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BURNOUT AND OCCUPATIONAL STRESSORS IN EDUCATIONAL PSYCHOLOGY

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BURNOUT AND OCCUPATIONAL STRESSORS IN EDUCATIONAL PSYCHOLOGY

by
Dennis Joseph Jacobs

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

Appendix

CHAPTER I

INTRODUCTION

Stress in Education

In recent years, personnel administrators in public education have devoted extensive study to the problems of stress among educators. The difficulty in attracting such personnel to many school districts (Burlingame, 1977), the rise in teacher collective bargaining (Casteter, 1980), and increasingly serious problems with sick leave and absenteeism (Bamber, 1979) have focussed the administrator's attention to questions of job satisfaction among both teachers and principals. Recognizing that severe interpersonal stress can result in the contemporary school, where behavior and discipline problems, race relations, economic issues, and changing sex roles all complicate the business of education, researchers have written voluminously on the factors which lead to burn-out among public school educators.

These studies have investigated the implications of occupational stress on teachers, administrators, and counseling personnel. Dederick, Hawks, and Smith (1981) surveyed teachers in kindergarten through grade twelve and

concluded that teacher stress and burnout were the principal factors leading educators out of the profession. That same year, Garland (1981) found stress to be the primary reason given by resigning teachers. Swent (1978) found similar sources of stress affecting school administrators in Oregon. Tegtmeyer (1980) studied a sample of school counselors in Virginia. He found that while these counselors reported that work accounted for between 50 and 70 percent of the reported stress in the lives of his sample, they possessed a high resistence to stress responses. Tegtmeyer's study also suggested a role for general personality traits in resisting stress.

While much investigation of stress among educators has taken place in the last decade, review of the literature shows that short shrift has been given to the role of the psychologist in the schools. The changing social context of the public schools has complicated the school psychologist's life as surely as it has the teacher's or the principal's. Changing occupational expectations of both men and women, increasing difficulties with discipline, racial tensions, all have impacted upon the school psychologist's work. Counseling professions in general are known to be at-risk for stress-related ailments (Pines and Maslach, 1978). Yet only a single study of stress among school pyschologists appears in the current literature.

This study, conducted by Bennington (1981), utilized several instruments, including the Profile of Mood States

and the Wahler Physical Symptoms Inventory, as well as a stress assessment developed by the author, to assess levels of stress in school psychologists. School psychologists were found to report significantly lower levels of stress than "normal" reference groups; Bennington suggests that this is perhaps attributable to the psychologist's professional understanding of coping skills. Nonetheless, the respondents ranked job stress as the greatest source of stress in their lives.

Stress Research

During this same period, extensive research has been carried out into the nature of the stress phenomenon itself. This research was pioneered by Hans Selye (1976), whose work since the 1930's has been largely responsible for earning medical recognition of the stress response. Selye's work on stress grew from a recognition that the human organism had a generalized set of symptoms which were evident whenever the biological system was under attack, regardless of the nature of the specific threat.

A second strand in stress theory is due to Antonovsky (1981). Rather than focussing on the causes of stress, Antonovsky is more concerned with the mechanism by which the person withstands threat to the biological, psychological, and social systems upon which he or she is dependent. Antonovsky's research convinced him of the role generalized personality characteristics play in the resistence to

stress. This orientation is reflected within the many stress-management courses arising in recent years to teach coping skills to persons who must work under stress.

While Selye's initial work related to threats of a physiological nature, more recent investigation has tended to focus on psychogenic sources of stress. In this connection, the work of Christina Maslach and her associates at the University of California has been most influential. Maslach's work is based on the observed high levels of stress in human service workers who provided direct client services. This stress produces a severe state of emotional exhaustion which by the early 1970's (Freudenberger, 1973) was being referred to as "burn-out" in the social service literature. Maslach and Jackson (1979) were able to develop an instrument for the measurement of burnout which discriminated three independent factors in the stress response; emotional exhaustion, depersonalization, and sense of personal accomplishment (or the lack thereof).

The Maslach instrument is simply the most popular and best-studied of a variety of instruments for the investigation of the stress response to appear in recent literature. Researchers such as Parker (1979) and Bennington (1981) have developed their own instruments for assessing stress levels among academic personnel. The extensive use of the Maslach in the literature, as well as its high validity and reliability, however, argue for use of this instrument as a

yardstick to permit comparable stress measurements in diverse studies.

Statement of the Problem

The psychologist in the public school is expected to provide assistance to the student in dealing with a wide range of psychological, educational, and occupational issues. The psychologist is responsible for the assessment of learning disability, mental retardation, and emotional disturbance, and the implementation of PL 94-142. Among normal students he offers counseling in such areas as general problems of adjustment, family difficulties, assessment of interests and aptitudes, and career choices. While this complex role is critically important to the functioning of our embattled public school systems, little has been written on school psychologists' perceptions of their jobs. Since other educational personnel, as well as social service and counseling personnel, have been shown by extensive research to be susceptible to stress and burnout, it seems that the school psychologist too must be considered at-risk. Yet little research has been done to assess levels of burnout among school psychologists, to determine the aspects of employment which contribute to school psychologist burnout, to determine the effects of burnout in the provision of counseling services, or to offer recommendations to the school system for reducing or preventing school psychologist burnout.

Purpose of the Study

The purpose of the present research was to assess the levels of burn-out experienced by psychologists in the public schools, and to determine the extent to which various factors in the worklife of these school psychologists contribute to that burnout. A secondary purpose was to develop a preliminary form of an instrument useful for the assessment of stress-provoking factors in the occupational environment of the school psychologist. A third purpose was to offer, based on the findings, suggestions for the improvement of conditions so that burnout among school psychologists can be minimized.

Research Questions

The study was designed to answer two research questions:

1. Are the levels of burnout among school psychologists comparable to the levels reported in the literature for teachers, counselors, and school administrative personnel?

2. How do demographic, interpersonal, and situational variables influence the level of burnout experienced by school pyschologists?

Methodology

The methodology employed in this research was that of a correlational sample survey. The population for the survey consisted on the 345 school psychologists in the three counties of the Detroit, Michigan Metropolitan area. The survey made use of two self-report instruments. The Maslach Burnout Inventory (Maslach and Jackson, 1979) was used to assess the level of burnout experienced by the psychologist. The School Psychologist Stress Inventory, an instrument developed within the present study, was used to collect data related to stressors and stress-resistance factors among the sample.

The procedures employed in the study consisted of four phases of research. In the first phase, the SPSI instrument form was developed. Items were selected for the instrument on the basis of stress surveys appearing in the literature, research into educational stress and burnout, and theoretical considerations based primarily on the work of Selye and Antonovsky. In the second phase, the questionnaire packets were mailed to the population of psychologists. Two subsequent follow-up letters sent at two-week intervals were used to urge participation in the study.

The third and fourth phases of the research consisted on data analysis. In the third phase, the SPSI results were analyzed for the purpose of refining the instrument. Factor analysis was used to divide the instrument into subscales. Items with an inadequate factor loading, or with high

loading on two or more factors, were eliminated from further analysis. Finally, Cronbach's Alpha coefficient was calculated for each scale to assess its homogeneity. On the basis of these calculations, recommendations were made for further development of the SPSI instrument.

The final phase consisted of the correlation and analysis of the SPSI and MBI data. Using the SPSI subscales developed in phase three, and eliminating items not found in these subscales, the SPSI was scored. The Maslach scores were calculated using procedures described by the author of that instrument (Maslach, 1981). A canonical correlation procedure was then used to develop a weighted sum on the MBI subscale scores with which the SPSI scores had maximum correlation, and to calculate correlation coefficients between the predictor variables of the SPSI and this criterion.

Definitions

The following definitions will be used throughout the present study:

Burnout: A stress response observed in human service professions, characterized by emotional exhaustion and lack of caring.

Generalized Adaptation Syndrome: Selye's three-phase model of stress response, consisting of Alarm, in which the organism tries to eliminate the stressor; Adaptation, in which it tries to

accommodate the stressor, and Exhaustion, where it is defeated by the stressor.

Generalized Resistance Resources: Antonovsky's term for traits which enable the organism to resist stress.

Occupational Stress: Stress due to stressors present in the work environment of an individual.

Stress: The non-specific response of the body to any demand made upon it.

Stressor: Any force in the environment which places a demand upon the human organism.

Stress-Management Skills: Behaviors or beliefs which enable the organism to tolerate high levels of stress.

Assumptions

The present study rests on a number of assumptions about the nature of stress.

1. Stress is a generalized response in which both psychological and physiological symptoms occur, and which can be caused by both psychological and physiological factors.

2. The burnout syndrome as described by Freudenburger (1973) is a particular pattern of stress response found in people experiencing the stressors encountered in human service jobs involving direct client contact.

3. Certain behaviors, traits, and beliefs enable persons to minimize the stress response to environmental stressors.

Limitations

The present research is bounded by a number of conditions which delimit its scope and delineate the extent to which it can be generalized.

1. The present study is limited to an investigation of occupational stress in the role of the public school psychologist, and cannot be generalized to draw conclusions about other educational or mental health professionals.

2. The present study uses burnout as a criterion of stress response, and measures burnout with the MBI. It is possible that school psychologists exhibit other forms of stress-response than those measured by this instrument.

3. This study represents a pilot use of the SPSI instrument. While the factor analysis permits some refinement of the instrument in this single administration, further refinements on the instrument would provide a more reliable measure.

Summary

While stress and burnout in public education have been much studied in the past years, little has been written on the situation of the school psychologist. These professionals function in the same stressful environment as

teachers, principals, and administrators, in direct contact with service recipients. That school psychologists would be prone to the burnout syndrome should therefore be suspected. The present research employed the Maslach Burnout Inventory (MBI) to assess levels of burnout among psychologists, and correlated these results with self-reports of stressors and stress-management skills. The factors which correlate most strongly with burnout were then used to propose stress remediation action to be taken by schools and school psychologists.

CHAPTER II

REVIEW OF THE LITERATURE

As early as the beginning of the nineteenth century, it was understood that the general activities of life, and especially those which evoked significant psychological response, placed a certain amount of wear and tear on the human organism. In an early work on disease of the heart, Coruisart (1812) discussed the effect of the emotions on the heart and concluded that joy, despair, revenge, terror, love, and anger all had a direct effect on the myocardium. A century later, Cannon (1912) discovered the mechanism for these effects in the action of the adrenal medulla, especially in the secretion of epinephrine. Cannon's subsequent work over the next 40 years led to the publication of Bodily Changes in Pain, Hunger, Fear and Rage (1953). Here Cannon developed the well-known "Fight or Flight" theory of the body's response to threat. In times of perceived emergency, extra reserves of energy are made available through a process characterized by alterations in epinephrine, adrenalin, noradrenilin secretion, catecholamine levels, and heart rate.

Early studies such as these, which demonstrated the mutual interaction of physical and psychological responses, led to the development of the concept of stress, defined by Antonovsky (1981) as the body's response to any event which upsets the organisms homeostasis and which demands an expenditure of energy for restoration. Over the past several decades, stress theory has been found to be a useful framework in which to understand human response to a wide range of life events, including marriage and divorce, mourning and grief, physical illness, and occupational conditions. Occupational stress, commonly called burnout, can be caused by working conditions, level of responsibility, role conflicts, and client contact. Such stress has been of vital importance in recent work dealing with job dissatisfaction and turnover in the human service professions. One such human service role which has not been studied extensively is that of the school psychologist. The present chapter will review the literature on stress, in general, and as it applies to the occupation of school psychologist. In doing so, three areas of interest will be reviewed: the general theory of stress, occupational stress in the educational environment, and the characteristics of the school psychologist role.

Theories of Stress

The theory of stress provides a bridge between diverse disciplines, each with its own perspective on human health. As a holistic approach to human health and illness, stress theory has historically made little distinction between psychogenic and physiologic causes of stress. Similarly, it has drawn no firm lines between the behavioral, affective, and physiological responses to stressors in the environment. On the contrary, stress theory has grown up in the light of evidence that such diverse stress responses as anxiety, ulcer, and absenteeism can all be caused by any extreme demand placed upon the organism.

The Work of Hans Selye

Hans Selye has no doubt been the single most influential theorist in stress research. In one of his works, Selye offers us his account of how he came to recognize stress as a single entity (Selye, 1956). As a student, Selye had often remarked on the great many symptoms which are common to a wide range of disease processes, and therefore, are of no use in a differential diagnosis. These were symptoms such as tiredness, headache, fever, aching muscles, and sore throat. Selye termed this generalized ailment "the syndrome of just being sick."

Later, as a research physician, while investigating a quite different question, Selye discovered that a variety of toxic agents, when injected into the body of a rat, produced

a syndrome of several easily recognizable signs. Again, Selye found himself fascinated by the common response of the body to a wide range of systemic insults. In his paper on this research, Selye presented a model of the body's response to any extreme demand. This description of what he termed the General Adaptation Syndrome was to remain the basis of his theory of stress.

The General Adaptation Syndrome. The General Adaptation Syndrome (GAS) has three distinct stages: alarm, resistance, and exhaustion. (Selye, 1976; p. 6). The stage of alarm is marked by a general activation of all physiological systems, and corresponds to the emergency state described by Cannon. If the organism is unable to escape or stop the stressors during the alarm period, a stage of resistance sets in, during which the organism attempts to adapt to the environment in a way which minimizes the harmful effects of the stressor. These adaptive efforts may include changes which are the symptoms of stress-related ailments, including fever, ulcer, hypertension, depression, and psychosis. The final stage of the General Adaptation Syndrome is termed the stage of exhaustion. Exhaustion here refers to the literal exhaustion of one's resources for defending against the stressor. If the stressor is not relieved after the organism enters this final stage, death will result.

