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Stress at Work: A Study of Professionals in Bureaucratic Organizations

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## **ABSTRACT**

The purpose of this study is to explain job stress among professionals who work in bureaucratic organizations, drawing from the professional-bureaucratic conflict and job stress literatures. A model is presented that includes both professional characteristics hypothesized to reduce stress, and bureaucratic characteristics hypothesized to increase stress. The study also examines whether managers and frontline workers differ in their work experiences and what affects their stress. The model is tested using secondary data from a 1993 survey of 514 social workers. As hypothesized, the findings suggest that positive interactions with clients and colleagues reduce job stress, and excessive and conflicting role demands and unmet job expectations contribute to stress. The same factors have the same effects for both frontline workers and managers who report the same levels of stress, suggesting that they do not experience stress in radically different ways. The limitations of the study and suggestions for future research are presented.

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## CHAPTER ONE: INTRODUCTION

The topic of job stress receives a great deal of attention from both academia and business. In the world of work, stress is salient to both the workers experiencing it and to the organizations for which they work. It affects workers in a wide range of occupations and not only influences people's satisfaction with their jobs, but also their lives outside of work and their health (Bhagat, Allie, and Ford, 1991).

Absenteeism and reduced productivity have been identified as the most damaging consequences of worker stress for organizations. Job stress and its related problems cost US organizations an estimated \$200 billion per year (Farren, 1999). This amount includes resultant absenteeism, reduced productivity, compensation claims, health insurance, and medical expenses (Cooper and Cartwright, 1994). The US National Safety Council estimates that on an average day, job stress will result in one million employee absences (Caudron, 1998). In the 1980s, stress cost the UK economy an estimated 2 billion pounds per year, including sickness, absenteeism, and premature death or retirement due to alcoholism. It is estimated that 21% of absences in the UK were due to stress-related heart disease (Cartwright and Cooper, 1997).

A wide range of disorders are attributed to stress, such as cardiovascular problems, hypertension, and depression (Cartwright and Cooper, 1997). One study found that individuals with high job stress have a higher mortality rate than those who have less frequent or less intense job stress. It has also been linked to drug and alcohol abuse (Peterson, 1997). In a study conducted in the early 1990s, 69% of respondents reported that high stress levels reduced their productivity, and one in three indicated that job stress is the greatest stress in their lives (Speilberger and Reheiser, 1994).

In the 1980s, stress-related illness claims made up 11% of worker compensation claims and were the fastest growing type of claim (Murphy, 1995). California has over 3,000 worker compensation claims a year for stress-related psychiatric injury (Cartwright and Cooper, 1997). In 1995, \$50 million in stress-related Workers' Compensation claims were paid out in Australia (Fogarty, Machin, Albion, Sutherland, Lalor, and Revitt, 1999). Currently in North America, the issue of whether stress-related disorders are compensatable is under debate, with each province and state enacting a plethora of

different standards.

Many workers' compensation boards do not view individuals incapacitated from work-related stress as worthy of compensation, although it is argued that these individuals are no different than those who have chronic back pain from repetitive movement or lung disease from exposure to noxious fumes (Shortt, 1995). When the economy was based more heavily on manufacturing and extraction industries, physical injuries were common. Now with the domination of white collar and service jobs, the nature of the injuries has changed. It is argued that it is unreasonable if work stress is not compensated because psychiatric diagnoses should be given the same recognition as purely physical ones (Shortt, 1995). As stress-related disorders become more accepted, employers will be held responsible for the long-term consequences of work-related stress experienced by their employees.

Work stress is frequently studied in academia. There are hundreds of published articles on the topic in fields such as management, psychology, social work, medicine, and sociology. From the 1970s to 1990s, the publications in PsychLit with titles that included "job stress," work stress" or "occupational stress" tripled (Speilberger and Reheiser, 1994). Much of the literature is criticized for taking too much of a psychological approach to the topic. Handy (1988), for example, argues that psychologically-based models should be augmented with salient sociological concepts in order to compensate for researchers' neglect of the link between organizational and societal issues and workers' experiences.

