is based on several underlying assumptions: (1) relations among the variables in the model are linear, additive, and causal; (2) endogenous variables are developed as linear combinations of exogenous or other endogenous variables in the causal system; (3) there is a one-way causal flow between variables in the system and
thus reciprocal causation between variables is ruled out; and (4) variables are measured on an interval scale.

When variables are expressed in standardized form and the assumptions mentioned above are met, path coefficients, as they are calculated, are essentially equal to standardized regression coefficients (beta weights) obtained in ordinary regression analysis. Path analysis differs from ordinary regression analysis in that in regression analysis, a dependent variable is regressed in a single analysis on all the independent variables under consideration, while in path analysis, more than one regression analysis may be required. In path analysis, beta weights are calculated by regressing a variable taken as a dependent variable on all those variables upon which the dependent variable is assumed to depend. The calculated beta weights are the path coefficients for the paths leading from the particular set of independent variables for that regression to the dependent variable under question. In path analysis, a variable may be treated as a dependent variable in one regression equation and as an independent variable in another.

Finally, one of the main advantages of path analysis over other statistical procedures is that it makes it possible to measure the direct and the indirect effects that one variable has upon the other by allowing the researcher to decompose the correlations between any two variables into simple and compound paths. Correlations are decomposed by developing the equations for the correlation between the two variables with each correlation understood to be a composite of the path coefficients leading to it and then expanding this equation by substituting whenever possible a compound term composed of more elementary terms.
For example, because variable 2 (as shown in Figure 2) is affected by variable 1 only, this decomposed correlation ($r_{12}$) is due solely to the direct effect of variable 1 on variable 2, which means that it is identical to the path coefficient for the path between 1 and 2. To decompose the correlation between variable 1 and variable 3, the formula used would be $r_{13} = \beta_3 + \beta_2 \beta_1$. From this formula, it can be seen that the decomposed correlation between variable 1, i.e., Ego Development, and Variable 3, i.e., Vocational Interest Pattern, is made up of two components. The direct effects of variable 1 (Ego Development) on variable 3 (Vocational Interest Pattern) are indicated by $\beta_3$, while the term $\beta_2 \beta_1$ represents the indirect effects of variable 1 (Ego Development) on variable 3 (Vocational Interest Pattern) as it passes through variable 2 (Behavioral Flexibility).

The standard criterion of $p$ (path coefficient) < .05 was used to delete paths from the initial model (Kerlinger and Pedhazur, 1973). After deleting nonsignificant paths, new multiple regressions were computed using only the retained variables. The total amount of variance accounted for was .2344 for the full model and .2339 for the reduced model.

The results of the path analysis as they relate specifically to the predictions stated in the previous section were as follows:

1. Direct effects of personality characteristic variables upon job characteristic variables were found for Ego Development on Age of Population ($p_{41} = .06$), Diagnosis of Population ($p_{51} = .11$), and General Satisfaction—JDS4 ($p_{91} = -.08$).

Direct effects were shown for the personality characteristic variable of Behavioral Flexibility upon the job characteristic variables of General Satisfaction.
with Work ($p_{92} = .07$) and Knowledge of Results of Work ($p_{82} = .13$).

Direct effects were shown for the personality characteristic variable of Vocational Interest Pattern upon the job characteristic variables of Age of Population ($p_{43} = -.09$), Meaningfulness of Work ($p_{63} = .15$), and General Satisfaction with Work ($p_{93} = .14$).

Results of the final path analysis established that the personality characteristic variable of Ego Development has a direct effect upon the job characteristic variable of Responsibility for Outcome ($p_{71} = .24$). The job characteristic variable of Responsibility for Outcome, while showing no direct effects upon Burnout, did show a direct effect on the job characteristic variable of General Satisfaction with Work ($p_{97} = -.08$), which in turn was established as having a direct effect upon Burnout ($p_{109} = -.22$).

2. A direct effect of personality characteristic variables upon Burnout was established only for the variable of Ego Development ($p_{101} = .21$).

3. Direct effects between personality characteristic variables were found for Ego Development on Behavioral Flexibility ($p_{21} = .20$), for Ego Development on Vocational Interest Pattern ($p_{31} = .20$), and for Behavioral Flexibility on Vocational Interest Pattern ($p_{32} = -.11$).
4. Direct effects upon Burnout were shown for the job characteristic variables of Age of Population ($p_{104} = .07$), Diagnosis of Population ($p_{105} = -.07$), Meaningfulness of Work ($p_{106} = -.28$), Knowledge of Results ($p_{108} = -.09$), and General Satisfaction with Work ($p_{109} = -.22$).

5. Direct effects were found between several of the job characteristics variables. Age of Population was found to have direct effects upon Diagnosis of Population ($p_{54} = -.44$), upon Responsibility for Outcome ($p_{74} = -.11$), upon Knowledge of Results ($p_{84} = .19$), and upon General Satisfaction with Work ($p_{94} = .12$). A direct effect was shown for Diagnosis of Population upon Responsibility for Outcome ($p_{95} = -.15$). A direct effect was shown for Responsibility for Outcome on Meaningfulness of Work ($p_{67} = .48$) and for Knowledge of Results on Meaningfulness of Work ($p_{68} = .16$). A direct effect was shown for Knowledge of Results on Responsibility for Outcome ($p_{78} = .19$). Direct effects were also found for Meaningfulness of Work on General Satisfaction ($p_{96} = .38$), for Responsibility for Outcome on General Satisfaction ($p_{77} = -.08$), and for Knowledge of Results on General Satisfaction ($p_{98} = .11$).

Indirect effects were indicated for all of the job characteristic variables in that each variable
directly influenced one or more of the other job characteristic variables which in turn had a direct effect upon Burnout.

Table 7 presents a summary of the direct, indirect, and total causal effects for all variables as they were regressed upon each of the dependent variables within the path analysis. The total causal effect was computed for each of these antecedent variables by the procedure outlined by Kerlinger and Pedhazur (1973, pp. 314-317). This involved computing the direct effect (defined by the path coefficient) of one variable upon another and then adding to this the calculated indirect effects of each subsequent variable upon the defined dependent variable. Indirect effects for each pair of variables were computed by subtracting the path coefficients from the zero-order correlations of variables. The direct effects were then computed by subtracting the indirect effect from the total causal effect for each of the variable pairs. This decomposition of zero-order correlations has been established as a procedure used to distinguish between "true correlations," which do imply causation and "spurious" correlations which do not (Simon, 1954).

6. A stepwise multiple regression analysis was performed using the SPSS Regression subroutine to test the prediction that there was a positive relationship between the amount of Sick Leave and Personal Use Leave taken by a subject and the burnout criterion measure which was defined for this analysis as the scores obtained by
Table 7. Decomposition of the effects from path analysis using reduced model

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<th></th>
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<th>Indirect Effect</th>
<th>Total Causal Effect</th>
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<th>Reduced Model</th>
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<td>.0431</td>
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<td>.1953</td>
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<td>.014</td>
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<td>of Vocational Interest Pattern</td>
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<td>-.089</td>
<td>.010</td>
<td>-.079</td>
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<td>Effects on Diagnosis of Population of Ego Development</td>
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<td>.111</td>
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<td>.1953</td>
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<tr>
<td>of Behavioral Flexibility</td>
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<td>.016</td>
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Table 7—Continued

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<thead>
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</tr>
<tr>
<td>Zero Order Correlation</td>
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<td>Indirect Effect</td>
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<td>Effects of Knowledge on Results (JDS 3)</td>
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<td></td>
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<tr>
<td>of Knowledge of Results of Work (JDS 3)</td>
<td>-.1880</td>
<td>-.100</td>
<td>-.100</td>
</tr>
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</table>
a subject on all six of the Maslach Burnout Inventory scales.