Selye's definition of Stress. Selye defines stress as "the nonspecific response of the body to any demand made upon it." (Selye, 1976). According to this definition, the organism is at all times experiencing some degree of stress. Stress cannot, therefore, be considered a harmful force; it is a ubiquitous component of the environment. Selye's definition considers stress to be the response of the individual organism to a demand in the environment, known as the stressor. The nature of the stressor is of course one aspect in determining its danger to the organism. But the individual person's skill in coping is also critical in determining the extent of the resulting stress. Selye (1974) uses the term "distress" to refer to stress which has predominantly harmful effects, and the neologism "eustress" to denote stress which is used constructively by the body. The emphasis in the research Selye catalogs in his most recent volume, however, remains on stress as a pathogenic entity (Selye, 1979).

The Work of Aaron Antonovsky

While the work of Antonovsky shows a significant debt to Selye, there are a number of important conceptual differences. These differences begin at the definition of stress. Antonovsky begins by defining stressor as:

> A demand made by the internal or external environment of an organism that upsets its homeostasis, restoration of which depends on a nonautomatic and not readily available energy-expending action.

According to this definition, not every demand constitutes stress. For example, a mild temperature change to which the body can adjust automatically is not a stressor. Nor is a slightly larger change which requires a man to put on a sweater which he has been carrying over his arm. Inherent in Antonovsky's definition is the fact that the stressor taxes the body's ability to adapt; it is not simply wear and tear on the organism (Antonovsky, 1981).

Antonovsky's original researches had been in the relationship of social and economic conditions to human health. He found that while more severely stressed groups were in significantly worse health overall, there were always individuals within even the most impoverished and maltreated groups who displayed excellent physical and mental health. Antonovsky asked "what resources do these individuals possess which enable them to resist stressors so effectively?"

Generalized Resistance Resources. Antonovsky hypothesized that there were certain traits, which he termed Generalized Resistance Resources (GRR) which were effective in combating the stress response. The ability to avoid stressors is one such resource. Antonovsky's research attempted to identify other resistance resources. Since Antonovsky's model assumes that stress causes illness, and emphasizes the mechanism by which illness is avoided, he terms his approach "salutogenic"--concerned with the origins of health.

Antonovsky found that a variety of attitudinal characteristics affected the ability of the body to resist all types of disease. Most important among these was a factor which he terms the "sense of coherence," which he defined as a view that "events are predictable and form some sort of coherent understandable scheme...within that scheme, in any situation, events will usually work out as well as can be expected." (Antonovsky, 1980).

Symptoms of Stress

Antonovsky and Selye both conceive of stress as a holistic response to environmental demand, a set of behavioral, physiological, and psychological responses to a stressor which likewise can be either physical or psychological. Selye (1976) summarized research which demonstrated that stress can produce a range of disturbances including:

irritability	anxiety	tension
hyperexcitation	nausea and vomiting	insomnia
substance abuse	appetite disorders	heart strain
headache	stuttering	depression
sweating	backache	
depersonalization		
weakness	vertigo	weakness
dermatitis	dryness of mouth	fatigue

Zaleznik, Kets de Vries, and Howard (1977) have categorized most of the reported types of stress reaction into five categories of stress-related disturbances:

1. emotional distress reaction
2. self-medication
3. cardio-vascular
4. gastro-intestinal
5. allergic and respiratory

The source of stress does not determine the symptomatology of the stress response. Psychogenic stress may have physiologic consequences and vice-versa. For example, Cobb (1974) demonstrated statistically significant alterations in norepinephrine secretion, serum uric acid, serum creatinine, and serum cholesterol associated with termination of employment in men. Sklar and Anixman (1979) similarly found that the growth rate of tumors is affected by the level of psychogenic stress. Thus, the prevailing view of stress has emphasized the non-specific nature of the syndrome. The conception of universal non-specific response to stressors was a simplification of a more complex reality; for example, Mason (1971) showed that exercise, fasting, and heat all fail to produce the GAS.

Occupational Stress

Antonovsky emphasizes the stress inherent in the principal socially-mandated roles persons in our society are obliged to play, roles which are frequently by definition in conflict with other social forces:

> One need not be a Marxist to see, permitting myself some license, the history of all social institutions as one of struggle; husband and

> wife, parent and child, supervisor and subordinate, priest and parishoner, doctor and patient, teacher and student...all without exception relate to each other in a context of scarcity of resources, of power, of different perspectives and interest and motivation.

In modern occupational settings, these role-related stresses have a major effect upon the working climate. Kerns (1973) listed four types of role-related stresses in the occupational context. These include individual stress, based upon the actual workload of the person; organizational stresses, caused by role conflicts built into the organization's structure; management stresses, which affect those responsible for work done by others; and status stresses.

Kahn (1978) considered role conflicts to be the principal source of occupational stress in those situations where the individual employee was required to relate extensively to persons both within and outside the employing agency. When this occurred, contradictions between the agency's self-definition and the perception of the agency by clients leads to stress. Overwork in these situations was also a role-related conflict. Not only does overwork place direct physiological burdens on the employee, but also places the employee in conflict between the demands of the job and what, in reality, can be accomplished.

Kanner, Kaffrey, and Pines (1978) concluded that not only the presence of specific stressors, but the absence of certain positive factors in the occupational setting, could provoke occupational stress. These authors listed the

following as important positive factors whose absence can be cause stress reactions:

variety	complexity	autonomy
significance	feedback	success
self-expression	self-actualization	policy influence
tangible rewards	appreciation	support

There was a great deal of evidence to indicate that direct responsibility for charges, be they patients, prisoners, or students, was among the most stressful of employment conditions. Calligan, Smith, and Hurrel (1977) surveyed the major occupational groupings in Tennessee to determine which categories displayed the most clinically significant psychiatric complaints. They concluded that there was an unexpectedly large number of health care workers admitted to mental health centers in the state. Pine and Maslach (1978) reported that personnel who could withdraw into administrative or other duties experienced less stress than those required to maintain constant personal contact with clients.

Burnout

The identification of client contact as a primary occupational stressor has led to the delineation of "Burnout" as a specific form of stress in the human service professions. The term originally entered the literature to describe the emotional exhaustion observed among community

mental health workers in free community clinics. These clinics, often underfunded and volunteer-run, appeared in the late 1960's and early 1970's as a response to the growing drug culture and the political activism created by the peace and civil-rights movements (Freudenberger, 1973).

Christina Maslach at the University of California at Berkeley generalized the phenomenon by defining "burnout" as "emotional exhaustion identified with interpersonal stressors."

> Burnout is characterized by an emotional exhaustion in which the staff person no longer has any positive feelings, sympathy, or respect for clients... the staff person who burns out is unable to deal with the chronic emotional stress of the job and this failure to cope can be manifested in a number of ways including impaired performance, absenteeism, and high turnover...
>
> Furthermore, burnout is correlated with various indices of personal stress. The emotional exhaustion is often accompanied by physical exhaustion, illness, and psychosomatic symptoms. People who experience burnout sometimes increase their use of alcohol and drugs as a way of reducing tension and blotting out strong emotional feelings. They report more mental illness, and increased marital and family conflict. (1978b)

The burnout phenomenon is associated with those professions which involve a great deal of work with service recipients. Maslach writes:

> The intense involvement with clients required of the professional staff in various human service institutions includes a great deal of emotional stress, and failure to cope successfully with such stress can result in the emotional exhaustion syndrome of burn-out, in which staff lose all feeling and concern for their clients. (1978a)

The symptoms of the burnout syndrome can be understood as adaptations to high levels of occupational stress attempted during the resistance phase of the GAS as described by Selye. They protect the individual against stress by reducing role conflict and minimizing emotional involvement. The use of the term "exhaustion" by Maslach refers to a sense of fatigue and not to literal exhaustion, the final and fatal stage of the GAS.

Stress in Education

A number of studies have been conducted to assess the proportion of the teaching population suffering from stress reactions. Findings place the number at greater than one-half of all teachers. Dedrick, Hawkes, and Smith (1981) studied teachers of kindergarten through twelfth grade and concluded that teacher stress and burnout are principal factors leading teachers out of the profession. They found that more than half of all teachers have considered a career change due to stress, and that less than a third would encourage a young person to take up teaching as a career. Similarly, Garland (1981) surveyed all teachers who resigned from a small urban school system during a two year period and found that 75 percent of them reported emotional exhaustion as the reason for leaving their position. Alschuler (1977) found that most teachers were in a "state of mild to extreme stress" at all times due to work-related factors. Colasurdo (1981) found that 52 percent of all teachers'

responses to a mailed questionnaire indicated that they were experiencing feelings of burnout.

Bruno (1981) studied absenteeism and stress at inner city schools. She cited previous studies which showed that the percentage of teachers reporting occupational stress had risen sharply in recent years, from 37.5 percent in 1938, to 43 percent in 1951, to 62.1 percent in 1967. Bruno found high levels of three stress indicators in the faculty sample she surveyed -- total days absent, stress days absent, and personal stress level. She found that these stress levels varied significantly between white, Black, and Hispanic teachers.

Most research found that the actual relationships with students are among the key stress factors in teaching. Holifield (1981) found this to be true, as did Alschuler (1977) and Dunham (1977). Discipline problems were the key feature in all of these studies, as they were in 1970 when the New York State United Teacher's Research and Educational Service studied the problem. Other factors that these studies found as significant teacher stressors were relationship with parents, administrative structures, lack of control, and shortages of materials.

The literature revealed that public school principals and administrators experience similar high levels of stress. Swent (1978) surveyed the principal stressors affecting school administrators in Oregon. A questionnaire was sent to all members of the Confederation of Oregon School

Administrators; 1152 or 52 percent responded. Administrators reported that management of their own schedules was the greatest source of stress in their work. Interpersonal stressors resulting from relationships with teaching staff, students, and parents were also significant. Finally, administrators reported that complying with rules and regulations was stressful. Perceived stress and health status were found to be strongly correlated.

Peterson (1977) compared stress levels in elementary school principals with perceived job satisfaction. He found relatively low levels of stress, and correspondingly high job satisfaction. One half the sample reported stress related to personal finances, and a third felt overworked. The principals were asked to list the methods they used to cope with feelings of stress. In rank order these included hobbies, sports, family activities, religion, and travel.

Moynihan (1978) studied these same factors in secondary school principals. Two hundred and five principals in the state of Michigan responded to a survey distributed at a conference. The study concluded that these principals suffered high levels of stress, associated with interactions with teachers' unions, parents, and individual teachers. Moynihan's questions about coping strategies turned up some school-centered suggestions: delegation of powers, proactive behavior, assertive training, and relaxation training for administrative personnel.

Mills (1981), using a work stress log to collect daily self-reports on 32 elementary principals, found that this sample experienced low to moderate levels of stress. Domain (1980) studied 39 high school principals in Iowa and found that they also experienced low stress levels with high job satisfaction ratings.

While most studies of burnout in education examined the occupational stress experienced by one or another type of educational employees, McKenzie (1981) examined stress in three types of public school personnel: teachers, administrators, and counselors. The McKenzie study was broadly exploratory, but does provide a baseline for the stress levels to expect in a range of educational roles. This study surveyed a sample of 358 persons in 84 schools in one Michigan County, and used the Maslach Burnout Inventory as a measure of stress. The sample included 187 teachers, and 68 administrators and 103 counselors. McKenzie found only one significant difference between MBI scores of the different occupational groups: teachers scored significantly higher on the emotional exhaustion subscale (3.75) than did administrators (3.02). For counseling personnel, means on the three subscales of the MBI were emotional exhaustion, 3.16; depersonalization, 1.64; and personal accomplishment, 5.34.

The youngest group of subjects, in the 20-29 year range, showed the greatest degree of emotional exhaustion, 4.13, compared to 2.33 for 30-39 year old; 2.91 for 40-49; and 3.22 for 50-59. Interestingly, all significant differences

found involved the emotional exhaustion subscale. The McKenzie study found no differences between groups defined on the basis of marital status, school level, size of school district, religiosity, race, or sex.

MBI values for teachers were also provided by Raison (1981). This research utilized the MBI in a comparison of stress levels in 198 regular classroom and 196 special education teachers. No differences were found between the MBI scores of the two groups. Multiple regression analysis was used to assess the factors accounting for the variance in the combined sample. However, using all the factors available accounted for only 25 percent of the sample variance, suggesting that the actual sources of stress are largely unidentified.

Crane (1982) similarly found no significant differences between MBI scores of special and regular classroom educators, although he was able to account for somewhat more of the variance in his sample of special educators.

Stress in Education: The School Psychologist

Little has been written about the stresses acting upon the school psychologist. Yet it is reasonable to assume that they are of the same magnitude and origin as the stresses acting upon other players in the public school arena. The school psychologist must deal with the same groups of personnel--teachers, students, parents--as do others who report these interactions as stressful.

Discipline problems and bureaucratic tangles are as much their domain as they are the teacher's or principal's. The complex role of school psychologists requires them to cope with a great many individuals both inside and outside the organization. These types of involvements have also been found to cause stress.