This thesis focuses on sociological aspects of job stress, as a complement to the wider literature that has a psychological focus. Specifically, it examines job stress experienced by professionals working in bureaucratic organizations and how the characteristics of professional work and of bureaucracies affect workers' stress levels. The sample used in this study is composed of social workers. Even though social work is considered to be a very high stress profession, Collings and Murray (1996) note that there are not many systematic studies of social worker stress, particularly compared to other human service workers, such as nurses and teachers. Although there are many studies that look at burnout in social workers (e.g., Soderfeldt, Soderfeldt, and Warg, 1995;



Koeske and Koeske, 1993), few look at their stress, which is commonly held as a precursor to burnout.

This thesis is organized as follows. Chapter 2 reviews the various definitions and measures of job stress found in the literature. Then a discussion of professionals and professional-bureaucratic conflict and how this relates to stress is presented. Included in this discussion is the model that will be tested, with hypotheses based upon relevant theoretical and empirical literatures. Chapter 3 describes the data, measures and statistical procedures used to test the hypotheses presented in Chapter 2. The results of the statistical analyses are presented in Chapter 4. Lastly, Chapter 5 discusses the results in relation to the professional-bureaucratic conflict and stress literatures. Conclusions and suggestions for future research are provided.

## CHAPTER TWO: A REVIEW OF THE LITERATURE

### Definitions of Stress in the Literature

Much of the work stress literature does not explicitly define the concept of stress. It is often assumed that there is a shared understanding of what stress is, and thus one is left to infer the definition. However, when it is defined, it becomes quickly apparent that it is used in many ways. It is often mistakenly conceptualized in terms of the antecedents of stress (stressors), or alternatively as the responses due to stress (strain). The third and more accurate conceptualization emphasizes the individual's perception or feeling of stress.

When defined as a stimulus, stress is a force that affects the individual. This is, however, more accurately the definition of a stressor, which is a precursor to stress. Koeske and Koeske (1993) use the terms interchangeably by referring to "stress stressor." Beehr (1998) defines occupational stress as the negative effects of aspects of the workplace on an individual's health and well-being, possibly combined with an individual's characteristics. Person-environment fit theory views occupational stress in terms of job characteristics that are problematic because the individual's abilities do not match the job's demands (Spielberger and Reheiser, 1994). Gupta and Beehr (1979) define stress as work demands that are particularly extreme or noxious. Bhagat et al. (1991) define organizational stress as a high level of demands from the environment that cause a change in an individual's physical or mental state which in turn causes a deviation from normal functioning. These conceptualizations clearly focus on situations or characteristics external to the individual, not on the actual experience of stress by the individual.

Another way stress is defined in the literature is in terms of its results, even though this is more aptly called strain. Stress is sometimes viewed as an adaptive response to circumstances that place unusual demands on an individual (Matteson and Ivancevich, 1987). Alternatively, it is described as the ineffective management of events perceived as threatening to the individual and hence resulting in symptoms such as increased heart rate or sweaty palms (Klarreich, 1985). According to the US National Institute for Occupational Safety and Health, stress is "the harmful physical and

emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker” (Minter, 1999: 49). These definitions concentrate on the effects of, or reactions to, experiences of stress.

In other conceptualizations of stress, the psychological state or perception of the individual experiencing stress is key, regardless of the conditions that cause the stress, or the resulting symptoms. As Hendrix, Steel, Leap, and Summers explain, “stress [is] one’s perception of being stressed (i.e., felt stress), not simple exposure to what others have labeled as a stressor (e.g., quantitative workload) or the effects of experiencing stress as indicated by a stress outcome” (1991: 145). It is sometimes defined as an uncomfortable cognitive state resulting from exposure to a stressor (Hendrix et al., 1991), or as a state of disturbed affect in response to environmental stressors (Parasuraman and Alutto, 1981). It is also viewed as an individual’s perception of unpleasant, irritating, and potentially harmful aspects of life (Bhalla, Jones, and Flynn, 1991) or as an individual appraisal that external or internal demands tax or exceed one’s resources (Lazarus, 1991). This study also conceptualizes stress in terms of perceptions of the individual. Job stress is defined as feeling frustrated, discouraged, and overwhelmed about one’s job.