Sick Leave and Personal Use Leave data were available for 89 of the subjects who participated in this study. The average number of Sick Leave and Personal Use days taken by subjects during the time period of September 1 through December 31, 1981, was 2.5 days. The Foundation allows each employee eight sick leave days and two personal use days per year. In addition, Foundation policy dictates that inability to come to work due to weather conditions be counted as a Sick Leave Day for an individual. Also significant is an observational analysis of institutional living with regard to a pattern of outbreak of physical illness which suggests that a greater amount of contagious physical disease is treated during the winter quarter, i.e., January through March, of each year. Therefore, to control for biasing of results of this analysis in favor of increased number of Sick Leave Days used, the period of time chosen to measure the amount of leave time taken was September through December, a time period during which the probability of weather conditions and of contagious physical disease necessitating use of Sick Leave and/or Personal Use days would be low.
A positive relationship was found between the amount of Sick Leave and Personal Use Leave days taken by subjects and their score on the Emotional Exhaustion—Frequency scale of the Maslach Burnout Inventory ($F = 4.42; \text{ df } = 1/87$). No significant relationship was found between the amount of Sick Leave and Personal Use Leave taken and the other scales of the Maslach Burnout Inventory (Emotional Exhaustion—Intensity; Depersonalization—Frequency, Depersonalization—Intensity; Personal Accomplishment—Frequency; Personal Accomplishment—Intensity).

7. A canonical correlation using the SPSS Cancorr subroutine was performed to determine the relationship between a subject's score on the six scales of the Maslach Burnout Inventory and his score on the Coworker Rating Form developed for this study as an assessment of a subject's experience of burnout made by a coworker who was familiar with the subject's job performance.

Data from Coworker Rating Forms were available for 91 of the subjects who participated in this study. No canonical correlation was found at the .05 level of significance indicating that there was no significant relationship between ratings on the Coworker Rating Form and scores on the scales of the Maslach Burnout Inventory.
CHAPTER IV
DISCUSSION

This chapter presents interpretation and theoretical explanation for the direct effects represented in the reduced path model shown in Figure 2 and for the indirect causal effects presented in Table 7. Discussion of methodological and conceptual considerations for future research designed to test theoretical models of burnout is also presented.

The causal model of burnout proposed in this study was supported by the results of the path analysis used to test the model in that not only job characteristics but also personality characteristics were found to have a direct effect upon the criterion measure of Burnout which was defined for the purpose of this study by combining scores on the Emotional Exhaustion—Frequency and the Emotional Exhaustion—Intensity scales and scores on the Depersonalization—Frequency and the Depersonalization—Intensity scales of the Maslach Burnout Inventory and then performing median splits to create classification scores of "burnt out" and "not burnt out." Causal effects were supported by the path coefficients between the personality characteristic variable of Ego Development and Burnout and by the path coefficients between the job characteristic variables of Age of Population and Burnout, Diagnosis of Population and Burnout, Meaningfulness of Work (JDS1) and Burnout, Knowledge of Results of Work (JDS2) and Burnout, and General Satisfaction with Work (JDS4) and Burnout.
Direct Effects of the Personality Characteristic Variables

The path coefficient between Ego Development and Burnout ($p_{101} = .21$) indicated that for this sample of subjects the higher an individual's level of ego development, the higher his or her score will be on the burnout criterion measure previously defined. This finding, while consistent with the prediction that the personality characteristic variable of Ego Development would have a direct effect upon Burnout, was at the same time inconsistent with the predicted direction of that effect and with the theoretical rationale used to include level of ego development as a personality variable within this causal model of burnout. It had been assumed that level of ego development, taken to represent a measure of emotional maturity and emotional stability, would aid an individual in dealing with job-related stress. A higher level of ego development was therefore assumed to be an asset in coping with burnout. The results of this study would suggest that a higher level of ego development as defined by Loevinger (Loevinger and Wessler, 1970), may in fact be a liability rather than an asset in coping with job-related burnout for this category of child care worker.

Theoretically, the above finding can be explained by the fact that individuals with higher levels of ego development, i.e., above level I-3, as defined in Loevinger's hierarchical stage theory (Loevinger and Wessler, 1970), while better equipped cognitively and emotionally to handle stress, are at the same time handicapped in their struggle with stress by possessing a high motivation for achievement, by being excessively conscientious about their work, by possessing a strong sense
of responsibility for getting things done, by being very intense in their interpersonal interactions and by being overly self-critical in assessing their accomplishments. All of these attributes or qualities have been cited in the burnout literature as factors contributing to an individual's susceptibility to burnout (Daley, 1979; Edelwich and Brodsky, 1980; Pines, Aronson, and Kafry, 1981).

In addition, when the theoretical conceptualization of ego development is considered relative to the job conditions inherent within the occupation of residential child care worker, the results presented above are better understood. It can be assumed that individuals with higher levels of ego development who work with individuals who are seriously enough emotionally disturbed or mentally retarded to require residential placement are likely to feel less in control of the interventions that they make in their efforts to produce change and improvement for their clients, and are thus more likely to experience burnout. In this sample of residential child care workers, two of the three individuals who were assessed as having the highest level of ego development for this group of subjects, i.e., level I-4/5, were also classified according to the above-mentioned criterion as "burnt out." Accordingly, it can also be assumed that individuals who have reached high levels of ego development and who work in jobs that allow for greater feelings of control over the interventions or efforts made in that job, will not be as likely to burnout. This understanding of how level of ego development and job conditions can interact to affect an individual's experience of burnout represents the basic underlying
conceptual rationale for the theoretical model of burnout proposed and tested in this study.

The personality variable of Ego Development was also found to have a direct effect upon the personality variables of Behavioral Flexibility ($p_{21} = .20$) and Vocational Interest Pattern ($p_{31} = .20$), indicating that subjects classified as behaviorally flexible showed higher levels of ego development and subjects with vocational interest pattern scores, previously defined as most closely correlated with a criterion measure of burnout, showed higher levels of ego development. Individuals rated as having reached a higher level of ego development will, by Loevinger's conceptual definition of higher ego levels, be characterized by greater cognitive complexity and thus a greater ability to consider different and often disparate alternatives or issues when problem solving or performing behaviorally (Loevinger and Wessler, 1970). This quality is consistent with the definition of behavioral flexibility used in this study. Thus it follows that higher levels of ego development would allow an individual to experience greater behavioral flexibility.

Interpretation of the direct effect of Ego Development upon Vocational Interest Pattern is restricted by the limitations of the type of scores, i.e., cannonical variate scores, used to represent Vocational Interest Pattern in this study. The direct causal effects of level of ego development upon vocational interest pattern suggested that subjects with higher levels of ego development chose a vocational interest pattern established in this study as positively related to the criterion measure of burnout described in Chapter II.
The direct causal effects established between Ego Development and the job characteristic variables of Age of Population ($p_{41} = .06$), Diagnosis of Population ($p_{51} = .11$), Responsibility for Outcome of Work (JDS2) ($p_{71} = .24$), and General Satisfaction with Work (JDS4) ($p_{91} = -.08$) would indicate that subjects in this study rated as having reached higher levels of ego development worked with residents who were older, worked with residents who were emotionally disturbed, perceived themselves as having greater responsibility for the results of their work, and reported lower feelings of general satisfaction with their work.

This last finding contradicts the theoretical rationale used to include the General Satisfaction with Work scale of the Job Diagnostic Survey as a "perceived" job characteristic variable in testing the causal model of burnout. The assumption had been made that higher levels of ego development would positively affect an individual's feelings of general satisfaction with his work. Following Loevinger's conceptualization of higher levels of ego development (Loevinger and Wessler, 1970), the above findings may be understood in that while individuals having reached higher levels of ego development may in fact be more capable of arranging events so that they perceive their work as more satisfying, they are also characteristically more motivated toward achievement, hold greater feelings of responsibility for accomplishing goals, and greater feelings of guilt when they fail to accomplish goals, and are generally more self-critical than individuals at lower levels of ego development; all of these qualities may be assumed to contribute to lowered feelings of satisfaction with one's job, especially when that job involves direct
service care to seriously handicapped individuals who often fail to accomplish the goals established by the child care worker.