Bowen and Dalton (1981) assessed the nature of the school psychologist role by studying a sample of 50 psychologists in western North Carolina. Their survey determined that the psychologists spent 47 percent of their time in psychological testing and assessment, 24 percent in report writing and administrative duties, and 17 percent of their time in a consultative or training capacity. This actual use of time was perceived differently by teachers than by the psychologists themselves. Teachers expected the psychologists to do more counseling of students. The psychologists, on the other hand, felt that they should be consulting more with teachers on the educational plans for students. When the 50 psychologists and 400 teachers were asked to rank the importance of various aspects of the psychologist's role, wide differences were noted, as shown in the table which follows.

Teacher Rank	Psych Rank	Task
4	1	test interpretation
9	2	consultations
2	3	testing
15	4	behavior change
1	6	early identification and prevention
6	13	counseling
5	18	screening

Kinnaird (1973) also examined the nature of the school psychologist role, examining the occupational characteristics of 275 school psychologists in the state of Ohio with a 157 item instrument which assessed 48 organizational and individual traits. A factor analysis of questionnaire data revealed five distinct professional role patterns among the subjects. Kinnaird termed these patterns intern, intern coordinator, mental health specialist, inner-city crisis solver, learning behavior change-agent. The Kinnaird study demonstrated that the psychologists developed sequentially from one of these roles to another; typically from intern, through mental-health specialist or inner-city crisis solver, to intern coordinator or learning-behavior change agent. In each role, activities, expectations, and relationships with others took on specific characteristics.

There are very few studies in the literature which survey stress factors among school counseling personnel, and only one was found which studied stressors and stress management in school psychologists. Tegtmeyer (1980)

investigated the incidence of stress among school counselors in the state of Virginia. The investigator developed a 109 item Likert-type questionnaire known as the School Counselor Stress Inventory in order to assess the extent to which counselors perceived their lives and work as stressful. Secondary school counselors in the state of Virginia responded to the questionnaire, providing a sample of 101 persons.

Tegtmeyer found that more than 50 percent of all respondents reported that over half of their life stress originated in their work. A full 20 percent indicated that over 70 percent of their daily stress came from work. A very high tolerance to stress was reported by 75 percent of the subjects. Counselors reported that most stress stemmed from quantitative work overload. More than half of the counselors indicated that a significant amount of stress stemmed from the identification of child abuse cases, and in taking remedial action in these cases.

The study also found that certain personality traits made the individual more susceptible to stress in the work situation. These traits included such traits as a tendency to set unrealistic expectations of oneself, to find it difficult to say "no" to supervisors, and being overly dedicated to the job. Length of time on the job bore no relation to manifestations of stress. The two coping patterns found to be of the most use in avoiding stress were

compartmentalization of work and non-work life and the setting of realistic goals and achievable schedules.

Parker (1979) also surveyed stress among school counselors in the state of Michigan. The study used the Job Descriptive Index to measure satisfaction, and an original questionnaire to survey stress and illness. The author concluded that stress and satisfaction were significantly related in a negative direction, and that the stress and illness were positively correlated. Thus it would appear that lack of job satisfaction in the school counselor can be related to clinically significant levels of stress.

Bennington (1981) performed the only recent study found in the literature which treats the problem of stress among school psychologists. The study used an initial random sample of 2,000 members of the National Association of School Psychologists of which 989 responded. Instrumentation included the Profile of Mood States and the Wahler Physical Symptoms Inventory, as well as an original questionnaire on job dimensions, perceived stress, and stress management. School Psychologists were found to report significantly lower levels of stress than "normal" reference groups. Job stress was however ranked as the leading stress factor in the lives of all respondent groups except for single parents, who ranked it third.

Summary

Stress is the response of the organism to high levels of environmental demand. While it has long been known that high levels of demand, such as those represented by rage or fear, cause wear and tear on the heart, the systemic, nonspecific effects of stress have only recently been recognized. Clinically significant stress response is caused not only by flight-or-fight situations, which Selye identifies as the Alarm phase of the Stress response, but by ongoing demands which the organism cannot escape. These ongoing stressors force the organism to adapt during what Selye refers to as the stage of resistance. While these adaptations could be constructive behavior changes, they could also comprise the symptoms of pathologic stress response; gastric disturbances, withdrawal and depression, cardiac problems, and allergic and respiratory difficulties. Antonovsky (1981) demonstrated that resistance to stress rests heavily on attitudinal qualities in the individual.

Much stress is associated with modern occupational contexts. This stress has been related to two main types of stressor: Role stresses--due to conflicting demands placed upon an individual by contradictory expectations or by impossible expectations; and, Interpersonal stresses--caused by high levels of interpersonal contact. Particular attention has been paid to interpersonal stress in the human service professions, where workers are directly responsible for the delivery of service to recipients. Practitioners in

medical, mental health, correctional, educational, and social service programs are subject to a stress syndrome known as "Burnout" (Maslach, 1978), marked by feelings of exhaustion, a lack of caring about service recipients, depression and withdrawal, and disruption of personal life. Public school educators have been demonstrated in a variety of studies to be susceptible to this response.

While a significant body of research has accumulated on stress among teachers and administrators in the public school, little has been done to assess the stress experienced by the school psychologist. Research shows that the psychologist in the public schools can be asked to function in one of a wide variety of roles. These roles are perceived differently by teachers and psychologists. This role strain can contribute to occupational stress. Moreover, these personnel are, like other educators, required to interact with students, administrators, and parents, and are thus susceptible to all the stress associated with other public school roles.

CHAPTER III

METHODOLOGY

The literature on stress among educational personnel demonstrates that high levels of occupational burnout are reported by teachers, administrators, principals, and guidance counselors in the school setting. Among these studies of school personnel, very few deal with the school psychologist, although this role like the others is involved with the direct client contact so often involved in human services occupational stress. The present study attempts to assess levels of burnout among school psychologists, and to determine which employment factors are most strongly associated with the burnout of these psychologists. To this end, the study includes the development of an instrument, The School Psychologist Stress Inventory (SPSI), for assessing the presence of specific stressors in the work environment of the school psychologist. This chapter describes the methods employed in the study, including research design, sample selection, instrumentation, procedures, the statistical techniques for data analysis, and the development of the SPSI instrument.

Research Design

The present study took the form of a sample survey using canonical correlation to assess the value of self-reported stressors as predictors of occupational burnout. Although a complete census of the target population was attempted, the better than 80 percent of the population which responded to the survey served as sample for the investigation. Burnout was measured through the use of the Maslach Burnout Inventory (MBI), an instrument for the assessment of stress and burnout in human service work. The presence of various stressors in the working environment was determined through the use of the School Psychologist Stress Inventory. The development of this instrument and its decomposition into subscales were major components of the present study. The scores on the SPSI subscales were considered the independent variables in this investigation. The scores on the three subscales of the MBI were taken as the dependent variables. None of the variables were manipulated by the experimenter, and the assumption was made that each variable obeys a normal distribution.

Subjects

The population for the survey consisted of all school psychologists in the public school systems of three counties in the Detroit Metropolitan area. A census of this population was obtained from the school systems themselves. Using mail solicitation, an attempt was made to obtain data from

the entire 345 members of this frame. The solicitation involved up to three mailings in a six-week period in an attempt to urge participation. Subjects were assured that their results were maintained in strict confidentality. In addition, each subject was told that he or she would be able to receive a summary of the final study at its completion. A copy of all correspondence with the subjects appears in Appendix A. All procedures utilized in the study met with the prior approval of the University of Michigan Department of Education Human Subject Committee. A copy of that approval is included in Appendix B.

Instrumentation

Two self-report instruments will be used to collect data on the subjects. The Maslach Burnout Inventory (MBI) is a 22-item form for assessing occupational stress in human service workers. The School Pyschologist Stress Inventory, developed in the course of the present investigation, consists of 41 items relating to occupational stressors and 15 demographic items. The SPSI was used to determine the presence of various stressors in the work environment of the school psychologist.

The Maslach Burnout Inventory

The MBI was developed in 1979 specifically to investigate the burnout syndrome in human service workers who work directly with service recipients. For this reason it is a

tool quite appropriate to the assessment of stress-related impairments in occupational functioning among school psychologists. The instrument is a 22-item questionnaire in which each item is rated on two scales, frequency and intensity. The scale consists of three independent subscales, measuring Emotional Exhaustion, Depersonalization, and Personal Accomplishment. The instrument has been used extensively in the measurement of burnout in educational institutions, law-enforcement organizations, health care facilities, and mental health agencies (Maslach and Jackson, 1979b; Scott, 1980; Das, 1981; Dunn, 1981; Raison, 1981).

The scale was developed by administering a 47 item preliminary version to a sample of 605 people (56% male, 44% female). Factor Analysis of the results led to the identification of ten orthogonal factors, of which four accounted for more than 75 percent of the variance. Items were retained which met the following criteria:

a. had a loading of more than .4 on only one factor.

b. had a large range of responses.

c. few subjects checked the "never" frequency.

d. high item-total correlation.

Using these criteria, a form with 25 questions was developed. Since the correlation between frequency and intensity responses was only moderate, both scales were retained. (Maslach and Jackson, 1979b).

The refined scale was administered to 1025 persons for subsequent evaluation. The results showed four factors.

The three with eigenvalues greater than one were considered MBI subscales. The Emotional Exhaustion subscale contains nine items, the Depersonalization subscale consists of five items, and the Personal Accomplishment scale is made up of another eight items. Three remaining items do not go into a standard subscale. These three items seem, however, to correlate with level of personal involvement with recipients.

Reliability and validity data were provided by the developers of the instrument. Reliability was assessed using both internal consistency measures and test-retest calculations. Using Cronbach's alpha coefficient of internal consistency, reliability of the instrument was found to be:

Scale:	Frequency	Intensity
Emotional Exhaustion:	.89	.87
Depersonalization:	.76	.75
Personal Accomplishment:	.77	.77
Overall:	.76	.81

In addition, split-half reliability for the scale was found to be .74 for frequency and .81 for intensity. Test-retest reliability over a two-week period was assessed on a sample of 54 health administrators and found to be:

Scale:	Frequency	Intensity
Emotional Exhaustion:	.82	.53
Depersonalization:	.60	.69
Personal Accomplishment:	.80	.68

The test thus appears to be reasonably stable over time, more so in the frequency than intensity measures.

The School Psychologist Stress Inventory

The SPSI is an inventory designed to determine which potential psychological and interpersonal stressors are perceived in the school psychologist's work environment. This self-report instrument is designed to assess the presence of various external factors by the subject. The instrument merely measures the presence of these stressors, and does not purport to measure any latent characteristics of the subject. In phase one of the present study, the items for the instrument were selected on the basis of literature review, and theoretical considerations. In phase three, a factor analysis of the SPSI survey scores was used to decompose the instrument into subscales and Cronbach's alpha coefficient was employed to assess homogeneity.

Procedures

The procedures utilized in the present research consisted of four phases of study. In phase one, the items for the SPSI questionnaire form were selected on the basis described in the Instrumentation section. Phase two of the research consisted of data collection. Phase three comprised the analysis and decomposition of the SPSI scale into its subscales. Phase four involved the correlation of MBI and SPSI scores.

Research Phase One: SPSI Item Selection

Items for the initial form of the SPSI were developed based on theoretical considerations and information about stress in education gleaned from the review of the literature. In addition to questions about occupational conditions, questions about coping strategies and stress management skills, as well as traits relating to Antonovsky's General Resistance Resources, were used. The SPSI includes items utilized in The School Counselor Stress Inventory (Tegtmeyer, 1980) and Teacher Stress Survey (Bausch, 1981), as well as items from instruments by Colasurdo (1981) and St. Clair (1981).

The SPSI form distributed to the subjects consisted of 56 items. Forty-one items inquired about psychological and social stressors in the working environment of the school psychologist. The remaining 15 items related to demographic characteristics of the subject. The forty-one items asking

about stressors are answered on the six-point Likert type scale. All the points on the scale are labeled to avoid clustering of responses around the points with labels (Cox, 1981). The items were initially divided by their content into six subscales:

1. Authority and Autonomy. (7 items)
2. Interpersonal Cooperation. (Collegial and Administrative) (6 items)
3. Satisfaction with professional duties (8 items)
4. Sense of achievement (7 items)
5. Expectations vs. Reality on the Job. (4 items)
6. General mental health--Resilience (8 items)

Since the SPSI was developed specifically for use in this study, it has not been previously evaluated for homogeneity, reliability, and validity. Moreover, the limited population size precluded extensive pretesting for developmental purposes. Content validity has been established by the use of terms from related instruments and the literature surveyed, as well as by review of the SPSI by scholars in the field. Correlations with other indices of stress have been found for these earlier instruments, demonstrating that they indeed identify stressors in the occupational setting. More extensive testing and refinement of the instrument was carried out as phase three of the study, and is described in the section on data analysis.

Research Phase Two: Data Collection

A first mailing consisting of a cover letter explaining the purpose of the survey and instructions for completing the questionnaires, both instruments, and a consent form were sent to all tri-county (Macomb, Oakland, and Wayne) school psychologists. To maintain confidentiality, the questionnaires were uncoded and returned anonymously via mail in a folded, self-addressed, stamped, legal-size envelope provided by the investigator.

Two to three weeks after this first mailing, a postcard was sent as initial follow-up to all subjects.

Two weeks later, a final mailing was sent, consisting of a postcard, to all school psychologists, urging participation.

All procedures used in this study met with the acceptance of the University of Michigan Department of Education Human Subjects Committee. Throughout the procedure, complete confidentiality of the subjects was maintained. At no point were the names of subjects associated with individual survey instruments, and subjects were assured that their individual response results would not be publicly divulged. Copies of the cover letter and follow-up postcard statements are enclosed in the Appendix A.