Burnout is a closely related term and discussions of work stress often focus on it, particularly in regard to human service workers. Freudenberger (1974) originally used the term to describe emotional and physical exhaustion resulting from work conditions. It is usually considered to be the result of prolonged stress (Reilly, 1994; Wolfgang, 1991). Veninga and Spradley (1981) refer to burnout as a debilitating psychological condition brought about by unrelieved work stress. Farber (1983) describes it as unmediated stress – experiencing stress with no buffers or support systems. The conceptualization of burnout is more focused on behavioral outcomes than stress is; stress is seen as the mediating variable which leads to burnout. Burnout is identified by symptoms such as the withdrawal of workers from their jobs in order to separate themselves from stress (Ratliff, 1988), or by workers depersonalizing their clients (Koeske and Koeske, 1993). Maslach (1982) states that a hallmark of burnout is a shift in viewpoint of others (e.g., clients or patients) from a positive and caring perspective to one that is negative and uncaring.

### Measurement of Stress in the Literature

Being that stress is defined in so many ways, it follows that its measurement varies as well. Studies of stress often will not even attempt to measure the individual's feelings of stress, but instead simply measure stressors (Parasuraman, Greenhaus, and Granrose, 1992) or "job stresses" (Gupta and Beehr, 1979). Others purport to operationalize stress, but they too are measuring stressors. Koeske and Koeske (1993) measure stress using a "Troubling Occurrences" survey in which points are given based on the number of stressors that the respondent has experienced, such as conflict with a coworker. Similarly, the Health Professions Stress Inventory (Wolfgang, 1991) uses common work situations that health professionals are likely to experience as a job stress measure. These survey instruments are poor measures of stress because they are in fact only measuring conditions and situations that may *lead* to stress.

Other operationalizations tap into less specific situations that are found to cause stress, such as the widely used job stress antecedents of role conflict, role ambiguity, and work load (Bhalla et al., 1991; Guterman and Jayaratne, 1994). In the Job Stress Survey (Speilberger and Reheiser, 1994), respondents rate the intensity of stress that they experience from 30 different job stressors and the frequency at which the job stressors occur. This survey is somewhat better than the others mentioned above because even though it is composed of potential stressors, the respondents' indications of how much perceived stress these potential stressors cause is also considered.

Of the studies that truly measure stress, there are two general approaches taken. One is to measure respondents' perceptions, and the other is to measure physiological symptoms. In the latter approach, some measures inquire about respondents' physical health by asking if they experience various symptoms such as appetite loss, lack of energy, headaches, or stomach upsets (Summers, DeCotiis, and DeNisi, 1995; Collings and Murray, 1996). Other measures require medical procedures to detect the presence of stress. Fried (1988) outlines the most commonly used physiological indicators. These are: 1) cardiovascular, particularly heart rate and blood pressure; 2) biochemical, such as cholesterol, blood sugar, and uric acid levels; and 3) gastrointestinal, primarily peptic ulcers. There are many potential problems with the use of physical symptoms to measure

stress. These include threats to validity due to the large number of confounding factors, such as the respondent's family health background, the manner in which measurements are taken, the number of times measurements are made, and the time duration between measurements.

Some operationalizations of stress combine measures of stressors with measures of other related variables, such as stress responses, and/or physical symptoms. For example, the Occupational Stress Indicator looks at sources of job stress, as well as personality type, physical and mental health, and coping strategies (Kirkcaldy and Cooper, 1993). Greenglass and Burke (1991) measure eight characteristics of work that have been shown to be stressful in other studies, along with measuring depression and somatization using the Hopkins Symptom Checklist. In a study of university professors, Ryland and Greenfeld's (1991) stress measure primarily contains aspects of the job, such as publishing efforts and relationships with students and colleagues, but it also contains one question measuring the perception of stress felt by the individual.

In accordance with the definition of stress used in the current study, it is necessary to tap the individual's perception of feelings of stress separately from the factors hypothesized to be responsible for such feelings, or the resulting outcomes. The concept of burnout is measured in this manner more consistently than stress is. The Maslach Burnout Inventory, or MBI, (Maslach and Jackson, 1981) is often used to measure burnout (e.g., Reilly, 1994) and it focuses on respondents' perceptions of self. This 22-item survey is divided into three subscales measuring emotional exhaustion, depersonalization, and lack of personal accomplishment. Sometimes the MBI is used in tandem with other measures, such as the Pines Tedium Scale (Soderfeldt et al., 1995), or only part of it is used, such as its emotional exhaustion subscale (Um and Harrison, 1998). The MBI has also been used to measure strain (Himle, Jayaratne, and Thyness, 1993; Koeske, Kirk, and Koeske, 1993), and even to measure stress in combination with a physical health measure (Collings and Murray, 1996).