The direct effect of Ego Development upon the "actual" job characteristic variables of Age of Population and Diagnosis of Population suggested that subjects who were rated as having reached higher levels of ego development worked with older residents and worked with residents who were diagnosed as emotionally disturbed. These findings suggested that for this sample of subjects, level of ego development may have influenced their choice regarding the age of residents, i.e., adults or adolescents versus children with whom to work as well as their choice of the diagnostic classification, i.e., emotionally disturbed versus mentally retarded, of residents with whom to work. It is suggested here that this finding of the effect of ego level on choice of resident population with whom to work may reflect the traditional, perhaps culturally stereotyped assumption, that children and mentally retarded individuals require less skill and ability to work with than is required in working with adolescents and adults and emotionally disturbed individuals. This consideration has been discussed by other authors (Doernberg, 1980). In addition, in line with Loevinger's (Loevinger and Wessler, 1970) conceptual constructs of the higher levels of ego development, i.e., above the I-3 level, it may be assumed that the strong need for achievement and for accomplishment of goals will be less frequently fulfilled in work with residents who are children and/or mentally retarded. Therefore, these two groups of residents may not be chosen to be worked with by individuals with higher levels of ego development.
Finally, the direct effect of Ego Development upon the job characteristic variable of Responsibility for Outcome of Work (JDS2) was not only consistent with the prediction that level of ego development will have a direct effect upon feelings of responsibility for the outcome of one's work, but also with the theoretical rationale from which this prediction was derived. Loevinger (Loevinger and Wessler, 1970) describes a strong sense of responsibility for the results of one's actions as emerging from the I-3/4 level and becoming fully developed at the I-4 level. Therefore, it is assumed that individuals with higher levels of ego development will perceive their jobs as providing them with responsibility for the outcome of their work not only in terms of actual job conditions but also because these individuals would perceive themselves as more responsible for their efforts than would individuals functioning at lower levels of ego development.

The direct causal effects identified for the personality characteristic variable of Behavioral Flexibility upon the personality characteristic variable of Vocational Interest Pattern ($p_{32} = -.11$) and upon the "perceived" job characteristic variables of Knowledge of Results of Work (JDS3) ($p_{82} = .13$) and General Satisfaction with Work (JDS4) ($p_{92} = .07$) suggested that subjects in this study who were classified as behaviorally flexible did not show a vocational interest pattern that was positively correlated with a criterion measure of burnout and that subjects classified as behaviorally flexible scored higher on those JDS subscales measuring feelings that one's job provides feedback regarding the results of work and feelings of general satisfaction with one's job.
Finally, the direct effects of the personality characteristic variable of Vocational Interest Pattern upon the job characteristic variables of Age of Population \( (p_{43} = -.09) \), Meaningfulness of Work \( (JDS1) (p_{63} = .15) \), Knowledge of Results \( (JDS3) (p_{83} = .07) \), and General Satisfaction with Work \( (JDS4) (p_{93} = .14) \) indicated that subjects who had a vocational interest pattern score which was positively correlated with a burnout criterion measure, worked with younger residents, perceived their work as meaningful, perceived their job as providing them with knowledge of the results of their work, and experienced feelings of general job satisfaction.

**Direct Causal Effects of the Job Characteristic Variables**

The causal implications supported by the path coefficients between the "actual" job characteristic variables of Age of Population \( (p_{104} = .07) \) and Diagnosis of Population \( (p_{105} = -.07) \) and the criterion measure of Burnout suggested that for this sample of child care workers, those individuals who worked with older residents scored higher on the criterion measure of Burnout, while those individuals who scored lower on the criterion measure of Burnout worked with residents having a primary diagnosis of emotional disturbance. The direct effect of Age of Population upon Diagnosis of Population \( (p_{54} = -.44) \) suggested that the older the residents worked with, the more likely they will be diagnosed as mentally retarded. This finding is validated by a census analysis of the patient population of the Devereux Foundation.

The direct causal effects of the Age of Population upon the perceived job characteristics of Responsibility for Outcome \( (JDS2) \)
(p_{74} = -.11), Knowledge of Results (JDS3) (p_{84} = .19) and General Satisfaction with Work (JDS4) (p_{94} = .12) supported the prediction that the age of residents with whom an individual works will influence his or her perception about his or her job. These findings suggested that the older the residents worked with, the less workers in this sample felt responsible for the end results of their work, the more likely they were to perceive their job as providing them with knowledge of the results of their work, and the higher their feelings of general job satisfaction.

Causal implications were supported by the path coefficient between the "actual" job characteristic variable of Diagnosis of Population and the "perceived" job characteristic variable of Responsibility for Outcome (JDS2) (p_{75} = -.15) with the indication that child care workers who worked with mentally retarded residents scored higher on this JDS scale measuring perceptions of responsibility for the end results of one's work. This finding also supports the prediction that the diagnosis of the residents with whom one works will affect the individual's perceptions about his or her work.

The direct causal effects of the perceived job characteristic variables of Meaningfulness of Work (JDS1) (p_{106} = -.28), Knowledge of Results (JDS2) (p_{108} = -.22) on the criterion measure of Burnout suggested that for this sample of child care workers, the greater an individual's experienced meaningfulness of his or her work, the more the individual perceived his or her job as providing knowledge of the results of his or her work, and the greater the feelings of general job satisfaction, the more likely an individual worker would be classified
as "not burnt out." Each of these causal effects is consistent with the prediction that how an individual perceives his or her job will have a direct effect upon that individual's experience of job burnout. More specifically, these findings support the underlying theoretical rationale for this prediction; that is, positive perception of one's job will decrease the likelihood of job burnout. These findings are noted to be consistent with the findings of an earlier study which also considered the relationship between a criterion measure of burnout (Maslach Burnout Inventory) and perceived job characteristics as measured by the Job Diagnostic Survey (Maslach and Jackson, 1981).

Direct causal effects were also established between the perceived job characteristic variables. As predicted, the perceived job characteristic variables of Responsibility for Outcome (JDS2) (p = .48) and Knowledge of Results (JDS3) (p = .16) were both found to have direct, positive effects upon the job characteristic variable of Meaningfulness of Work (JDS1). These findings suggested that for this sample of child care workers, those individuals who perceived themselves as responsible for the outcome of their work and who perceived their jobs as providing them with information regarding the results of their work experienced their work as more meaningful than did those workers who did not hold these perceptions. The final path model also supported a direct causal effect of the perception that the job provides information or knowledge regarding the results of one's work upon feelings of responsibility for the outcome of one's work. These findings were consistent with predictions.
Finally, as predicted, direct causal effects were supported in the obtained path model for the positive effects of Meaningfulness of Work (JDS1) ($p_{g6} = .38$) and Knowledge of Results (JDS3) ($p_{g8} = .11$) upon an individual's feelings of general job satisfaction as measured by the JDS scale of General Satisfaction with Work. These findings were consistent with the theoretical rationale offered by this author and by Hackman and Lawler (1971) in the theoretical conceptualization of the JDS. The negative path coefficient found between Responsibility for Outcome (JDS2) and General Satisfaction with Work (JDS4) ($p_{g7} = -.08$) was not consistent with the prediction that how responsible a worker feels for the results of his work would positively influence his feelings of general job satisfaction.