Research Phase Three: SPSI Subscale Development

Two weeks after the mailing of the final letter, the sample was closed, and data tabulation began. All calculations were performed on a TRS-80 Model III microcomputer. Three statistical packages were used: ADVANCED STATISTICAL PACKAGE published by Radio Shack, and MICROFACTOR AND MICRO-CANON, by Michael Stein Associates of Washington, D.C. Radio Shack is a major producer of microcomputer hardware and software; Michael Stein Associates is a consulting group which makes available several statistical programs for the TRS-80 computer. Phase three of the study consisted of the analysis of the SPSI instrument; phase four was comprised of the correlation of the SPSI and MBI scores.

Reliability of an instrument is typically measured in one of two ways. Test-retest reliability measures the stability of subject responses over time. Homogeneity measures the internal consistency of test subscales. The limited population precluded pretesting to determine stability. However, the validity of SPSI subscales can be presumed. The SPSI was divided into subscales for the purpose of decreasing the number of variables and thereby increasing the power of statistical analysis. It was, therefore, important that these subscales demonstrate adequate levels of homogeneity. Such a division into subscales also presumes construct validity of the scale. Factor analysis of the responses from the sample was used to refine the scale, to acquire homogeneous subscales,

discarding items with less than a .40 loading on any subscale. The analysis was performed on a TRS-80 microcomputer using MICROFACTOR by Michael Stein Associates of Washington, D.C. This program used the centroid method of factor analysis, setting the values along the main diagonal equal to the row commonalities. Homogeneity of the resulting scales was assessed using Cronbach's alpha coefficient. The results of this analysis and the final selected subset of items for use in the refined SPSI are presented in the Chapter IV.

Research Phase Four: Correlation of MBI and SPSI Scores

Scores on the MBI were tabulated and descriptive statistics were derived, assessing the overall burnout levels of the subject, and the frequency with which various stressors were reported. Research Question 1 inquired as to whether or not the levels of burnout among school psychologists are comparable with the levels reported in the literature for teachers, counselors, and school administrative personnel. To answer this question, ninety-five percent confidence limits for the MBI levels were calculated, and these were compared with MBI scores for other school personnel as reported in the literature.

Research Question 2 asked how demographic, interpersonal, and situational variables predict the level of burnout experienced by school psychologists. To answer these questions, the technique of canonical correlation was used to assess the relationship between the SPSI subscales

and demographic data on the one hand, with MBI subscales on the other. Since it is known (Maslach, 1979b) that the subscales of the MBI are independent, this method has far more power than could be obtained if the subscales of the MBI were added to create a total burnout index.

Canonical correlation is a technique used to determine the correlation between several predictor variables and several dependent or "criterion" variables. Canonical correlations were calculated through the use of MICROCANON, by Michael Stein Associates. Canonical correlation determines a linear combination of the criterion variables with which the predictors have maximum correlation. The correlations and regression coefficients of the predictors relative to this linear combination (called the composite criterion) are then calculated (Maxwell, 1977). The predictors were ranked in order of their correlation coefficients, and those with significant correlation were retained as possible predictors of burnout in the school psychologist.

Three canonical correlations were conducted: between SPSI subscales and MBI frequency scores, between SPSI subscales and MBI intensity scales; and between certain of the demographic data and MBI frequency scores. Other demographic comparisons for catagorical data were made using t-tests or one-way analysis of variance.

Summary

There has been little research conducted to assess the stress levels of the school psychologist and the factors producing such stress. In the present study, an instrument was developed to measure the presence of various stressors in the occupational environment of the school psychologist. A survey of school psychologists in the Detroit Metropolitan area was conducted, using the Maslach Burnout Inventory to assess burnout and the SPSI to measure occupational, interpersonal, and demographic factors. Factor analysis was used to refine the SPSI and decompose it into subscales. Stress levels were compared with values reported in the literature for stress and burnout levels in other educational personnel. Finally, a canonical correlation analysis was utilized to determine which stressors were principal predictors of stress in school psychologists.

CHAPTER IV

FINDINGS

The present study was intended to serve three purposes: (1) to answer research questions relating to the degree of burnout in school psychologists and the factors contributing to burnout; (2) to contribute to the development of an instrument for assessing stress and stress-management in school psychologists; and (3) to offer recommendations for stress remediation among these personnel within the school system. The research consisted of four phases: instrument development, data collection, instrument refinement, and data analysis. The development of the SPSI instrument has been discussed at some length in the preceding chapter, and a copy of the initial form of the SPSI as used in the data collection phase can be found in Appendix C.

This chapter presents the results and findings of the three remaining phases of the research. Under the second phase, Data Collection, descriptive statistics relating to the sample of survey respondents will be presented. Under phase three, Instrument Refinement, the factor analysis and refinement of the SPSI will be presented. And in the final

phase, Data Analysis, Research Questions 1 and 2 will be answered. These questions were:

1. Are the levels of burnout among school psychologists comparable to the levels reported in the literature for teachers, counselors, and school administrative personnel?
2. How do demographic, interpersonal, and situational variables influence the level of burnout experienced by school psychologists?

After the presentation of the findings in Chapter IV, the final chapter will draw conclusions as they reflect on the theory of occupational stress, the further refinement of the SPSI, and the remediation of stress within the profession of school psychology.

Research Phase Two: Data Collection

Questionnaires were mailed to all 345 school psychologists employed in Macomb, Oakland, and Wayne counties in the State of Michigan. Of these 345 persons, 281, or 81.4 percent, responded to the survey. Of these respondents, five were rejected for improperly or incompletely filling out the forms. Thus the final sample consisted of 276, or 80 percent, of the total population of school psychologists in the tri-county area.

The demographic composition of the sample was determined from items 41 through 56 on the SPSI form. The sample composition is described in the sections following.

Sex. The respondents were divided nearly evenly between the sexes, as shown in Table 1 below.

TABLE 1
Composition of Sample: Sex

sex	freq	%
MALE	132	47.8%
FEMALE	140	50.7%
(blank)	4	1.5%
TOTAL	276	100.0%

Martial Status. More than two-thirds of the respondents were married, while less than 10 percent were divorced or separated. Table 2 below shows the composition of the sample by martial status:

TABLE 2
Composition of Sample: Marital Status

status	freq	%
SINGLE	45	16.7%
MARRIED	196	71.0%
DIVORCED	23	8.0%
SEPARATED	4	1.4%
(no answer)	8	2.9%
TOTAL	276	100.0%

Age. The respondents ranged in age from 25 to 64 years, with median age 37. Age was coded in five-year intervals and tabulated, presenting the distribution displayed in Table 3 below.

TABLE 3
Composition of Sample: Age

AGE	freq	%	cum freq	%
25-29	27	09.7	27	10.1
30-34	65	23.5	92	33.2
35-39	66	23.9	158	57.1
40-44	43	15.5	201	72.8
45-49	22	8.0	223	80.8
50-54	31	11.2	254	92.0
55-59	14	5.1	268	97.1
60-65	8	2.9	276	100.0

Children. The survey showed that 176 members of the sample, or 63.8 percent, indicated that they had children, while 102, or 37 percent, indicated they had none. One subject failed to answer this question.

The 174 subjects who had children primarily had one or two child families. Sixteen percent of those with children, however, reported having four or more children in the family. Table 4 displays the distribution of family size among the subjects.

TABLE 4
Composition of Sample: Number of Children

children	freq	%	cum freq	%
0	102	37.0	102	37.0
1	37	13.4	139	50.4
2	81	29.3	220	79.7
3	28	10.1	248	89.8
4	18	6.5	266	96.3
5	3	1.1	269	97.4
6	4	1.5	273	98.9
7	2	.7	275	99.6
8	1	.4	276	100.0

Education. All of the personnel functioning as school psychologists indicated a degree higher than the Bachelor's degree level. The Masters degree was the most common, but a significant number of subjects reported Specialist and Ph.D. degrees as well. Table 5 displays the distribution of educational level within the sample of respondents.

TABLE 5
Composition of Sample: Education

degree	freq	%
MA/MS	124	44.9
Specialist	99	35.8
Ed.D	8	2.9
Ph.D.	42	15.2
Other	1	.4
(No answer)	2	.7
TOTAL	276	100.0

Experience. Subjects were asked to indicate the number of years for which they had been a psychologist, a school psychologist, and in their current job. Means for these three measures of experience were approximately 9.7 years in psychology, 9.2 years in school psychology, and 7.9 years in present job. These figures suggest a low level of job mobility, with an average of 1.2 jobs per subject. Tables 6A to 6C display the distributions of these three measures of employment experience.

TABLE 6A
Professional Experience: Number of Years
As Psychologist

years	freq	%	cum freq	%
1- 3	36	13.0	36	13.0
4- 6	69	25.0	105	38.0
7- 9	50	18.2	155	56.2
10-14	63	22.8	218	79.0
15-19	36	13.0	254	92.0
20-24	17	6.2	271	98.2
25-29	4	1.4	275	99.6
30+	1	.4	276	100.0

TABLE 6B
Professional Experience: Number of Years
As School Psychologist

years	freq	%	cum freq	%
1- 3	51	18.5	51	18.5
4- 6	60	21.7	111	40.2
7- 9	53	19.2	164	59.4
10-14	60	21.7	224	81.2
15-19	35	12.7	259	93.8
20-24	15	5.4	274	99.3
25-29	2	0.7	276	100.0

TABLE 6C
Professional Experience: Number of Years
In Current Position

years	freq	%	cum freq	%
1- 3	60	21.7	60	21.7
4- 6	73	26.4	133	48.2
7- 9	52	18.8	240	87.0
10-14	55	19.9	272	98.6
15-19	32	11.6	272	98.6
20-24	2	0.7	274	99.3
25-29	2	0.7	276	100.0

Future plans. Subjects were asked to indicate whether they planned to remain in their present position for at least three more years. The majority of subjects indicated that they planned to continue in their present position for three more years. One hundred ninety-two subjects (69.5%) indicated that they would stay in their present position for three more years, while 202 (73.2%) said they would remain in the schools for that long. Twelve subjects (5%) wrote in comments to the effect that they would remain if budgetary problems of the school district did not lead to the termination of their position. The responses to this question were tabulated in Table 7 found on the following page.

Scope of responsibility. A question was asked regarding the psychologist to pupil ratio. The median ratio was between 1:1000 and 1:1500. Responses to this question were tabulated in Table 8.

TABLE 7
Future Plans of School Psychologists

Do you plan to remain at least 3 years in:	yes	no	maybe	if funds	no answer
current position	192 (69.5%)	42 (15.2%)	24 (8.2%)	12 (4.3%)	6 (2.2%)
school psychology	202 (73.2%)	39 (14.1%)	24 (8.2%)	10 (3.6%)	2 (0.7%)

TABLE 8
Ratio of Psychologists to Pupils

Ratio	freq	%
1:1000	36	13.0
1:1000-1500	30	10.9
1:1500-2000	52	18.8
1:2000-2500	50	18.1
1:2500+	84	30.4
(no answer)	24	8.7

Salary. The final SPSI question asked subjects to state their annual salary. The median salary was $30,000. Only 10 percent of the subjects earned over $38,000; 7.2 percent earned less than $20,000. Annual salary distribution is shown in Table 9.

TABLE 9
Annual Salary of School Psychologists

salary	freq	%	cum freq	%
<20,000	20	7.2	20	7.2
20-22	27	9.8	47	17.0
23-25	24	8.7	71	25.7
26-28	36	13.0	107	38.7
29-31	45	16.4	152	55.1
32-34	39	14.0	191	69.1
35-37	36	13.0	227	82.2
38-40	25	9.1	252	91.2
40+	2	0.7	254	91.8
(no answer)	22	8.0	276	100.0

Research Phase Three: SPSI Subscale Development

The third phase of the study consisted of the analysis, refinement, and division into subscales of the SPSI instrument. The methodology for this process was based upon a factor analysis of the SPSI data collected in phase two.

Factor analysis was performed on items 1 through 41 of the SPSI form. After determination of a set of rotated, orthogonal factors, items were eliminated from the instrument if they failed to show a factor loading of .40 or better on exactly one factor. The remaining items were grouped into the subscales and scored. The values then served as the independent variables in research phase four. Cronbach's alpha coefficients was calculated for each subscale to determine the homogeneity of each scale, providing data for a possible further refinement of the scale in future research, and setting a lower bound for the scale's reliability.

Factor Analysis. Factor Analysis was performed using the program MICROFACTOR on a TRS-80 Model III microcomputer. MICROFACTOR calculates an intercorrelation matrix for up to 64 items and 512 subjects. The intercorrelation reverses the signs of scores on items which correlate negatively with a majority of other items, and flags these items; in scoring the subscales, the scores on these items will be subtracted rather than added to form the total. The factor analysis itself uses an algorithm described by Thorndike (1982). Factors are rotated as described by Maxwell (1977), producing orthogonal factors. The program also permits "fine tuning" of the rotation by the operator. An excellent discussion of the technique of factor analysis in the development of psychometric instruments is provided by Thorndike (1982), while Maxwell presents a concise and rigorous mathematical derivation of the method.