The MBI is a good example of measuring respondents' perception of their feelings, instead of measuring precursors or outcomes, however it is not valid for measuring stress. Burnout is a change in attitudes and behaviors in response to prolonged

job stress (Chemiss, 1980a), in which workers, most often those in the human services, become callous toward clients and emotionally drained. These experiences likely result from long periods of stress which cause workers to disengage themselves from their work. Thus, while burnout measures tap into perceived feelings, stress measures should tap into perceived emotions that do not necessarily reflect the more extreme condition of burnout.

Some studies of stress measure perception, just as the MBI does for measuring burnout. Hendrix et al. (1991) approach it in this manner by using a three-item scale that asks how much stress respondents feel. Henderson and Argyle (1985) ask about feelings of job stress based on a 5-point scale ranging from "not at all stressful" to "very stressful." The current study uses a multiple-item, Likert measure detailed further in Chapter 3. The measure includes items that tap individuals' feelings of job stress in terms of the extent to which they feel frustrated, discouraged and overwhelmed in regard to their job.

### **Proposed Model and Hypotheses**

A popular model used in studying job stress is the person-environment fit model (French, Caplan, and Harrison, 1982), sometimes called the person-organization fit model (Kristof, 1996). This model considers the compatibility, or goodness of fit, between the characteristics of individuals and the characteristics of the organizations in which they work. This theory postulates that workers' well-being may be jeopardized when the demands of their job do not mesh with their needs, or if there is conflict between their expectations and their experiences in the organization. When there is lack of fit between the abilities and values of the person and the requirements of the organization, one of the results may be that the individual experiences job stress.

Just as the person-organization fit model looks at the compatibility between the work environment and the worker, so does the professional-bureaucratic conflict model. A major area of study in the sociology of professions is the potential for conflict between professionals and the bureaucratic organizations for which they work when the values, goals and expectations of the professional are not compatible with those of the organization (Engel, 1970). Scott (1966) argues that one of the problems that may arise

when professionals are employed in bureaucratic organizations is that the professional and the bureaucracy hold different organizational principles, which leads to conflict. This conflict or incongruence may in turn result in stress for professionals. This study will examine how individuals' stress levels are affected by their professional work experiences and by the characteristics of their employing bureaucratic organizations.

### **Professional Conditions**

Professions are often considered to be distinctive from other types of occupations because they are high-status jobs rooted in specialized knowledge. Many different models of what constitutes professional work include the characteristics of autonomy, professional collegiality, and service to others (e.g., Waters, 1989; Engel, 1970; Larson, 1977).<sup>1</sup> Professionals generally expect to have autonomy in their jobs, collegial relations with their coworkers, and a sense that they are helping others. If their jobs fail to offer these rewards, professionals may experience considerable tension between their day-to-day work experiences and their professional expectations and values, resulting in job stress. In the discussion that follows, these professional ideals are linked to findings in the stress literature.

Autonomy is a central attribute of professional work; it allows individuals discretion and control in the performance of their work tasks (Engel, 1970; Wallace, 1995b). This is important for professionals because it allows them to utilize their judgment based on their expertise and extensive training. The stress literature discusses how lacking control and discretion in one's job is associated with high levels of stress (Hendrix et al., 1991; Guterman and Jayaratne, 1994; Cherniss, 1980a). Pottage and Huxley (1996) discuss how, for social workers, control over the content of interactions with clients provides a great sense of personal achievement, and that when they are moved into administrative positions, they report more stress because of this loss of control and personal influence over their day-to-day activities.

**Hypothesis 1:** More autonomy results in less job stress.

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<sup>1</sup>There are numerous typologies and lists of attributes used to classify occupations as professions (e.g. Goode, 1960; Greenwood, 1957; Wilensky, 1964). The discussion that follows is not an exhaustive review of the various attributes of an occupation in general, or social work specifically, that indicate professional status. Rather, the discussion illustrates how certain attributes of professional work are relevant to professional's work experiences and the more general stress literature.