**Indirect Effects upon the Criterion Measure of Burnout**

In addition to the direct effects or influence of the personality characteristic variables and the job characteristic variables, significant indirect effects were also found. As shown in Table 7, indirect causal effects were computed for each personality characteristic and job characteristic variable upon the various dependent variables by subtracting the path coefficient from the zero-order correlation of the two variables.

Of the personality characteristic variables, only Vocational Interest Pattern ($TIE_{103} = -.052$) showed a significant indirect effect upon the criterion measure of Burnout. This indirect effect suggested that as direct effects of the personality characteristic variable of
Vocational Interest Pattern occurred on the "actual" job characteristic variable of Age of Population and on the "perceived" job characteristic variables of Meaningfulness of Work (JDS1), Knowledge of Results (JDS3), and General Satisfaction with Work (JDS4), a negatively correlated indirect effect was created on the criterion measure of Burnout by the variable of Vocational Interest Pattern.

Those job characteristic variables which showed significant indirect effects upon the criterion measure of Burnout were Age of Population (TIE\textsubscript{104} = -.12); Meaningfulness of Work (JDS4) (TIE\textsubscript{106} = -.09); Responsibility for Outcome (JDS3) (TIE\textsubscript{107} = -.13); Knowledge of Results (JDS3) (TIE\textsubscript{108} = -.10); and General Satisfaction with Work (JDS4) (TIE\textsubscript{109} = -.12). These findings of significant indirect effects represent the influence these variables have upon the criterion measure of Burnout as a result of their direct impact or influence upon other antecedent variables in the path model.

Computed causal effects presented in Table 7 revealed that the indirect effects created by the personality characteristic variable of Ego Development upon the "perceived" job characteristic variable of Meaningfulness of Work (JDS1) were so significant that when the correlations were decomposed a significant direct effect was created (P\textsubscript{61} = -.168). This path had been dropped from the original path model for failure to meet the criterion of significance (P < .05; P\textsubscript{61} = -.047) for inclusion in the second path analysis. This finding strongly supported the importance of indirect causal effects in developing and in testing causal models. Conceptually, the significance of the indirect
causal effects of the antecedent variables in the causal model of burnout presented in this study provides further support for the underlying theoretical framework for the model. That is to say, how an individual experiences burnout may best be understood as a result of the combined effects of individual personality characteristics and characteristics, both actual and perceived, of the job. This would therefore include not only the isolated direct effects of each group of variables upon burnout, but also the indirect effects created on burnout as one antecedent variable influences other antecedent variables within this model.

**Interpretation of the Results of Validational Predictions**

The positive relationship between the amount of Sick Leave and Personal Use Leave taken by the child care workers used as subjects in this study indicated that individuals who scored higher on the MBI scale measuring frequency of emotional exhaustion used more Sick Leave and Personal Use Leave during the time period of September through December 1981. Thus, for this sample of residential child care workers, how frequently an individual experienced emotional exhaustion was directly related to how much Sick Leave and Personal Use Leave he or she took. These results were consistent with the research findings and the theoretical assumptions reported in earlier studies (Maslach and Jackson, 1981; Maslach and Pines, 1977; Pines, Aronson, and Kafry, 1981) in which sick leave was either found to be or hypothesized to be positively correlated with an individual's score on a criterion measure of burnout.
The failure to obtain significant results in assessing the relationship between an individual's self-report measure of his or her experience of burnout and a rating made by a coworker on how he or she perceives that individual relative to the degree of burnout experienced may be explained by the limitations of the scale used by coworkers to assess the fellow employee's experience of burnout. A factor analysis of the Coworker Rating Form revealed different item loadings for factors on this scale than those found by Maslach and Jackson (1981) for the Maslach Burnout Inventory. Future research should use the same scale for coworker ratings of a subject as is used by subjects in their self-report assessment of burnout. Finally, it is observed that despite the observable behavioral correlates of burnout cited in the literature (Freudenberger, 1975, 1977; Pines and Maslach, 1978), conceptually, the experience of burnout may in fact be too much of an intrapersonal experience to be assessed accurately other than in its most severe stages, i.e., Burnout Mental Disorder as defined by Paine (1981), by a coworker.

Considerations for Future Research

Future research studies designed to test theoretical or causal models of burnout might benefit not only from the knowledge that significant causal effects were supported by the final, reduced path model obtained in this study but also from knowledge of the methodological flaws of the present study. Caution should be taken in the development of subsequent research studies to include an equal number of personality characteristic variables and job characteristic variables when
testing the causal model. The inclusion of more job characteristic variables than personality characteristic variables in the present path model automatically inflated the amount of variance and the number of direct effects accounted for by the job characteristic variables.

Consideration should also be given to refining the selection criterion for personality characteristics to be included in the causal model. This is necessary not only at the level of developing a theoretical rationale for including a personality characteristic in a causal model, but also in determining how these variables are operationally defined, i.e., tests and measures to be used, in testing the model. Personality traits such as individual problem-solving skills and coping strategies or skills might better be used in testing the theoretical model proposed in this study. A measure of ego strength, rather than ego development, might more accurately assess an individual's coping abilities relative to the experience of burnout. Other personality characteristics that might be expected to have direct causal effects upon burnout would be cognitive complexity, attribution of responsibility and perception of job-related stress. This last characteristic, perception of job-related stress, might be conceptually understood according to Selye's dichotomy of experienced stress in terms of distress, i.e., bad stress, versus eustress, i.e., good stress (Selye, 1974, 1976). It would appear to be of value in developing a causal model of burnout to consider the effects of an individual's perception of stress upon burnout, based on the assumption that what is experienced as "distress" for one individual might be perceived or experienced as
"eustress" for another and thus would influence the experience of burnout.

While an individual's perceptions of his job, as stated in Chapter I, have been established to be the most critical factors in understanding the effect of job conditions upon the individual (Hackman and Lawler, 1971), the inclusion of a third-party, objective assessment of job conditions in a causal model of burnout is recommended. This additional job characteristic variable would serve as a validational check of the individual's perceptions of his or her job against a more objective perception of the job conditions, allowing for an assessment of discrepancies between actual and perceived job characteristics as well as an assessment of how each of these variables influences the experience of burnout.

Longitudinal studies such as those conducted by Cherniss (1980) are also recommended. Such studies allow not only for better understanding of the causal implications supported in a test of a theoretical model of burnout, but also for establishing a greater understanding of the burnout process (Paine, 1981).

Finally, the advantage of using test instruments or assessment techniques that will provide interval-level rather than nominal-level data should not be overlooked in future studies testing causal models of burnout. Interpretation of the results in the present study were in some cases limited, i.e., with the score used for the variable of Vocational Interest Pattern, due to the necessity of creating an interval-level variable from data provided by scales using nominal-level of measurement.
Conclusions

The reduced path model obtained in this study supported the theoretical model of burnout which proposed that the experience of burnout is directly affected not only by characteristics of the job but also by personality characteristics of the individual worker. It was established by the results of this study that both personality characteristics and job characteristics as operationally defined in this study have direct effects upon a criterion measure of burnout, created for the purpose of this study by performing median splits on the combined scores for the two Emotional Exhaustion Scales and for the two Depersonalization scales of the Maslach Burnout Inventory in order to create a classification category of "burnt out" and "not burnt out." Job characteristic variables, i.e., Age of Population, Diagnosis of Population, Meaningfulness of Work (JDS1), Knowledge of Results (JDS3), and General Satisfaction with Work (JDS4), were found to have the most direct effect upon the criterion measure of burnout. A direct effect was also supported for the personality characteristic variable of Ego Development, although the direction of this effect was inconsistent with the originally predicted negative correlation of level of ego development with the criterion measure of burnout. Significant indirect effects were also established between both personality characteristic variables and the criterion measure of burnout and job characteristic variables and the criterion measure of burnout.