Factor Analysis results. The centroid method of factor analysis places commonalities on the diagonals of the intercorrelation matrix. This method thus bases its analysis only upon shared variance, rather than the total variance, which includes error variance (Maxwell, 1977; Thorndike, 1982). The shared variance is calculated as the sum of the commonalities. The shared variance of the SPSI item intercorrelation matrix was 18.877. It is against this shared variance that the completeness of the factor analysis is measured.

The analysis yielded five factors, accounting for 81.1 percent of the variance. Table 10 presents the five unrotated loadings, and the variance accounted for by each. These factors were rotated, as shown in Table 11. No items had loadings greater than or equal to .40 on the fifth factor, and thus it was discarded. Table 12 shows the assignment of items to scales. Items which had an inadequate loading on any scale, or which had loading of greater than .40 on two or more scales, were discarded at this point. These items are listed in Table 13; Table 15 shows the items whose scoring must be reversed.

TABLE 10
Unrotated Factors: SPSI

	I	II	III	IV	V
ITEM 1	0.34	0.16	-.21	0.25	-.23
ITEM 2	0.67	0.20	-.29	-.01	0.15
ITEM 3	0.67	0.15	-.26	0.01	0.16
ITEM 4	0.65	0.05	0.05	-.17	-.09
ITEM 5	0.52	0.27	-.12	-.20	-.30
ITEM 6	0.49	0.20	-.07	0.06	-.20
ITEM 7	0.65	0.18	-.28	0.10	0.02
ITEM 8	0.58	0.31	-.34	0.00	0.25
ITEM 9	0.64	0.10	-.48	-.09	0.04
ITEM 10	0.54	-.06	-.43	0.01	-.09
ITEM 11	0.41	-.10	-.45	0.06	-.11
ITEM 12	0.31	-.35	-.26	0.13	-.08
ITEM 13	0.63	-.26	-.42	-.11	0.11
ITEM 14	0.57	-.16	-.44	0.12	0.09
ITEM 15	0.70	0.15	-.17	0.05	0.19
ITEM 16	0.44	0.06	0.19	-.23	-.19
ITEM 17	0.61	0.14	0.18	-.09	0.20
ITEM 18	0.65	0.01	0.07	-.32	0.21
ITEM 19	0.39	0.20	0.20	-.41	0.06
ITEM 20	0.53	0.30	-.05	-.21	0.10
ITEM 21	0.29	-.09	0.17	0.03	0.10
ITEM 22	0.43	0.16	0.23	-.28	0.12
ITEM 23	0.49	0.24	0.26	0.24	0.05
ITEM 24	0.41	0.12	0.33	0.22	-.11
ITEM 25	0.23	0.26	0.25	0.15	-.14
ITEM 26	0.75	0.14	0.02	-.14	0.23
ITEM 27	0.74	0.05	0.11	-.18	0.07
ITEM 28	0.48	0.06	0.21	0.23	-.29
ITEM 29	0.56	0.05	0.17	0.25	-.14
ITEM 30	0.12	-.08	0.19	-.01	0.07
ITEM 31	0.33	-.09	0.07	0.13	0.08
ITEM 32	0.47	-.12	0.31	0.32	-.09
ITEM 33	0.28	0.09	0.10	-.13	0.03
ITEM 34	0.33	-.16	0.23	-.00	-.20
ITEM 35	0.14	-.37	0.06	0.04	0.14
ITEM 36	0.16	-.47	0.05	0.11	0.28
ITEM 37	0.34	-.05	0.19	0.16	0.13
ITEM 38	0.19	-.52	0.20	-.11	-.30
ITEM 39	0.42	-.34	0.21	-.14	-.29
ITEM 40	0.49	-.09	0.21	0.08	0.02
ITEM 41	0.27	-.32	0.04	0.08	-.06
		Variance			
acct for:	9.90	1.86	2.37	1.18	1.09
percent	52.4	9.8	12.5	6.2	5.7

TABLE 11
Rotated Factors: SPSI

	I	II	III	IV	V
ITEM 1	0.45	-.04	-.02	0.20	-.24
ITEM 2	0.60	0.36	0.16	0.28	0.11
ITEM 3	0.56	0.33	0.20	0.29	0.11
ITEM 4	0.26	0.46	0.27	0.26	-.18
ITEM 5	0.39	0.46	-.03	0.14	-.32
ITEM 6	0.37	0.22	0.04	0.28	-.25
ITEM 7	0.61	0.24	0.15	0.30	-.02
ITEM 8	0.61	0.33	0.02	0.27	0.23
ITEM 9	0.70	0.35	0.18	0.06	0.05
ITEM 10	0.62	0.17	0.27	-.00	-.08
ITEM 11	0.57	0.06	0.23	-.07	-.09
ITEM 12	0.33	-.09	0.42	-.08	-.09
ITEM 13	0.57	0.27	0.50	-.06	0.09
ITEM 14	0.63	0.08	0.39	0.05	0.07
ITEM 15	0.52	0.32	0.23	0.38	0.12
ITEM 16	0.05	0.44	0.16	0.19	-.28
ITEM 17	0.16	0.43	0.23	0.44	0.08
ITEM 18	0.18	0.59	0.35	0.24	0.11
ITEM 19	-.02	0.61	0.05	0.19	-.01
ITEM 20	0.31	0.50	0.01	0.27	0.05
ITEM 21	-.01	0.12	0.25	0.23	0.02
ITEM 22	-.01	0.51	0.11	0.29	0.03
ITEM 23	0.14	0.13	0.09	0.62	-.07
ITEM 24	0.03	0.08	0.13	0.52	-.23
ITEM 25	0.01	0.08	-.09	0.41	-.21
ITEM 26	0.34	0.52	0.29	0.41	0.13
ITEM 27	0.25	0.54	0.35	0.36	-.05
ITEM 28	0.16	0.07	0.18	0.44	-.40
ITEM 29	0.23	0.09	0.24	0.49	-.26
ITEM 30	-.11	0.07	0.15	0.14	0.01
ITEM 31	0.12	0.03	0.26	0.24	0.01
ITEM 32	0.05	0.04	0.37	0.50	-.23
ITEM 33	0.05	0.28	0.08	0.16	-.02
ITEM 34	-.03	0.14	0.30	0.19	-.29
ITEM 35	-.05	-.05	0.41	-.00	0.09
ITEM 36	-.04	-.12	0.52	0.02	0.21
ITEM 37	0.04	0.05	0.26	0.35	0.03
ITEM 38	-.17	0.05	0.52	-.13	-.37
ITEM 39	-.03	0.23	0.48	0.06	-.39
ITEM 40	0.08	0.17	0.35	0.36	-.10
ITEM 41	0.07	-.03	0.40	0.05	-.13
		Variance			
acct for:	4.80	3.66	3.16	3.44	1.34
percent :	25.42	19.38	16.73	18.22	7.10

TABLE 12
Assignments of Items to Factors

I		II		III		IV	
item	load	item	load	item	load	item	load
9	.70	19	.61	35	.52	23	.62
14	.63	18	.59	38	.52	24	.52
10	.62	27	.54	39	.48	29	.49
7	.61	22	.51	12	.42	28	.44
8	.61	20	.50	35	.41	25	.41
2	.60	4	.46	41	.40		.
11	.57	5	.46				.
3	.56						.
15	.52						.
1	.45						.

TABLE 13
Items Discarded from Instrument

	factor loadings			
items	I	II	III	IV
6	.37	.22	.04	.28
13	.57	.27	.50	-.06
17	.16	.43	.23	.44
21	-.01	.12	.25	.23
26	.34	.52	.29	.41
30	-.11	.97	.15	.14
31	.12	.03	.26	.24
33	.05	.28	.08	.16
34	-.03	.14	.30	.19
37	.04	.05	.26	.35
40	.08	.17	.35	.36

TABLE 14
Retained Items Whose Scoring Must Be Reversed

item	scale
35	3
36	3
41	3

The scales determined through this process can be readily identified with the common content themes of the retained questionnaire items. Scale I refers to matters of policy and authority in the occupational situation. Scale II refers to rewards, both salary and sense of contributing to clients and the school system. Scale III relates to general stress management skills. And Scale IV seems to relate to questions of time management. For the remainder of the study, these scales will be referred to as (1) Policy; (2) Rewards; (3) Stress Management; and (4) Time Management. Items 35, 36, and 41, all of which fell within the Stress Management scale, were to be scored in reverse, due to the predominately negative correlations these elements had with other items in the intercorrelation matrix.

Reliability and homogeneity of SPSI subscales. Cronbach's alpha coefficient provides a measure of the homogeneity of subscales on a mental measurement. Alpha is often used as a measure of reliability as well. Homogeneity or internal consistency measures in fact are not equivalent to realiability measures. The homogeneity of a scale does, however, determine a lower bound for the reliability of the scale (Lord and Novick, 1968). Table 15 on the following page shows the alpha coefficient for the four SPSI subscales.

These alpha values, with the exception of that for Scale I (and possibly Scale III) are indeed not high enough to warrant consideration of the SPSI as a fully developed

TABLE 15
Internal Consistency of SPSI subscales:
Cronbach's Alpha Coefficient

Scale	Alpha
1. Policy	.801
2. Rewards	.724
3. Stress mgmt	.499
4. Time mgmt	.617

instrument. The magnitude of these values suggests that these scales include multiple factors themselves. This seems especially likely in the case of Stress Management; this scale consists of six items relating to six diverse behaviors. It is possible that there is little correlation between the possession of one of these skills and any of the others by an individual. Such a condition would lower the internal consistency of the scale (alpha) even if the test-retest reliability of the scale were high.

In view of the low internal consistency values of the scales, the SPSI instrument must be refined prior to future use. This is probably best done through the development of additional test items in the weak scales, and the refactoring of this larger test, followed by another item analysis and scale homogeneity assessment. Specific recommendations for the refinement of the SPSI will be offered in the following chapter.

Research Phase Four: Data Analysis and Correlation

The present study was designed to answer two research questions:

1. Are the levels of burnout among school pyschologists comparable to the levels reported in the literature for teachers, counselors, and school administrative personnel?

2. How do demographic, interpersonal, and situational variables influence the level of burnout experienced by the school psychologist?

The remaining two sections of this chapter address themselves to these two questions.

Research Question 1. Burnout levels were assessed using the mean scores on the MBI subscales. Ninety-five percent confidence limits for the means on each scale were established, and are displayed in Table 16.

Maslach has calculated cut-points in the scales for each of these six scales, dividing the scores into low, medium, and high ranges. These ranges were determined by dividing the normative distribution of MBI scores into thirds. The cut-points are displayed in Figure 1.

TABLE 16
Burnout Levels in School Psychologists:
95% Confidence Levels

#	MBI scale	mean	sd	conf. limits	
1	EE (FREQ)	18.07	8.33	17.09	19.05
2	EE (INT)	26.38	11.46	25.03	27.73
3	DP (FREQ)	10.28	3.78	9.83	10.73
4	DP (INT)	13.89	7.00	13.06	14.72
5	PA (FREQ)	32.47	5.41	31.83	33.11
6	PA (INT)	35.21	6.05	34.50	35.92

key: EE = Emotional Exhaustion FREQ = frequency
DP = Depersonalization INT = intensity
PA = Personal Accomplishment

Figure 1
Cut-points in the MBI Scales

Scale	low	moderate	high
EE (FREQ)	0-17	18-29	30+
EE (INT)	0-25	26-39	40+
DP (FREQ)	0- 5	6-11	12+
DP (INT)	0- 6	7-14	15+
PA (FREQ)	40+	34-39	0-33
PA (INT)	44+	37-43	0-36

Using Figure 1 as our yardstick, the sample showed moderate levels of burnout on both the Emotional Exhaustion and Depersonalization scales. On the Emotional Exhaustion scales, the lower confidence limit was in fact scarcely out of the low range. On the other hand, the sample mean for Personal Accomplishment burnout was within the high range on both frequency and intensity.

Comparison with other educators. The wide variety of instruments and designs used made quantitative comparisons not often possible; however, most of the studies used instruments for which normative ranges had been calculated.

This permitted categorization of data into high, moderate and low stress and burnout levels.

Raison (1981) reviewed MBI studies of teachers, and found that most of them reported high-moderate to high levels for emotional exhaustion and depersonalization, and moderate levels for personal accomplishment burnout. Raison's own findings indicate that burnout is higher in the personal accomplishment dimension and lower in the other two. Thus Raison's recent findings on teacher stress are in line with the findings for school psychologists in the present study.

A comparison of the literature on stress and burnout in teachers, administrators and counselors with psychologists indicated the following:

1) Teachers--generally experienced the highest levels of burnout and stress.
2) Administrators--experienced relatively lower levels of occupational stress and burnout. In addition, research demonstrated higher levels of job satisfaction for this group, quite opposite from the results found with the psychologists.
3) School Counselors--this group appeared to experience stress and burnout in a qualitatively similar manner with the findings in the present study for psychologists.

What can be suggested from these findings is that there appears to be a correlation between the frequency and intensity of direct client contact and the levels of stress and burnout experienced in human service professionals. Research by Pines and Maslach (1978) substantiated this issue. They reported that personnel who could withdraw into administrative or other duties with lessened or intermittent client contact experienced reduced stress levels than those individuals who had consistent client involvement.

Research Question 2. The major analytic component of the study involved the assessment of the influence of the demographic, interpersonal, and situational variables assessed in the SPSI on the burnout levels of school psychologists. To accomplish this analysis, the SPSI questionnaires were scored using the division into subscales provided by the analysis in research phase three. The technique of canonical correlation was then used to determine the influence of individual factors on burnout. Several statistical tests relating demographic variables to burnout were also performed; this final section of the chapter presents the results of these tests.