Collegiality, another characteristic of professional work, refers to the extent to which there is teamwork and support among professional colleagues (Wallace, 1995b). A high degree of collegiality among fellow members of a profession operates as a form of self-control over occupational matters, such as how to perform one's job (Waters, 1989). In addition, close collegial relations help professionals to cope with the uncertainties of their job (Blau and Scott, 1962). Collegial relations are considered important not only for sharing work-related knowledge, but also for support and understanding, which may be helpful for coping with the stressors encountered in one's job (Cherniss, 1980a). This concept is also examined as coworker or supervisor support in the stress literature. Good relationships with colleagues and supervisors are believed to reduce stress (Cartwright and Cooper, 1997; Bradley and Sutherland, 1995; Collings and Murray, 1996; Karasek and Theorell, 1990; Burke, 1988). Findings show that supportive relationships within a work group are of central importance for individual and organizational health (Sutherland and Cooper, 1988).

**Hypothesis 2:** More collegiality results in less job stress.

Further to the above hypothesis, considerable attention in the stress and coping literature is given to whether or not social support, or collegiality, has a "main effect" or a "buffer effect" on stress. The notion of social support as a main, or additive, effect holds that stressors and social support affect stress independently of each other (e.g., Ganster, Mayes, and Fusilier, 1986). This view that social support directly affects stress contrasts with the buffer hypothesis, which holds that social support acts as a moderator between potential stressors and feelings of stress. In other words, stress is felt more acutely by individuals who experience low levels of social support than by those with high levels. In work situations, coworkers and supervisors may act as social support and eliminate or modify conditions which give rise to stress (Haines, Hurlbert, and Zimmer, 1991). The relationship between stress and health can be modified by social support; this support protects the individual from the negative consequences of health (Williams and House, 1985). This study will empirically explore both the main effect argument (Hypothesis 2) and the buffer argument (Hypothesis 2a).

**Hypothesis 2a:** The stressors result in greater job stress for individuals with lower



levels of collegiality compared to individuals with higher levels of collegiality.

Professional work is generally expected to have a great social value and professionals are assumed to bring exceptional commitment and concern to their work (Freidson, 1984). As result of their extensive training and socialization, professionals internalize professional norms that emphasize service to society and altruistic ideals (Vollmer, 1966). These characteristics of professional work should be particularly salient for social workers, as their primary duty is to provide assistance to their clients and help them in difficult situations. The intrinsic rewards that result from working with people and effectively helping them should reduce workers' feelings of stress.

Chemiss (1980b) discusses how human services professionals strive for effective job performance or efficacy, and how stress is likely to occur if this opportunity is blocked. These rewards from job performance resemble the job enhancement variable used by Hendrix et al. (1991) which taps the extent to which individuals feel their work allows them to use their talents and training to accomplish a worthwhile job, which is hypothesized to reduce stress. This relates to person-environment fit theory, for when social workers are not engaged in satisfying interactions with clients, stress levels should increase as their professional goals are inconsistent with their performed tasks.

**Hypothesis 3:** More satisfaction from working with clients results in less job stress.

### **Bureaucratic Conditions**

Professionals may experience job stress when they work in bureaucratic settings. Bureaucratic organizations partition and coordinate work activities through a hierarchy of positions based on legal-rational authority and involve hierarchical coordination and routine rules (Davies, 1983). Managing organizations in this manner facilitates coordination and control of the tasks of a large number of workers efficiently. It is an administrative tool used to oversee many groups in an organization and ideally allows direction of everyone's efforts to the achievement of a common goal. The section below discusses the professional-bureaucratic conflict model and some characteristics that often result from bureaucratic organizations which may lead to job stress for professionals. These are formalization, routinization, work overload, role conflict, and unmet

expectations.<sup>2</sup> The extent to which these factors may be problematic for professionals and the way in which they relate to the stress literature is highlighted.

There is a wide body of literature that discusses the relationship between professionals and the organizations that they work for. The professional-bureaucratic conflict literature sees inherent conflict between the goals of professionals and the goals of the bureaucratic organizations in which they work (Sorensen, 1967; Scott, 1966). It is argued that if the behavior that organizations demand of professionals is inconsistent with the behavior guided by professional norms and values, then professionals will have to subjugate one set of behaviors for the other (Aranya and Ferris, 1984). As Larson (1977) explains, professionals are carriers of the norms and ideals of their profession and they often experience contradictions in bureaucratic work settings because these norms conflict with bureaucratic norms. Cherniss describes in a study of burnout in human service professionals that professionals "often came to believe that the real client to be cared for and protected was the institution for which they worked rather than the individuals who came to them for help" (1980a: 167).