The greater number of direct effects found for job characteristic variables versus personality characteristic variables upon the
criterion measure of burnout may reflect a methodological flaw in the
design of the present study rather than greater causal significance of
job characteristics upon burnout.

Recommendations were presented for future research studies
designed to expand and to strengthen the theoretical model of burnout
proposed in the present study. Methodological weaknesses of the current
research design were also discussed to aid in the development of better
causal models to be used in testing the present theory of burnout or in
testing new theories of burnout.
APPENDIX
INFORMED CONSENT FORM

Subject's Name ________________________ Code # ________________________

Protocol # ________________________

Project Title: The Effect of Perceived Job Characteristics and Personality Variables upon Experienced Burnout among Residential Child Care Workers

Any job that requires a person to help or to care for others is a job that involves special talents and abilities in relating to people. Such a job can also involve a good deal of stress. Prolonged stress that is job related can lead to a condition known as burnout. It is the purpose of this study to consider the effect that a person's perceptions and feelings about his job combined with certain personality characteristics will have upon how the individual copes with burnout.

Please read the following statements before signing the attached consent forms:

1. I understand that participation in this study will involve the completion of (a) a biographical data sheet; (b) five (5) pencil-paper questionnaires; and (c) a rating form on one of my coworkers. I understand that it is estimated that it will take between two and two and one-half hours to complete all questionnaires and rating forms.

2. I understand that participation in this study will involve no risk or accompanying discomfort either physically or psychologically to myself or to any other subject.

3. I understand that I will not be compensated monetarily for my time taken to participate in this study.

4. I understand that I will benefit from participating in this study by developing an increased awareness of my feelings and perceptions pertaining to myself and to my job. I also understand that following the completion of this study a brief written report will be made available to me upon request outlining the overall findings of the study.

5. I understand that confidentiality is insured to the extent provided by the law and by the professional code of ethics of the American Psychological Association which are adhered to by the principal investigator.
I have fully explained to ________________________ the nature and the purpose of the above-described procedure and the risks that are involved in its performance. I have answered and will answer all questions to the best of my ability.

_____________________________  
Name and signature of person obtaining consent

I have been fully informed of the above-described procedure with its possible benefits and risks and have received a copy of this description. I have given permission for my participation in this study.

I understand that I am free to withdraw this consent and to discontinue participation in this project at any time without its affecting my job. Furthermore, I agree that the information gained from this study may be used for educational purposes which may include publication.

_____________________________  
Signature of Subject

Witness to Signature  
Date

_____________________________  
Signature of Principal Investigator  
Date
BIOGRAPHICAL DATA SHEET

1. Age: __________
2. Sex: Male ______ Female ______
3. Marital Status: Single ______ Married ______
   Divorced ______ Engaged ______
4. Years of Completed Educations:
   High School __________
   College:
   1 year __________
   2 years __________
   3 years __________
   4 years __________
   Graduate School __________
5. What is the chronological age range of most of the Devereux residents with whom you work?
   Children (5 years to 12 years) __________
   Adolescents (13 years to 20 years) __________
   Young Adults (21 years to 35 years) __________
   Older Adults (36 years to 75 years) __________
6. What is the primary diagnosis of the residents with whom you work?
   Mental Retardation __________
   Emotionally Disturbed __________
   Multiple Handicapped, i.e., MR and ED __________
This questionnaire was developed as part of a study of jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

On the following pages, you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 25 minutes to complete the entire questionnaire. Please move through it quickly.

The questions are designed to obtain your perceptions of your job and your reactions to it. There are no "trick" questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible. Thank you for your cooperation.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below.

A. To what extent does your job require you to work with mechanical equipment?

1 --------- 2 --------- 3 --------- 4 --------- 5 --------- 6 --------- 7

Vary little; the job requires almost no contact with mechanical equipment of any kind. Moderately

Vary much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time—but also requires some paperwork—you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.
1. To what extent does your job require you to work closely with other people (either clients, or people in related jobs in your own organization)?

<table>
<thead>
<tr>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little; dealing with other people is not at all necessary to doing the job.</td>
<td>1</td>
</tr>
<tr>
<td>Moderately; some dealing with others is necessary.</td>
<td>2</td>
</tr>
<tr>
<td>Very much; dealing with other people is an absolutely essential and crucial part of doing the job.</td>
<td>3</td>
</tr>
</tbody>
</table>

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

<table>
<thead>
<tr>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little; the job gives me almost no personal &quot;say&quot; about how and when the work is done.</td>
<td>1</td>
</tr>
<tr>
<td>Moderately; many things are standardized and not under my control, but I can make some decisions about the work.</td>
<td>2</td>
</tr>
<tr>
<td>Very much; the job gives me almost complete responsibility for deciding how and when the work is done.</td>
<td>3</td>
</tr>
</tbody>
</table>

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

<table>
<thead>
<tr>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.</td>
<td>1</td>
</tr>
<tr>
<td>My job is a moderate-sized &quot;chunk&quot; of the overall piece of work; my own contribution can be seen in the final outcomes.</td>
<td>2</td>
</tr>
<tr>
<td>My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.</td>
<td>3</td>
</tr>
</tbody>
</table>

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

<table>
<thead>
<tr>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little; the job requires me to do the same routine things over and over again.</td>
<td>1</td>
</tr>
<tr>
<td>Moderate variety</td>
<td>2</td>
</tr>
<tr>
<td>Very much; the job requires me to do many different things, using a number of different skills and talents.</td>
<td>3</td>
</tr>
</tbody>
</table>
5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1—2—3—4—5—6—7
Not very significant; the outcomes of my work are not likely to have important effects on other people.

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.

6. To what extent do managers or co-workers let you know how well you are doing on your job?

1—2—3—4—5—6—7
Very little; people almost never let me know how well I am doing.

Moderately; sometimes people may give me "feedback," other times they may not.

Very much; managers or co-workers provide me with almost constant "feedback" about how well I am doing.

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing—aside from any "feedback" co-workers or supervisors may provide?

1—2—3—4—5—6—7
Very little; the job itself is set up so I could work forever without finding out how well I am doing.

Moderately; sometimes doing the job provides "feedback to me; sometimes it does not.

Very much; the job is set up so that I get almost constant "feedback" as I work about how well I am doing.
SECTION TWO

Listed below are a number of statements which could be used to describe a job. You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job—regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Inaccurate</td>
<td>Inaccurate</td>
<td>Slightly Inaccurate</td>
<td>Uncertain</td>
<td>Slightly Accurate</td>
<td>Mostly Accurate</td>
<td>Accurate</td>
<td></td>
</tr>
</tbody>
</table>

1. The job requires me to use a number of complex or high-level skills.
2. The job requires a lot of cooperative work with other people.
3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
4. Just doing the work required by the job provides many chances for me to figure out how well I am doing.
5. The job is quite simple and repetitive.
6. The job can be done adequately by a person working alone—without talking or checking with other people.
7. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing on my work.
8. This job is one where a lot of other people can be affected by how well the work gets done.
9. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
10. Supervisors often let me know how well they think I am performing the job.
11. The job provides me the chance to completely finish the pieces of work I begin.
12. The job itself provides very few clues about whether or not I am performing well.
13. The job gives me considerable opportunity for independence and freedom in how I do the work.
14. The job itself is not very significant or important in the broader scheme of things.
SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1. It's hard, on this job, for me to care very much about whether or not the work gets done right.
2. My opinion of myself goes up when I do this job well.
3. Generally speaking, I am very satisfied with this job.
4. Most of the things I have to do on this job seem useless or trivial.
5. I usually know whether or not my work is satisfactory on this job.
6. I feel a great sense of personal satisfaction when I do this job well.
7. The work I do on this job is very meaningful to me.
8. I feel a very high degree of personal responsibility for the work I do on this job.
9. I frequently think of quitting this job.
10. I feel sad and unhappy when I discover that I have performed poorly on this job.
11. I often have trouble figuring out whether I'm doing well or poorly on this job.
12. I feel I should personally take the credit or blame for the results of my work on this job.
13. I am generally satisfied with the kind of work I do in this job.
14. My own feelings generally are not affected much one way or the other by how well I do on this job.
15. Whether or not this job gets done right is clearly my responsibility.
How satisfied are you with this aspect of your job?