SPSI-MBI Subscale Correlations

The SPSI subscales were correlated separately with the Maslach Frequency and Intensity data. Weights for both predictors and criterion scales were normalized to set the

largest weight equal to unity. Findings are presented in Tables 17A and 17B on the following pages.

The results showed that Emotional Exhaustion was the principal component of the composite criterion for burnout. Depersonalization was the weakest component. Personal Accomplishment contributed about 33 percent as heavily as does Emotional Exhaustion, of course in the negative direction.

The predictor weights showed that Scale 2, Rewards, was the most significant in predicting burnout frequency and intensity in the sample. Scale 1, Policy, ranks next in predicting frequency scores, at 70 percent of the weight of Scale 2. Scale 4, Time Management, weighs almost as heavily in predicting frequency, at .61. Stress management skills weigh least at .36. The Stress Management scale was only minimally correlated with the composite burnout frequency rating.

The predictor weights are different in the prediction of burnout intensity ratings. Scale 2, Rewards, was still dominant, but Scale 4, Time Management, follows at 75 percent. Scale 1, Policy, and Scale 3, Stress Management, carry slight weights of 28 percent and 18 percent respectively, and these variables were only slightly correlated with the composite criterion.

TABLE 17A
Correlation of SPSI with Maslach Frequency Scores

canonical correlation coefficient = .41
CHI-SQUARE = 128.33; DF=6; P<.0001

criterion weights scale	weights	predictor weights scale	weights
EE	1.00	1	0.70
DP	0.09	2	1.00
PA	-0.31	3	0.36
.		4	0.61

correlation of predictors with composite criterion:

scale	corr
1 Policy	0.52
2 Rewards	0.58
3 Stress mgmt	0.27
4 Time mgmt	0.48

TABLE 17B
Correlation of SPSI with Maslach Intensity Scores

canonical correlation coefficient = .38
CHI-SQUARE = 112.521; DF=6; P<.0001

criterion weights scale	weights	predictors weights scale	weights
EE	1.00	1	0.28
DP	-0.20	2	1.00
PA	-0.30	3	0.18
		4	0.75

correlation of predictors with composite criterion:

scale	corr
1 Policy	0.44
2 Rewards	0.58
3 Stress mgmt	0.22
4 Time mgmt	0.52

Other Occupational Considerations

Canonical correlations were performed with a composite of three variables from the second part of the SPSI relating to occupational conditions, and suggested in the literature

as contributing to stress among educators. These factors were:

Item 50: How many years have you been in school psychology?

Item 51: How many years have you been in present position?

Item 56: What is your annual salary?

As above, correlations were done with both frequency and intensity data of the MBI. With frequency data, the greatest canonical correlation coefficient was 0.02; in the case of intensity, 0.04. Neither of these is significant at the .05 level using Barlett's chi-square test. There does not appear to be a linear relationship between these factors and burnout.

The variable elicited by item 52, "Do you plan on remaining in present position for at least three more years?" was also selected for analysis. An Analysis of Variance was performed to compare the MBI scores of persons who gave various responses to this item. Differences were found in all six MBI scores, although the pattern of differences was a bit erratic. The F ratio was highly significant in all cases, at better than $p<.01$. A number of conclusions can be drawn from this analysis:

1. Persons who do not expect to be working in the same position in three years (answer = no) were under more Personal Accomplishment stress than the other groups, both in frequency and intensity. This group as well scored higher than the others on the Emotional Exhaustion Frequency scale.

2. Persons who responded "maybe" or "no reply" were under more Emotional Exhaustion stress (intensity) but less Personal Accomplishment stress (intensity) than the other groups.

3. Persons who wrote in that they would keep their position but were worried about funding for the job were under less Emotional Exhaustion stress (both intensity and frequency) and Depersonalization Stress (again, both intensity and frequency) than the other groups.

Table 18 displays the means, standard deviations, and F ratios of these tests.

TABLE 18
Summary of Analysis of Variance of Six MBI Scales by Response to Item 52 of the SPSI

sc	if funds	yes	no	maybe	no reply	F ratio
EEI	mean	16.67	17.88	19.14	18.33	18.67	151.17
	sd	9.85	8.49	8.25	8.33	3.06	
EEF	mean	22.00	26.13	25.86	29.33	35.00	172.19
	sd	12.74	11.66	7.43	15.65	3.46	
DPF	mean	8.50	10.36	9.71	11.92	8.33	248.80
	sd	2.07	3.93	2.35	4.93	3.21	
DPI	mean	10.17	14.17	11.62	16.83	16.67	132.88
	sd	4.17	7.38	4.21	8.04	5.86	
PAF	mean	35.50	32.99	29.67	31.92	31.67	1235.05
	sd	4.89	4.73	7.29	5.50	7.57	
PAI	mean	35.50	35.53	32.38	37.00	37.00	1128.68
	sd	6.92	5.94	6.11	5.69	7.81	

Demographic Aspects

Only two demographic features were selected for comparison, sex and age; since the overwhelming majority of the sample was married, no comparison was made using marital status. MBI scores were compared by sex using a t-test. No significant difference was found on any of the scales. Table 19 summarizes these six comparisons.

TABLE 19
Summary of T-test Comparison of MBI Scores for Male and Female Subjects

	MALES		FEMALES		
	mean	sd	mean	sd	z
EEF	17.68	19.78	18.41	20.30	-.213
EEI	26.74	29.43	25.80	28.32	.190
DPF	11.12	11.84	9.57	10.29	.812
DPI	15.20	16.90	12.59	14.36	.968
PAF	31.64	32.31	33.15	33.84	-.268
PAI	34.42	35.16	35.81	s6.62	-.266

ANOVA comparisons were also made of MBI scores and grouped according to age. Once again, no significant differences were found between demographic groupings of subjects. Table 20 presents a summary of these ANOVA tests.

TABLE 20
Summary of ANOVA Testing of MBI Scores by Age Group

	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	F
EEF mn	18.43	20.13	17.73	17.95	18.91	15.20	14.43	18.75	0.18
sd	20.55	22.53	20.24	19.23	21.80	17.23	17.89	23.50	
EEI mn	26.36	27.88	26.33	26.50	28.73	25.53	18.29	25.00	0.18
sd	29.23	30.70	29.25	29.14	32.92	29.25	21.57	30.91	
DPF mn	8.86	10.75	10.15	10.95	9.91	11.40	7.86	9.75	0.19
sd	9.95	11.37	11.20	11.79	10.77	12.71	8.77	11.68	
DPI mn	10.50	14.84	13.64	16.82	14.09	14.40	7.86	12.25	0.19
sd	11.94	16.53	15.49	19.02	16.34	16.79	8.75	14.87	
PAF mn	31.93	31.34	31.85	32.82	34.82	33.27	36.29	30.50	0.20
sd	33.43	32.40	32.96	33.98	36.88	34.64	39.27	35.50	
PAI mn	34.36	34.47	35.18	34.23	38.73	34.87	38.57	35.50	0.20
sd	36.08	35.53	36.45	35.38	40.92	36.57	6.57	42.18	

Summary

This chapter presented the results of the four phases of the current investigation into burnout among school psychologists. During phase one, the 56 item form of the SPSI was developed. This form can be found in Appendix C. In phase two, the SPSI and the Maslach burnout inventory were distributed by mail to all 345 school psychologists in the three counties of the Metropolitan Detroit area. Two hundred and seventy-six usable forms were returned, for a response rate of 80 percent. Complete descriptive statistics were compiled on the final sample based on the fifteen descriptive items in the SPSI instrument. These statistics are displayed in Tables 1 to 10.

In phase three of the research, the data collected were used to perform a first refinement on the SPSI form. This refinement was carried out by means of a factor analysis on the 41 attitude items on the scale. The factor analysis produced four subscales, shown in Table 13. The four scales correspond to issues of (1) Policy and Authority, (2) Rewards, both tangible and intangible, (3), Stress Management Skills, and (4) Time Management. These scales are hereinafter referred to as Policy, Reward, Stress Management, and Time Management. The Policy scale contains 10 items; Reward, 7 items; Stress Management, 6 items; and Time Management, 5 items. Cronbach's alpha was calculated to measure the internal consistency of these four subscales. The values of alpha found indicated a relatively low level

of internal consistency in all the scales with the exception of the Policy and Reward scales. Internal consistency for Stress Management was especially low, suggesting that these skills were actually independent traits with low inter-correlation. Recommendations for future work into the refinement of the instrument will appear in the following chapter.

The final phase of the research involved the analysis of MBI and SPSI data to answer the two research questions. Ninety-five percent confidence limits for the mean MBI scores were calculated for the entire sample. Using Maslach's cut-points for the MBI, these values showed high levels of burnout in the Personal Accomplishment dimension, but low-moderate levels in the other two dimensions of the MBI. This finding agreed with one recent study (Raison, 1977) but seemed to present a lower picture of burnout than did many earlier studies on teachers and administrators. The difficulty in comparing burnout levels when a variety of instruments are used argues forcefully for standardizing stress measurement devices.

The principal component of the study involved the assessment of factors influencing burnout among school psychologists. The four scales of the SPSI were correlated first with the Frequency aspect of the MBI and then with the Intensity aspect, using a canonical correlation. The composite criterion was found to weight Emotional Exhaustion most heavily, and Personal Accomplishment at about 30

percent of Emotional Exhaustion with Depersonalization playing a minor role. Reward was the predictor scale weighted most heavily in the regression; Stress management was weighted only slightly and appeared to play a relatively minor role. Total canonical correlation coefficients of .41 for Frequency and .38 for Intensity were found.

The MBI scales were then correlated with a subset of items relating to professional conditions contained among the final 15 items of the SPSI. No significant correlation was obtained.

The MBI scores of the different response groups to the question, "Do you plan on remaining in your present position for at least three years?", were different on all six Maslach scales. These differences showed frequent write-in comments relating to fears about school-board finance and job security: persons writing in responses of this sort on their questionnaire scored significantly lower than other groups on four of the six scales. The Maslach scores of different sex and age groups were compared using Analysis of Variance; no significant differences were found.

These findings suggested a variety of conclusions which can be drawn about stress in the school psychologist: its causes, its measurement, and its remediation. These conclusions will be discussed in the following chapter.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The problem of stress among human service professionals has received much attention in the last decade. Burnout, a particular form of stress response described in persons who must work directly with service recipients has been particularly well researched. Among the type of personnel who have been shown to be susceptible to this response are educators working within the nation's school systems. Studies have been directed toward the problems of stress among teachers, administrators, and counseling personnel. The present study measured levels of burnout among school psychologists in the Detroit Metropolitan area, and identified a variety of factors which influence the experience of burnout by these professionals.

The study consisted of four phases: instrument development, data collection, instrument refinement, and data analysis. The previous chapter presented the results of these four phases of investigation. This chapter will discuss a variety of issues raised by the findings, and offer suggestions for future research in the area of stress within the educational establishment.

The School Psychologist Stress Inventory

The School Psychology Stress Inventory was designed to assess a variety of stressors believed likely, from the literature, to be causes of stress in the work-life of the school psychologist. Items were selected with seven subscales in mind. These scales were Authority and Autonomy; Interpersonal Cooperation; Satisfaction with Professional duties; Sense of Achievement; Expectations vs. Realities; and General Mental Health--Resilience. The Factor Analysis of the 41 items did not bear out this intended division into scales.

Instead, four scales were found, although at generally lowered levels of internal consistency. These four were Policy, Reward, Stress Management, and Time Management. The Policy scale had significant overlap with the original Authority and Autonomy scale, as well as with Interpersonal Cooperation. Reward overlapped Sense of Achievement and Satisfaction with Professional duties. Stress Management was roughly equivalent to General Mental Health. The expectations items were scattered among a number of separate scales, including, peculiarly, Time Management. The Policy and Reward scales demonstrated high enough levels of internal consistency (alpha = .80 and .72 respectively) to suggest that these items indeed form the core of a consistent scale. These items were also weighed heavily on both canonical correlations, suggesting a content validity for these scales.

What of the other two scales? Many of the items which factor analysis located in the Stress Management scale had their origin in the prior General Mental Health category. These items were included in the instrument for dual reasons. On the one hand, both Antonovsky and Selye, worked within distinct conceptual frameworks, emphasized the role of general resilience in the resistance to stress responses. These items were chosen as possibly being representative of such resilience. On the other hand, studies in the literature inquired about stress management techniques on the part of educators suggested a great many of these attitudes and behaviors as treatments for stress (Mills, 1981). Yet, the scale showed minimal internal consistency, and minimal correlation with the composite burnout criterion.

As Antonovsky pointed out so often, stress research has concentrated on the pathogenic rather than salutogenic components of the response; it is, therefore, not surprising that we are able to identify the stress-provoking aspects of a situation more readily than the stress-resisting aspects. Yet, if research is to contribute to the remediation of burnout in the professions, these preventive and curative factors must be ferreted out. It is no doubt symptomatic of the pathogenic research orientation that the present SPSI instrument contained so few general resilience items, and that they were expected to form only a single homogeneous factor. Further development of this or similar inventories

should include a large set of such resistence items from which more reliable subscales can be developed.