A major characteristic of bureaucracies is formalization, which is the degree to which organizational norms are explicitly formulated, usually in written form (Price and Mueller, 1986). These rules represent the authority structure of the employing organization. Formalization is a feature of bureaucratic structures that may threaten professionals' autonomy and discretion. The traditional literature on bureaucracies and alienation argues that formal rules and procedures depersonalize employee activities and routinize their work (Aiken and Hage, 1966). More recently, however, it has been argued that formalization may facilitate job and role clarity, thereby reducing the potential for role conflict and role ambiguity (Michaels, Cron, Dubinsky, and Joachimsthaler, 1988), which are so often associated with job stress (Kahn, Wolfe, Quinn, Snoek, 1964; Summers et al., 1995).

In the case of professionals, formalized rules and procedures are expected to threaten their autonomy and control over their work. Professionals deal with varied client

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<sup>2</sup>There are numerous list of attributes of bureaucracies in the literature (e.g., Litwak, 1961; Davies, 1983; Sorensen, 1967) and the discussion below is not meant to provide an exhaustive review of all these characteristics. The purpose of this section is to identify and discuss select features of bureaucratic

problems and these require using innovation in order to provide different solutions under different conditions (Engel, 1970). As well, in contrast to professional collegial relations, where professionals govern each other and make decisions collectively based on consensus (Waters, 1989), the formalization found in bureaucracies is more rigid and is based on top-down authority. This formalization may limit professionals' freedom to innovate and is considered to be a stressor (Summers, DeCotiis, and DeNisi, 1995).

**Hypothesis 4:** More formalization results in greater job stress.

Routinization, the degree to which a job is repetitive (Price and Mueller, 1986), is another aspect of bureaucratic organizations that professionals may experience. It is often associated with formalization and standardization of tasks, and can also challenge professionals' expectations regarding their work. Although stress is often associated with too much stimulation, the understimulation that results from highly routinized work may also lead to stress (Cherniss, 1980a). An absence of variety has been found to be stressful (Sutherland and Fogarty, 1995) and for professionals, routinized duties contrast to the interesting and challenging work that they usually expect.

**Hypothesis 5:** Greater routinization results in greater job stress.

Also related to formalization, workers in bureaucratic organizations often report their work requires more time spent on administrative tasks than they had expected or would prefer (e.g., Davidson and Veno, 1980). Administrative work involves compiling and/or providing information that assists in the management of the organization. This often includes attending meetings and completing paperwork. Administrative tasks are inconsistent with professional activities and take human service professionals away from their primary focus, such as working with and helping clients. A large amount of paperwork may interfere with direct contact with clients; in some organizations, it seems like completing paperwork has a higher priority (Maslach, 1982).

In studies of social workers, administrative duties and paper work (Collings and Murray, 1996; Bradley and Sutherland, 1995; Matteson and Ivancevich, 1987), and large numbers of meetings (Parasuraman and Alutto, 1981) are found to be stressors. For social workers, in addition to administrative tasks, high workload also results from the

high number of cases they must handle (Matteson and Ivancevich, 1987). As well as being frequently cited in the general stress literature (Bhalla et al., 1991), work overload is often cited as a stressor for social workers (Gibson, McGrath, and Reid, 1989; Jones, Fletcher, and Ibbetson, 1991; Collings and Murray, 1996).

**Hypothesis 6: Greater workload results in greater job stress.**

The authority structure of a bureaucratic organization and the administrative tasks that are required for maintaining its smooth and efficient running are often incompatible with what professionals require to do their best work. However, for most professionals, bureaucratic duties to maintain the organization have to be done in addition to their professional duties. As a result, it may be difficult for them to balance their responsibilities to their clients and to their organizations. This often causes role conflict, which takes place when the demands and expectations that the worker places upon him or herself clash with the demands and expectations of other members of the organization, or when the job includes tasks that the worker thinks should not be part of his or her duties (Sutherland and Cooper, 1988).

Thus, there is role conflict for professionals between their roles as employees, in which they must follow bureaucratic rules, and their roles as professionals, in which they are to exercise their professional expertise. Due to the bureaucratic nature of the organization, they may lack authority in decision-making at the organizational level, even if they have the freedom to make decisions regarding their day-to-day jobs, creating conflicting roles and expectations. This lack of authority has the potential to be frustrating for professionals who value their autonomy and professional judgment, and can in turn, contribute to stress (Summers et al., 1994).