<table>
<thead>
<tr>
<th></th>
<th>Extremely Dissatisfied</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Extremely Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. The amount of job security I have.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2. The amount of pay and fringe benefits I receive.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3. The amount of personal growth and development I get in doing my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4. The people I talk to and work with on my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5. The degree of respect and fair treatment I receive from my boss.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6</td>
<td>6. The feeling of worthwhile accomplishment I get from doing my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7. The chance to get to know other people while on the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8. The amount of support and guidance I receive from my supervisor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9. The degree to which I am fairly paid for what I contribute to this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10. The amount of independent thought and action I can exercise in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11. How secure things look for me in the future in this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12. The chance to help other people while at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>13. The amount of challenge in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>14. The overall quality of the supervision I receive in my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION FIVE

Now please think of the other people in your organization who hold the same job you do. If no one has exactly the same job as you, think of the job which is most similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Most people on this job feel a great sense of personal satisfaction when they do the job well.
2. Most people on this job are very satisfied with the job.
3. Most people on this job feel that the work is useless or trivial.
4. Most people on this job feel a great deal of personal responsibility for the work they do.
5. Most people on this job have a pretty good idea of how well they are performing their work.
6. Most people on this job find the work very meaningful.
7. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.
8. People on this job often think of quitting.
9. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.
10. Most people on this job have trouble figuring out whether they are doing a good or a bad job.
## SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job.

**NOTE:** The numbers on this scale are different from those used in previous scales.

<table>
<thead>
<tr>
<th></th>
<th>Would like having this extremely much</th>
<th>Would like having this very much</th>
<th>Would like having this much</th>
<th>Would like having this a moderate amount</th>
<th>Would like having this only</th>
<th>Would like having this not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. High respect and fair treatment from my supervisor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2. Stimulating and challenging work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3. Chances to exercise independent thought and action in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4. Great job security.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5. Very friendly co-workers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6. Opportunities to learn new things from my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7. High salary and good fringe benefits.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8. Opportunities to be creative and imaginative in my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9. Quick promotions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10. Opportunities for personal growth and development in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11. A sense of worthwhile accomplishment in my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer—if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

Two examples are given below.

<table>
<thead>
<tr>
<th>JOB A</th>
<th>JOB B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A job requiring work with mechanical equipment most of the day</td>
<td>A job requiring work with other people most of the day</td>
</tr>
<tr>
<td><img src="image.png" alt="Table" /></td>
<td><img src="image.png" alt="Table" /></td>
</tr>
</tbody>
</table>

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

Here is another example. This one asks for a harder choice—between two jobs which both have some undesirable features.

<table>
<thead>
<tr>
<th>JOB A</th>
<th>JOB B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A job requiring you to expose yourself to considerable physical danger.</td>
<td>A job located 200 miles from your home and family.</td>
</tr>
<tr>
<td><img src="image.png" alt="Table" /></td>
<td><img src="image.png" alt="Table" /></td>
</tr>
</tbody>
</table>

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.
<table>
<thead>
<tr>
<th>JOB A</th>
<th>JOB B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A job where the pay is very good.</td>
<td>A job where there is considerable opportunity to be creative and innovative.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td>2. A job where you are often required to make important decisions.</td>
<td>A job with many pleasant people to work with.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td>3. A job in which greater responsibility is given to those who do the best work.</td>
<td>A job in which greater responsibility is given to loyal employees who have the most seniority.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td>4. A job in an organization which is in financial trouble— and might have to close down within the year.</td>
<td>A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td>5. A very routine job.</td>
<td>A job where your co-workers are not very friendly.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td>6. A job with a supervisor who is often very critical of you and your work in front of other people.</td>
<td>A job which prevents you from using a number of skills that you worked hard to develop.</td>
</tr>
<tr>
<td>Strongly Prefer A</td>
<td>Slightly Prefer A</td>
</tr>
<tr>
<td></td>
<td>JOB A</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>7.</td>
<td>A job with a supervisor who respects you and treats you fairly.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
<tr>
<td>8.</td>
<td>A job where there is a real chance you could be laid off.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
<tr>
<td>9.</td>
<td>A job in which there is a real chance for you to develop new skills and advance in the organization.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
<tr>
<td>10.</td>
<td>A job with little freedom and independence to do your work in the way you think best.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
<tr>
<td>11.</td>
<td>A job with very satisfying team-work.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
<tr>
<td>12.</td>
<td>A job which offers little or no challenge.</td>
</tr>
<tr>
<td></td>
<td>1 Strongly Prefer A 2 Slightly Prefer A 3 Neutral 4 Slightly Prefer B</td>
</tr>
</tbody>
</table>
WASHINGTON UNIVERSITY SENTENCE COMPLETION TEST FOR WOMEN*

Please fill out the attached sentence completion form. As you will see, these are incomplete sentences. Please finish each one. Notice that there are two pages; please make sure that you complete all thirty-six items. Thank you for your cooperation.

Instructions: Please complete the following sentences.

1. Raising a family _____________________________
2. Most men think that women _____________________________
3. When they avoided me _____________________________
4. If my mother _____________________________
5. Being with other people _____________________________
6. The thing I like about myself is _____________________________
7. My mother and I _____________________________
8. What gets me into trouble is _____________________________
9. Education _____________________________
10. When people are helpless _____________________________
11. Women are lucky because _____________________________
12. My father _____________________________
13. A pregnant woman _____________________________
14. When my mother spanked me, I _____________________________
15. A wife should _____________________________
16. I feel sorry _____________________________
17. When I am nervous, I _____________________________
18. A woman's body _____________________________
19. When a child won't join in group activities _____________________________
20. Men are lucky because _____________________________
21. When they talked about sex, I _____________________________
22. At times she worried about _____________________________
23. I am ________________________________
24. A woman feels good when ________________________________
25. My main problem is ________________________________
26. Whenever she was with her mother, she ________________________________
27. The worst thing about being a woman ________________________________
28. A good mother ________________________________
29. Sometimes she wished that ________________________________
30. When I am with a man ________________________________
31. When she thought of her mother, she ________________________________
32. If I can't get what I want ________________________________
33. Usually she felt that sex ________________________________
34. For a woman a career is ________________________________
35. My conscience bothers me if ________________________________
36. A woman should always ________________________________
WASHINGTON UNIVERSITY SENTENCE COMPLETION TEST FOR MEN*

Please fill out the attached sentence completion form. As you will see, these are incomplete sentences. Please finish each one. Notice that there are two pages; please make sure that you complete all thirty-six items. Thank you for your cooperation.

Instructions: Please complete the following sentences.