The fourth scale, Time Management, also had low levels of internal consistency. The scale demonstrated a large weighting on the regression against MBI intensity scales, suggesting some level of content and construct validity, although it had minimal weighting against the frequency criterion. This dichotomy suggested that the time-related items, while dominating the scale in number, may not reflect the scale's true identity. Two of the items in the scale related to expectations of the position. Expectations had been cited before in the literature as contributing to burnout in education. "The problem of burnout may have more to do with self-expectations than the demands of the organizations or other extrinsic conditions" (Colasurdo, 1981). More items relating to expectations should be placed in future developmental forms of this stress inventory.

Because of the weakness in the third and fourth scales of the factored SPSI, the low weights placed on Stress Management and Time Management by canonical correlation with the MBI must be interpreted cautiously. The SPSI as currently constituted does not measure these two variables with enough precision to offer a definitive judgment.

Burnout Levels among School Psychologists

The sample of school psychologists demonstrated levels of burnout at the low-moderate level on two of the three dimensions: Emotional Exhaustion and Depersonalization. On the other hand, burnout was in the high range on the Personal Accomplishment dimension. This finding was akin to that of Raison (1977) for teachers, and differed from previous findings applying the MBI to teacher populations in setting emotional exhaustion levels lower and personal accomplishment burnout levels higher. The finding suggested that professional job-satisfaction issues contributed significantly to the overall sense of burnout among school psychologists.

Comparison of burnout levels between various studies presented insurmountable difficulties caused by the variety of different instruments used to make stress assessments. While the MBI is the most popular single instrument used for this purpose, it was used in a minority of the research studies reviewed. Comparison then must proceed by using the qualitative judgments of research study conclusions, which were for the most part based on establishing normative scales for their respective instruments. These studies with few exceptions indicated that burnout levels were moderate to high among administrators, principals, teachers, and counselors. Only a few studies reviewed in Chapter II reported low stress levels in their sample. It would be useful to survey stress-level studies in general to

determine if there exists a bias towards reporting "high" stress levels in all populations studied.

Personal Accomplishment burnout levels were in the high zone in the population as a whole. A glance at Table 16 on page 64 showed that the variance of this component was relatively low within the sample; only one scale had lower variance, the frequency level of Depersonalization, the scale with the lowest overall level. This suggested that factors which can account for variance in the PA burnout component were not present within the sample; indeed among school psychologists as a whole such variance may not exist. This low variance made it impossible to arrive at conclusions regarding the cause and remediation of PA burnout in school psychologists.

Factors Influencing Burnout Among School Psychologists

Canonical correlations were performed to assess the extent of linear relationship between the four subscales of the SPSI and the MBI burnout indices. The analysis was performed separately for frequency and intensity scales of the MBI: a slightly greater correlation was reached using frequency data.

Canonical correlation maximizes the linear relationship by forming the linear combination of the dependent variables with which the predictor variables have the greatest multiple linear regression. This linear combination was presented as a series of weights for the dependent variables,

also called the criterion variables in the analysis. The weights were presented in standardized scale, with the greatest weight set equal to unity and the lesser weights expressed as fractions thereof. In both the analysis for frequency and intensity scales, Emotional Exhaustion had the greatest weight. Personal Accomplishment was weighted approximately -0.30 in both cases. This means that Personal Accomplishment burnout scores were less than one-third as sensitive as Emotional Exhaustion scores to changes in SPSI subscale levels.

Reward Scale. After calculation of the composite criterion weights, multiple linear regression was performed. The coefficient of the predictor values thus created a set of predictor weights. SPSI Scale 2, Reward, was the most heavily weighted of the predictor values. The composite criterion was most sensitive to changes in the level of this variable. An interesting situation: a change in the level of tangible and intangible rewards reported by the subject had a far greater effect on exhaustion rather than accomplishment levels on the MBI.

This observation implied that the Personal Accomplishment subscale of the Maslach does not measure the same trait as that of the SPSI Reward scale. The Reward scale on the SPSI included two items referring to salary level. These two items had very high factor loadings on the subscale factor. The MBI Personal Accomplishment scale had no items dealing with this quantity. The MBI scale tended to include

items which related to one's own ability as a human service worker, rather than to the actual level of accomplishment in the system in which the work was accomplished. Thus the MBI items include "I can easily understand how my recipients feel about certain things" and "I deal very effectively with the problems of my recipients." SPSI items on the other hand deals with the sense of accomplishment permitted by the structure of the school. Such items as "I am bothered by my ability to see closure in my work" and "I am bothered with my sense that performance of my job responsibilities made a contribution to the functioning of the school system" contributed to the SPSI Reward Scale.

These considerations suggested that the MBI Personal Accomplishment scale is perhaps better thought of as a measure of the subject's sense of professional competence. The general high level of burnout on this dimension and the low variance along this scale suggested a poor professional self-image was endemic among school psychologists, and that this conception was little affected by the variations which occurred between employment situations, even those changes which affected the overall Reward level attributed to the job. The high weighting of the Reward scale, its high correlation with composite criterion, and with Emotional Exhaustion in particular, and its high internal consistency, made the Reward scale the best single predictor of burnout among the SPSI variables.

The Policy Scale had the second largest weight when correlated with the Frequency scales of the MBI. The Policy scale was heavily involved with issues of authority and relationship with the supervisor, as well as with the degree to which the psychologist felt he/she was able to participate in the creation of policy. The Policy scale carried a weight of .72 when correlated with the MBI Frequency scales. The roles played by Reward and Policy reflect the importance of organizational features in human service burnout, features which were not directly assessed in the MBI. Given the predominance of large bureaucratic institutions in the delivery of services, it would seem that attitudes toward the organization as well as the recipients might be a fundamental aspect of human service burnout; the present results suggested that, at least for school psychologists, these factors played a central role in determining the burnout level.

When correlated against the intensity scales of the MBI, Scale 4 of the SPSI, Time Management, carried a weight of .75. This scale contained five items. Three relate to time usage, and two to expectations of school psychology, and clearly needed further development to represent a more clearly definable underlying trait. Both Lawson (1980) and Mills (1981) reported time pressures as the greatest single source of stress among principals. Colasurdo, as quoted earlier, found expectation to be the greatest source of stress among teachers. Thus both aspects of this scale

appeared as major contributors to the intensity of the stress response. This suggests that the inclusion of more items of these two types and a refactoring of the instrument would provide us with two scales to measure these two significant contributors to the intensity of burnout levels. Both seemed to play a major role in determining burnout levels on the MBI intensity scale for the present sample.

In summary, then, it appeared that the Emotional Exhaustion scale of the MBI was the best single predictor of burnout, measuring a quantity with much greater variance than the Personal Accomplishment scale of the Maslach. The Emotional Exhaustion scale was the most highly weighted predictor of both frequency and intensity of burnout, and had a correlation of .58 with the composite criterion. The Policy scale was weighted next most heavily in accounting for the frequency composite. The combination of these two scales as predictor suggested the great role played by bureaucratic factors in burnout and occupational stress. In predicting the frequency composite, the second highest weight was assigned to Time Management. The Stress Management Skills scale played a negligible role.

Other factors were considered as possible influences on school psychologist burnout levels. These factors included a composite of occupation factors taken from the final 15 items of the SPSI, as well as age and sex. None of these factors contributed to the variance in burnout scores. The responses to the question, "Do you plan on remaining in pre-

sent position for three more years?", divided the sample into groups with differences on all six MBI scales. This question provided some interesting serendipitous findings.

The item had been designed as a simple yes-no response. In fact, four possible responses to the question took shape, as subjects in large numbers wrote in one of two messages. Some indicated that they were undecided about their future plans. Others indicated that they would stay in their position if funding for the job continued, but had fears of possible reductions-in-force in the school district. Table 18 on page 69 displayed the analysis of this item. On the Intensity Scales, persons writing in messages about their undecided state scored very high on Emotional Exhaustion and Depersonalization, and very low (remembering this scale was reversed) on Personal Accomplishment burnout. This suggested the source of the ambivalence in these persons, who are in fact reversing the sample-wide pattern of high Personal Accomplishment burnout and low burnout in the other two dimensions.

Even more interesting was the group who wrote in that they would continue in their present condition if funds were available. This group was the lowest scoring of all the groups on both Intensity and Frequency scales for Emotional Exhaustion and Depersonalization; on all but Emotional Exhaustion Intensity this group scored significantly lower than the group answering "yes." It was difficult to assess the meaning of this relationship from the current study.

It was not clear whether what was being measured was a trait that involved the writing in of unsolicited answers on questionnaires, or a trait related to the specific questions. The fact that no other item had a significant number of write-in responses suggested that the relationship had something to do with the content of the item. Why the group suffering from the least burnout should be the group most worried about funds was not at all clear from the data on hand, but it certainly was a relationship deserving of some future attention.

The School Psychologist and Stress

The present assessment of stress among school psychologists was apparently only the second attempt made to measure the extent of the burnout problem in this profession. The one previous study, by Bennington, using different instrumentation, concluded that School psychologists were at lower stress levels than the average person in our culture. The present study found that this was true on two of the three dimensions of the MBI; on both Emotional Exhaustion and Depersonalization, the sample scored in the low-moderate range, and placed them slightly below the norm on these scales. However, the school psychologist showed high levels of burnout associated with Personal Accomplishment. This value showed a low variance within the sample, suggesting that this burnout was not associated with factors which vary from workplace to workplace.

The data implied that the major cause of stress among school psychologists was built into the profession itself, and related to the sense of personal professional competence, since other aspects of professional satisfaction, assessed in the SPSI Rewards scale, showed a high variance. Factors which contributed to this pervasive sentiment should be identified in future research. Studies on school psychology roles suggested several possibilities. It was possible that this low professional self-esteem stemmed from the lower value attributed to school psychology by both the teaching and psychological professions. It is also possible it relates to the low salary levels of the position vis-a-vis other mental health professionals. These factors cannot be identified or assessed in the present study. What can be stated is that there is a widespread feeling of inadequate personal satisfaction from the practice of professional duties and that this type of burnout varies very little with changes in the SPSI or demographic variables.

Recommendations for Stress Remediation

Research into occupational stress would be pointless if it could not contribute to efforts to remedy stressful situations. The considerations outlined in the preceding sections of this chapter suggest a number of possible avenues for stress remediation.

Since the major component of burnout stems from the Personal Accomplishment scale, steps should be taken to improve this situation. A major component of the problem, it has been pointed out, is perhaps endemic to the profession; the profession itself can take steps to remedy the low sense of professional accomplishment through providing more pathways to professional growth, continuing education, and career advancement. Conferences, seminars, and other activities to bolster professional esteem would be of use in this context. In addition, joint activities with other mental health or education personnel might enhance the image of the school psychologist in the eyes of these other practitioners, and increase further the sense of personal accomplishment.

The Personal Accomplishment scale carries a weight of .30 in the composite criterion. Steps taken to adjust the most heavily weighted of SPSI factors will also improve professional satisfaction and decrease Personal Accomplishment burnout. These steps will have an even greater effect on emotional exhaustion burnout, the most heavily weighted item in the composite.

Rewards. The item in the reward scale with the highest factor loading refers to the adequacy of salary. It seems likely that a salary increase for school psychologists would decrease stress significantly. Current fiscal realities do not make this a viable option for many school districts, however. The location of the two items relating to salary

on the same scale with less tangible forms of reward hint at the possibility that stress associated with low pay is, in part, based on the social meaning attributed to pay and not to actual hardships imposed by the level of pay. This issue is difficult to resolve.

Other reward items relate to the sense that the psychologist is contributing significantly to the success of the education enterprise. These items include a sense of recognition by teachers, a greater role in planning for the education needs of special children, more interaction with other educational personnel, and similar concerns. In short, this implies a change in the role of the psychologist within the schools. Administrators with interest in improving the productivity of their psychologists should consider taking steps to implement some of these role changes, through structured interaction between the school psychologists and teaching staffs. The data of the present study would suggest a decrease in Emotional Exhaustion would be associated with such increased professional participation into the educational program.

Policy. The Frequency of Burnout feelings is also heavily dependent on the Policy variable. This variable relates to the quality of the relationship the psychologist has with his or her supervisor, the general approval of school policies, and the degree to which the psychologist has input into the policy-making process. Supervisory personnel in general need to be aware of the effects that

their behavior have upon the staff working under their authority. Administrators should examine supervisor-staff relationships whenever stress management emerges as a problem in the school system. Steps to maintain constructive, open relationships between supervisors and the school psychologist should be encouraged, and avenues for increased participation of all personnel in decisions affecting them must be sought. In particular, the psychologists surveyed indicated the policies did not really permit them to work to the best of their abilities.

Time Management. Problems in the area of time management appear as a factor producing burnout in the present study as well as in prior work. This problem can arise either when the workload is simply too large, or when the diversity of individual tasks turn scheduling itself into a burdensome project. Supervisors should consider carefully the workload of their pyschologists. If the work simply cannot be done, it should be cancelled or rescheduled officially, rather than having the overload appear as a failure of the individual psychologist. If problems arise in the efficient scheduling of a multiplicity of tasks, help should be forthcoming in time-management skills. Perhaps a seminar in effective scheduling would be useful not only for the psychologists, but for their supervisors as well.

Expectations. Accurate expectations of professional human service work is essential for the development of a healthy attitude toward employment. The development of

unrealistic expectations should not be encouraged at any point. Graduate education programs should be quite clear about the nature of a career in school psychology. During hiring, pains need to be taken not to present the job in an unrealistically favorable light. Job descriptions in policy manuals must bear some relations to the actual work performed by the school psychologist.