1. Raising a family ________________________________
2. Most women think that men ________________________________
3. When they avoided me ________________________________
4. If my mother ________________________________
5. Being with other people ________________________________
6. The thing I like about myself is ________________________________
7. A man's job ________________________________
8. If I can't get what I want ________________________________
9. I am embarrassed when ________________________________
10. Education ________________________________
11. When people are helpless ________________________________
12. Women are lucky because ________________________________
13. What gets me into trouble is ________________________________
14. A good father ________________________________
15. If I were king ________________________________
16. A wife should ________________________________
17. I feel sorry ________________________________
18. When a child won't join in group activities ________________________________
19. When I am nervous, I ________________________________
20. He felt proud that he ________________________________
21. Men are lucky because ________________________________
22. When they talked about sex, I ________________________________
23. At times he worried about ________________________________
24. I am ________________________________
25. A man feels good when ________________________________
26. My main problem is ________________________________
27. When his wife asked him to help with the housework ________________
28. When I am criticized ________________________________
29. Sometimes he wished that ________________________________
30. When I am with a woman ________________________________
31. When he thought of his mother, he ________________________________
32. The worst thing about being a man ________________________________
33. Usually he felt that sex ________________________________
34. I just can't stand people who ________________________________
35. My conscience bothers me if ________________________________
36. Crime and delinquency could be halted if ________________________________
THE VOCATIONAL PREFERENCE INVENTORY*

Developed by John L. Holland, Ph.D

This is an inventory of your feelings and attitudes about many kinds of work. Fill out your answer sheet by following the directions given below:

1. Show on your answer sheet the occupations which interest or appeal to you by blackening Y for "Yes."
2. Show the occupations which you dislike or find uninteresting by blackening N for "No."
3. Make no marks when you are undecided about an occupation.

1. Criminalist
2. Private Investigator
3. Restaurant Worker
4. Detective
5. Photograver
6. Truck Gardener
7. Physical Education Teacher
8. Humorist
9. Photographer
10. Diplomat
11. Airplane Mechanic
12. Meteorologist
13. Sociologist
14. Bookkeeper
15. Speculator
16. Poet
17. Deep Sea Diver
18. Stock Clerk
19. Dramatic Coach
20. Lawyer
21. Fish and Wildlife Specialist
22. Biologist
23. High School Teacher
24. Business Teacher
25. Buyer
26. Symphony Conductor
27. Wrecker (Building)
28. Veterinarian
29. Elementary School Teacher
30. Physician
31. Auto Mechanic
32. Astronomer
33. Juvenile Delinquency Expert
34. Budget Reviewer
35. Advertising Executive
36. Musician
37. Printwasher
38. Post Office Clerk
39. Experimental Laboratory Engineer
40. Bartender
41. Carpenter
42. Medical Laboratory Technician
43. Speech Therapist
44. Certified Public Accountant
45. Manufacturer's Representative
46. Author
47. Firefighter
48. Airline Ticket Agent
49. Entertainer
50. Novelist
51. Power Shovel Operator
52. Anthropologist
53. Marriage Counselor
54. Credit Investigator
55. Television Producer
56. Commercial Artist
57. Wild Animal Trainer
58. Administrative Assistant
59. Physical Therapist
60. Cashier
61. Surveyor
62. Zoologist
63. School Principal
64. Court Stenographer
65. Hotel Manager
66. Free-Lance Writer
67. Stunt Man Stunt Woman (Movies)
68. Route Salesperson
69. Professional Athlete
70. Flight Attendant
71. Construction Inspector
72. Chemist
73. Playground Director
74. Bank Teller
75. Business Executive
76. Musical Arranger
77. Jockey
78. Interior Decorator
79. Airplane Pilot
80. Banker

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THE VOCATIONAL PREFERENCE INVENTORY (Continued)

81. Radio Operator
82. Independent Research Scientist
83. Clinical Psychologist
84. Tax Expert
85. Restaurant Manager
86. Journalist
87. Motorcycle Driver
88. Department Store Manager
89. Referee (Sporting Events)
90. Mail Carrier
91. Filling Station Worker
92. Writer of Scientific Articles
93. Social Science Teacher
94. Inventory Controller
95. Master of Ceremonies
96. Portrait Artist
97. Blaster (Dynamiter)
98. Police Officer
99. English Teacher
100. U.N. Official
101. Tree Surgeon
102. Editor of a Scientific Journal
103. Director of Welfare Agency
104. IBM Equipment Operator
105. Salesperson
106. Concert Singer
107. F.B.I. Agent
108. Probation Agent
109. Astronaut
110. College Professor
111. Long Distance Bus Driver
112. Geologist
113. Youth Camp Director
114. Financial Analyst
115. Real Estate Salesperson
116. Composer
117. Mountain Climber
118. Cook-Chef
119. Stage Director
120. Ticket Agent
121. Locomotive Engineer
122. Botanist
123. Personal Counselor
124. Cost Estimator
125. Publicity Director
126. Sculptor-Sculptress
127. Explorer
128. Nursery School Teacher
129. Quality Control Expert
130. Judge
131. Machinist
132. Scientific Research Worker
133. Psychiatric Case Worker
134. Payroll Clerk
135. Sports Promoter
136. Plavwright
137. Test Pilot
138. Computer Programmer
139. Clothing Designer
140. Truck Driver
141. Electrician
142. Physicist
143. Vocational Counselor
144. Bank Examiner
145. Sales Manager
146. Cartoonist
147. Racing Car Driver
148. Forester
149. Social Worker
150. Sales Clerk
151. Funeral Director
152. Mind Reader
153. Architect
154. Shipping & Receiving Clerk
155. Criminal Psychologist
156. Insurance Clerk
157. Barber
158. Ball Collector
159. Ward Attendant
160. Masseur-Masseuse
INTERPERSONAL DISPOSITION INVENTORY

Instructions

On the following pages you will find a series of statements which a person might use to describe himself or herself. Read each statement and decide whether or not it describes you. Then indicate your answer on the separate answer sheet.

If you agree with a statement or decide that it does describe you, answer TRUE. If you disagree with a statement or feel that it is not descriptive of you, answer FALSE.

Indicate your answers to the items by placing an X over the T if your answer is TRUE or over the F if your answer is FALSE. Always be sure that the item number on the answer sheet matches the item number on the test.
2. I like to be with people who assume a protective attitude toward me.

3. I try to control others rather than permit them to control me.

4. Surf-board riding would be too dangerous for me.

6. If I have a problem, I like to work it out alone.

7. I seldom go out of my way to do something just to make others happy.

[Five sample items of the Interpersonal Disposition Inventory developed by Berzins, Welling, and Wetter (1977) and taken from the Personality Research Form (Form AA) reproduced by special permission of Research Psychologists Press, Inc., Port Huron, Michigan, 48060]
Any job requiring that a person help or care for others is a job that involves special talents and abilities in relating to people. It can also involve a good deal of stress, depending on the particular demands of the job and the limited resources available. The purpose of this questionnaire is to discover how various helping professionals view their job and the people with whom they work closely. Your answers will help us to formulate more adequate training programs as well as proposals for improved job practices. We would appreciate it very much if you would answer these questions as honestly and as completely as possible.

Because this questionnaire is used in studies with a wide variety of professionals in health and social services, the term "recipients" will be used when referring to the type of people for whom you provide service, care, or treatment. Although you may use another term in your work (such as client, patient, student, etc.), please think of these people as recipients of the service you provide when answering this questionnaire.

Be assured that all questionnaires are STRICTLY CONFIDENTIAL. Your personal answers will not be divulged under any circumstances. We are interested in the answers of all respondents taken together as a group rather than in the answers of any one respondent. Results will be reported in general statistical form and never with reference to any individual. Thank you for your cooperation.

*This scale is officially titled The Maslach Burnout Inventory. The title of The Berkeley Survey of Professional Occupations was used in this study to avoid sensitizing subjects to the issue of burnout just as it was initially used by Maslach.

Copyright 1980 by Christina Maslach and Susan E. Jackson. All rights reserved. Reproduced by special permission of the authors, Department of Psychology, University of California, Berkeley, California, 94270. Further reproduction is prohibited without permission of the authors.
On the following pages are several statements of job-related feelings you might have. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, check the box marked "NEVER" and go on to the next statement. However, if you have experienced this feeling, indicate HOW OFTEN you feel it by circling the appropriate number on the 6-point scale. Then, decide HOW STRONG the feeling is when you experience it by circling the appropriate number on the 7-point scale. An example is shown below.

Frequency of Feeling: HOW OFTEN:

<table>
<thead>
<tr>
<th>NEVER</th>
<th>A FEW TIMES A YEAR OR LESS</th>
<th>ONCE A MONTH OR LESS</th>
<th>A FEW TIMES A MONTH</th>
<th>ONCE A WEEK</th>
<th>A FEW TIMES A WEEK</th>
<th>EVERY DAY</th>
</tr>
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<tbody>
<tr>
<td>☐</td>
<td></td>
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</table>

Intensity of Feeling: HOW STRONG:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY MILD, BARELY NOTICEABLE</td>
<td>MILD</td>
<td>MODERATE</td>
<td>MAJOR, VERY STRONG</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example:

00. I feel depressed at work.

HOW OFTEN: NEVER ☐ 1 2 3 ☑ 5 6
HOW STRONG: 1 2 3 ☑ 5 6 7

If you occasionally feel depressed at work (say a few times a month), you would circle the number 3. If, when you do feel depressed, it is a fairly strong feeling, but not as strong as you can imagine, you would circle a 6.
<table>
<thead>
<tr>
<th></th>
<th>HOW OFTEN</th>
<th>HOW STRONG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A few times a year</td>
<td>Very mild</td>
</tr>
<tr>
<td>2</td>
<td>Monthly</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>A few times a month</td>
<td>Very strong</td>
</tr>
<tr>
<td>4</td>
<td>Weekly</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>A few times a week</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Daily</td>
<td></td>
</tr>
</tbody>
</table>

1. I feel emotionally drained from my work.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

2. I feel used up at the end of the workday.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

3. I feel similar to my recipients in many ways.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

4. I feel personally involved with my recipients' problems.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

5. I feel fatigued when I get up in the morning and have to face another day on the job.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

6. I feel uncomfortable about the way I have treated some recipients.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7

7. I can easily understand how my recipients feel about things.

   NEVER

   HOW OFTEN: 1 2 3 4 5 6

   HOW STRONG: 1 2 3 4 5 6 7
<table>
<thead>
<tr>
<th>HOW OFTEN:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>A few times a year</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
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<tr>
<td>A few times a month</td>
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<tr>
<td>Weekly</td>
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<tr>
<td>A few times a week</td>
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<tr>
<td>Daily</td>
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</tr>
<tr>
<td>HOW STRONG:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Very mild</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Very strong</td>
<td></td>
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</tbody>
</table>

8. I feel I treat some recipients as if they were impersonal "objects".
   NEVER HOW OFTEN: 1 2 3 4 5 6

9. Working with people all day is really a strain for me.
   NEVER HOW OFTEN: 1 2 3 4 5 6

10. I deal very effectively with the problems of my recipients.
    NEVER HOW OFTEN: 1 2 3 4 5 6

11. I feel burned out from my work.
    NEVER HOW OFTEN: 1 2 3 4 5 6

12. I feel I'm positively influencing other people's lives through my work.
    NEVER HOW OFTEN: 1 2 3 4 5 6

13. I've become more callous toward people since I took this job.
    NEVER HOW OFTEN: 1 2 3 4 5 6

14. I worry that this job is hardening me emotionally.
    NEVER HOW OFTEN: 1 2 3 4 5 6

15. I feel very energetic.
    NEVER HOW OFTEN: 1 2 3 4 5 6
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1  2  3  4  5  6

HOW OFTEN: A few times a year Monthly A few times a month Weekly A few times a week Daily

HOW STRONG: 1 Very mild 4 Moderate 7 Very strong

16. I feel frustrated by my job.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

17. I feel I'm working too hard on my job.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

18. I don't really care what happens to some recipients.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

19. Working directly with people puts too much stress on me.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

20. I can easily create a relaxed atmosphere with my recipients.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

21. I feel exhilarated after working closely with my recipients.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

22. I have accomplished many worthwhile things in this job.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7

23. I feel like I'm at the end of my rope.
   NEVER  HOW OFTEN: 1 2 3 4 5 6
   □  HOW STRONG: 1 2 3 4 5 6 7
24. In my work, I deal with emotional problems very calmly.

<table>
<thead>
<tr>
<th>NEVER</th>
<th>HOW OFTEN: 1 2 3 4 5 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOW STRONG: 1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

25. I feel recipients blame me for some of their problems

<table>
<thead>
<tr>
<th>NEVER</th>
<th>HOW OFTEN: 1 2 3 4 5 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOW STRONG: 1 2 3 4 5 6 7</td>
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</table>
COWORKER RATING FORM

Please rate your coworker, ________________, on the following items. Be assured that this information will be held highly confidential.

1. Seems to feel frustrated by his/her job.
   1 2 3 4 5 6 7
   __________________________
   Very mildly frustrated   Moderately frustrated   Extremely frustrated

2. Seems to treat some residents as if they were impersonal objects.
   1 2 3 4 5 6 7
   __________________________
   Not at all   Some of the time   Much of the time

3. Seems to find it very difficult to work directly with residents.
   1 2 3 4 5 6 7
   __________________________
   Not at all   Somewhat   Very much so

4. Deals very effectively with the problems of the residents.
   1 2 3 4 5 6 7
   __________________________
   Not very effective   Moderately effective   Very effective

5. Seems to be burned out from his/her work.
   1 2 3 4 5 6 7
   __________________________
   Mildly   Moderately   Extremely
6. Deals with emotional problems very calmly.

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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not calm at all</td>
<td>Moderately calmly</td>
<td>Extremely calmly</td>
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</table>

7. Is a very energetic person.

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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all energetic</td>
<td>Moderately energetic</td>
<td>Very energetic</td>
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</table>

8. Seems to feel used up at the end of the day.

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<th>1</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Moderately</td>
<td>Very much so</td>
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</table>

9. Doesn't seem to care what happens to residents one way or the other.

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<tr>
<th>1</th>
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<th>5</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does seem to care</td>
<td>Shows moderate lack of concern</td>
<td>Does not seem to care at all</td>
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</tbody>
</table>

10. Seems to have a positive influence on the residents' lives through his/her work.

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<tr>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>No influence</td>
<td>Moderate influence</td>
<td>Strong influence</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
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Kathleen Marie Wilkins (née Jenkins) was born on May 23, 1947, in Washington, D.C. She graduated summa cum laude from Ohio University, Athens, Ohio, in June 1969 with a Bachelor of Arts degree in psychology. While at Ohio University, she was elected to Phi Betta Kappa, Pi Gamma Mu, and Phi Kappa Phi.

In September 1969 she entered graduate school at the University of Florida. Here she received the degree of Master of Arts in psychology in March 1971. She continued to work toward the degree of Doctor of Philosophy in psychology with a major in clinical psychology. In September 1972 she began a predoctoral internship at The Devereux Foundation, Devon, Pennsylvania. After completion of her internship, in September 1973, she joined the Devereux staff as a Clinical Psychologist I working in the Leo Kanner Branch of Devereux located in West Chester, Pennsylvania.

She is licensed in psychology and is certified in school psychology in the state of Pennsylvania. She has worked in private practice since January 1978. She has been employed as an associate of the private practice groups of Chester County Psychological Associates, West Chester, Pennsylvania, since March 1980 and the Guidancenter, Malvern, Pennsylvania, since March 1981.

She has been married to Gregory G. Wilkins since June 19, 1971. They currently reside in West Chester, Pennsylvania.
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Jacquelin R. Goldman, Chairman
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Hugh C. Davis
Professor of Clinical Psychology

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Professor of Psychology
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Lawrence J. Severy
Associate Professor of Psychology

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Madelyn Lockhart
Professor of Economics

This dissertation was submitted to the Graduate Faculty of the Department of Clinical Psychology in the College of Health Related Professions and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August 1982

Dean, College of Health Related Professions

Dean for Graduate Studies and Research