Stress Management. Other studies of stress among educational personnel have frequently placed a major emphasis on stress management techniques relating to activities outside of the occupational context, techniques related to general resilience and mental health. These activities have included exercise, outside interests and hobbies, improved family relationships, and similar behaviors. The present study does not indicate a significant role for these factors. While certainly there is no reason to discourage such general good habits, the current data cannot suggest that these practices will lower the incidence of burnout. Perhaps future refinements of the SPSI with diverse stress management skills will be able to distinguish those practices which do in fact increase resistance to stress at work.

Recommendations for Future Research

The present study suggests several possibly fruitful avenues for future research relating to occupational stress and stress management.

1. Instrument refinement. The SPSI used in the present study is still not completely developed. While the Reward and Policy scales have relatively high internal consistency and require merely some item substitutions for improved performance, the stress management and time management scales appear to contain internal factors; unfortunately there were not sufficient items of these types for development of more scales through the factoring process. Continued development of this Inventory appears warranted on the basis of the scale's significant correlations with the subscales of the MBI. SPSI items relate to issues arising within the bureaucratic structures of the school system, and it is in fact these items which contribute to the two principal scales. Most human service work is performed by the employees of such agencies; the SPSI then can serve as a prototype for a human service stress questionnaire which examines the particular organizational aspects of burnout. Since the MBI does not explicitly assess these aspects, an SPSI-type instrument might in fact point us toward other, independent factors of occupation stress beyond the three factors of the Maslach Burnout Inventory.

2. Stress resistance. Most studies on stress assess the stressors present in the environment through sophisticated statistical techniques, then offer recommendations for remediation in a far less rigorous fashion. The present study had hoped to provide evidence for the usefulness of certain Stress Management traits, but no such evidence was found in the data. Yet persons vary in their susceptibility to stress. Further research into the behavioral, attitudinal, and organizational factors which create resistance to stress need to be explicitly studied if serious recommendations for stress remediation in the human services are to be developed.

3. Educational Roles. The school psychologist functions in a complex environment amongst a variety of professional roles. Altering these relationships to reduce stress on the psychologist may appear useful, but is in fact counterproductive if these changes increase the stress upon other roles. Studies reviewed in Chapter II demonstrated some of the contradictory role perceptions operating on the school psychologist. Research into the relationship between congruence or incongruence of role perceptions and stress within the school would be useful in determining to what extent restructuring of roles and responsibilities might reduce stress.

Summary

The present study verifies for two of the MBI scales Bennington's finding that school psychologists experience less stress than the average individual. These two scales are Emotional Exhaustion and Depersonalization. High levels of burnout are recorded in the Personal Accomplishment direction, however. Burnout among school psychologists seems to be determined primarily by the rewards of the work expressed in terms of pay and contribution to the school system's functioning. Policy input and relationships to supervisory personnel also play a significant role in determining the level of burnout. Time stresses and expectations also play a major role, but stress management techniques were not seen to be significant. Sets of weights for these factors and the MBI scales were developed through canonical correlation to provide an optimal linear relationship between the two; these were not expressed as prediction equations, but as the relative importance of the various factors in explaining the variance in burnout among school psychologists. Age, sex, student-psychologist ratio, and salary were not significant in determining burnout levels. Expectations relating to continuation in the same professional position were found to have some significance. Decreasing the magnitude of the significant predictor factors through organizational restructuring and supervision should work to lower levels of burnout among these personnel.

The current SPSI instrument demonstrates its usefulness in identifying sources of stress for human service workers in an educational bureaucracy. Further work refining the instrument scales is necessary to develop a tool capable of accurately assessing the role of time management, role expectations, and general stress management ability. Such development is left for future investigation.

APPENDICES

APPENDIX A

Correspondence with Subjects

November 1, 1982

Dear Fellow School Psychologists,

The psychologist in the public school is expected to provide the system with a multi-faceted role of evaluator, counselor, and implementer of programming as part of his/her professional assignment. Since other personnel, such as teachers, counselors, and administrators have been shown by extensive research to be susceptible to stress and burnout, it seems that the school psychologist, too, must be considered at-risk. Yet, little research has been done to assess levels of burnout among psychologists, to determine the aspects of employment which contribute to psychologist burnout in the provision of job responsibilities, or to offer recommendations to the school system for reducing or preventing psychologist burnout.

This study will attempt to research the effects of various pressures and responsibilities inherent in the work-life of the school psychologist.

Enclosed is your research packet with consent form and two questionnaires, the Maslach Burnout Inventory and the School Psychologist Stress Inventory. Completion of the questionnaires will take approximately 25-30 minutes of your time. If you wish to become part of this research, please sign and return the consent form in the separate, letter-size envelope provided. The completed questionnaires are to be returned in the folder, legal-size envelope enclosed in your packet.

Your participation is on a purely voluntary basis with strict confidentiality maintained. Responses of all participants will be collectively assessed with results reported in an understandable statistical form.

My hopes is that the outcome of this research will be beneficial to our profession of school psychology. Careful examination of job stresses will, hopefully, assist us to formulate improvements in our worklife to enhance the quality of both professional and personal involvement. Your participation in this research will be much appreciated.

Sincerely,

Dennis J. Jacobs
School Psychologist
(Farmington Schools)

INFORMED CONSENT FORM

The research project to be conducted by Dennis J. Jacobs as a Doctoral Dissertation has been explained to me. I understand that my participation is completely voluntary. Furthermore, I understand that if I agree to participate, I will have to complete two questionnaires assessing feelings and opinions about the stresses I am experiencing as a mental health professional within the public school sector.

I further understand that:

1. All information is confidential and my identity will not be revealed.
2. I am free to respond to all or part of the questionnaires' items.
3. Any questions I have about the research will be answered.
4. I would like to receive a copy of the research results: Please check [ ] YES [ ] NO

On the basis of the above statements, I agree to participate in this research.

_____ _____

Participant's Signature Investigator's Signature

_____

Date

Dear Fellow School Psychologists:

Approximately two weeks ago, you were mailed a research packet containing two survey questionnaires to be completed anonymously. Thank you very much for your time and co-operation if you have already completed and returned the questionnaires. If you haven't, would you please do so. If you have mislaid the materials and would like to participate, you may contact me by phoning collect 313/853-1315 and I will promptly mail you a survey packet.

Thank you,

Dennis J. Jacobs, M.A.
School Pyschologist

Dear Fellow School Psychologists:

If you have already mailed your School Psychologist research questionnaires, thank you very much and please disregard the remainder of this communique. For those of you who haven't, this is your last opportunity to participate in the research attempting to assess potential burnout factors in the profession of School Psychology. To maximize reliability and validity of research results, your participation is most necessary.

Thank you,

Dennis J. Jacobs, M.A.
School Psychologist

APPENDIX B

Approval of Human Subjects Committee

October 26, 1982

Dr. Charles G. Overberger
Vice President for Research
4080 Fleming Administration Building

Dear Vice President Overberger:

The School of Education's Research/Human Subjects Review Committee has approved the following application for the use of human subjects:

Title: Burnout and Occupational Stressors in School Psychology

Researcher's Name and Address: Dennis J. Jacobs
2345 Chelsea Court
Troy, MI 48084

Date approved: October 25, 1982

The study has been approved: as originally proposed _____
as modified as a result of the review X

This approval is granted with the following provisions:

(1) that the investigator is required to advise the Human Subjects Review Committee of the School of Education before making any change in protocol which might bring into question the involvement of human subjects in a manner at variance with the consideration on which this approval was based;

(2) that the investigator is required to immediately suspend an inquiry if an unanticipated negative change in the health or behavior of a subject is noticed that may be attributable to the research, and the circumstance shall be promptly reported by the investigator to the Human Subjects Review Committee of the School of Education for its further review and decision on continuation/termination of the project; and

(3) that every 12 months from the date of approval, a review by the Committee is required. If a continuing proposal is not submitted for annual review, or if it is not approved as a result of such review, the project will be discontinued, pending later approval.

Sincerely,

Ann A. VanDemark, Ph.D.,
Director of Research
Executive Secretary, Research/
Human Subjects Review Committee

AAV:mm
cc: Dr. Menlo, Academic Services, Mr. Jacobs

APPENDIX C

Instrumentation

This Appendix Contains the Maslach Burnout Inventory and the School Psychologist Stress Inventory in the forms distributed to the subjects.

SCHOOL PSYCHOLOGIST STRESS INVENTORY

1=Strongly Disagree 2=Disagree 3=Mildly Disagree
4=Mildly Agree 5=Agree 6=Strongly Agree

1.	I am bothered with the work space or office set aside for my use.	1	2	3	4	5	6
2.	I am bothered with the extent to which my job permits me to best utilize my abilities.	1	2	3	4	5	6
3.	I am bothered with the chance I am given to implement many of my own ideas.	1	2	3	4	5	6
4.	I am bothered with my ability to see closure in my work.	1	2	3	4	5	6
5.	I am bothered with the use made of psychological evaluations.	1	2	3	4	5	6
6.	I am bothered with the level of responsibility I am given for program placement.	1	2	3	4	5	6
7.	I am bothered with the extent to which my actual job responsi bilities are congruent with my job description.	1	2	3	4	5	6
8.	I am bothered with the extent to which my actual job responsibilities are congruent with my education, skills, and abilities.	1	2	3	4	5	6
9.	I am bothered with the schools policies toward my position.	1	2	3	4	5	6
10.	I am bothered with the professional understanding I have developed with my supervisor.	1	2	3	4	5	6
11.	I am bothered with the technical competence of my supervisor.	1	2	3	4	5	6
12.	I am bothered with the sense of mutual cooperation between the psychological staff.	1	2	3	4	5	6

1=Strongly Disagree 2=Disagree 3=Mildly Disagree
4=Mildly Agree 5=Agree 6=Strongly Agree

13.	I am bothered with the level of administrative support from my professional decisions.	1	2	3	4	5	6
14.	I am bothered with the extent to which supervisors disseminate information needed in order to carry out my work responsibilities.	1	2	3	4	5	6
15.	I am bothered with the extent to which my actual job responsibilities are congruent with my expectations for my present job.	1	2	3	4	5	6
16.	I am bothered with the level of cooperation between myself and the teaching staff.	1	2	3	4	5	6
17.	I am bothered with the degree to which I have attained my professional goals.	1	2	3	4	5	6
18.	I am bothered with the recognition I receive for my job performance.	1	2	3	4	5	6
19.	I am bothered with the degree to which my salary level is congruent with the teaching staff.	1	2	3	4	5	6
20.	I am bothered with my sense that the performance of my job responsibilities made a contribution to the functioning of the school system.	1	2	3	4	5	6
21.	I am bothered with the job security in my present position.	1	2	3	4	5	6
22.	I am bothered with the extent to which my actual job responsibilities are congruent with my annual salary.	1	2	3	4	5	6
23.	I am bothered with the amount of time I must spend writing psychological reports and doing my other paperwork.	1	2	3	4	5	6
24.	I am bothered with the time available in the school calendar for the performance of my job responsibilities.	1	2	3	4	5	6

1=Strongly Disagree 2=Disagree 3=Mildly Disagree
4=Mildly Agree 5=Agree 6=Strongly Agree

25.	I am bothered with the travel time between school buildings as it related to the performance of my job responsibilities.	1	2	3	4	5	6
26.	I am bothered with my feelings of achievement in my present position.	1	2	3	4	5	6
27.	I am bothered with my personal feelings of success.	1	2	3	4	5	6
28.	I am bothered with the degree to which my graduate education prepared for the actual work.	1	2	3	4	5	6
29.	I am bothered with the degree to which my graduate program prepared me for the frustration of a career in psychology.	1	2	3	4	5	6
30.	I have been able to form enjoyable relationships with my colleagues in the school.	1	2	3	4	5	6
31.	I am bothered with the relationships I have been able to form with the students I work with.	1	2	3	4	5	6
32.	I am bothered with the extent to which my work permits the development of a comfortable routine.	1	2	3	4	5	6
33.	I consider my work to be one of the central sources of meaning in my life.	1	2	3	4	5	6
34.	In my position, it is difficult to set up a daily schedule and carry it out.	1	2	3	4	5	6
35.	I get some form of physical exercise regularly.	1	2	3	4	5	6
36.	I spend a great deal of time outside of work with family and friends.	1	2	3	4	5	6
37.	I work well under pressure.	1	2	3	4	5	6
38.	I frequently have difficulty saying "no."	1	2	3	4	5	6

1=Strongly Disagree 2=Disagree 3=Mildly Disagree
4=Mildly Agree 5=Agree 6=Strongly Agree

39.	I am not as assertive as I would like to be.	1 2 3 4 5 6
40.	I am generally optimistic about my future.	1 2 3 4 5 6
41.	I have pursuits not related to my job which occupy a good bit of my time.	1 2 3 4 5 6
42.	Sex:	Male Female
43.	Martial status:	Single Married Divorced Separated
44.	Age:	_____
45.	Do you have children:	Yes No
46.	If so, how many:	_____
47.	Highest degree:	MA/MS Specialist Ed.D. Ph.D. Other

Fill In

48. Field of Program Specialization:

49. Number of years you have been a psychologist:

50. Number of years in school psychology:

51. Number of years in present position:

52. Do you plan on remaining in present position for at least three more years:

53. Do you plan on remaining in the schools for at least three more years:

54. How many other school psychologists are employed in your school system:

55. What is the approximate ratio of psychologists to students in your system:

- Less than 1:1000
- 1:1000-1500
- 1:1500-2000
- 1:2000-2500
- More than 1:2500

56. What is your annual salary:

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