This issue is particularly relevant for social workers who exercise a high degree of autonomy over the content of their interactions with clients, which results in a "high sense of personal ownership, and control of personal achievement" (Pottage and Huxley, 1996: 127). However, social service organizations rely on a "command structure, built around administrative systems, procedures and prescriptive working practices, designed to achieve consistency in performance and worker compliance to predetermined plans" (Pottage and Huxley, 1996: 127). Thus, social workers are in a position to exercise

discretion in regard to their clients, but at the same time often feel powerless in relation to the organization and its goals and functions, which may result in role conflict.

Further, individuals who occupy roles at organizational boundaries, that is, when they work with not only people in the organization but also with others who are external to the organization, are more likely to find role conflict a serious problem (Sutherland and Cooper, 1988). This situation applies to social workers because they are in a boundary spanning position – they are accountable to both those higher up in the organization as well as to clients outside the organization. Client concerns are often major stressors for social workers, in terms of their inability to provide solutions for clients' problems (Collings and Murray, 1996; Thompson, Stradling, Murphy, and O'Neill, 1996) and their sense of responsibility for others (Glowinkow and Cooper, 1987; Cartwright and Cooper, 1997; Bhalla et al., 1991; Sutherland and Cooper, 1988). Not only applicable to professionals, role conflict is a frequently cited stressor in the job stress literature among workers in general (Hendrix et al., 1991; Matteson and Ivancevich, 1987; Quick and Quick, 1984).

**Hypothesis 7:** Greater role conflict results in greater job stress.

Professionals often enter their jobs with high expectations. These expectations arise in part from the time and effort they have invested in training to learn the profession, as well as because of the prestige that society attaches to professional jobs. However, these expectations may not always be met by professionals' everyday work situations, which may result in frustrating and stressful work experiences (Kahn and Quinn, 1970; Eaton, 1980; Stevens and O'Neill, 1983). These unmet expectations may be due in part to the constraints of bureaucratic organizations that require administrative duties that infringe on professionals' time spent with clients, as well as the rules and regulations that impede their power.

Professionals typically do not learn in their formal training how to work within large bureaucracies, although many of them eventually work in these types of organizations. Consequently, they are often unprepared for the bureaucratic duties they are expected to do (Pines, Aronson, and Kafry, 1981). In Cherniss' study of human service professionals (1980a), he found that bureaucratic rules and duties were one of the

most disillusioning aspects of these professionals' jobs, as well as a major cause of burnout. Unmet expectations are key to the professional-bureaucratic conflict model, because it is professionals' expectations of their jobs that collide with the realities of working within bureaucratic structures.

**Hypothesis 8:** More unmet expectations result in greater job stress.

### **The Effect of Position**

When studying job stress, the difference in stress experienced between managers and frontline workers is worthy of consideration. In keeping with professional-bureaucratic conflict theory, it seems that compared to frontline workers, managers should experience greater levels of bureaucratic stressors and lower levels of professional rewards, and hence, experience more stress. Much of the stress literature supports this argument.

Several studies indicate that managers have fewer professional rewards in their jobs than frontline workers. For example, Gibson et al. (1989) found that senior social workers reported dealing with colleagues more stressful than other social workers, because they have less client contact and more managerial components in their jobs. Pottage and Huxley (1996) argue that when social workers are moved into administrative positions from frontline positions, stress may result because of a loss of control over day-to-day activities, and a loss of personal influence and contact with clients.

Studies also indicate that managers experience more bureaucratic characteristics of work, which may be stress inducing. For example, it is argued that compared to other employees, individuals in managerial positions experience more stress from workload, as they are responsible for not just clients, but for subordinates as well (Bhalla et al., 1991). Parasuraman and Alutto (1981) hypothesize that managers and supervisors experience more stress than those in nonsupervisory positions from such job features as too many meetings and interunit conflicts. They argue that these issues are salient for upper level workers because they have more direct dealings with individuals in other departments and because of the responsibility they carry for the overall performance of their workers. Kahn et al. (1964) argue that since managerial positions often involve contact with others outside of the department and organization, managers are also more likely to experience

role conflict, a common stressor, than those in non-supervisory positions.

**Hypothesis 9:** Managers experience more job stress than frontline workers.

This study will also explore whether the characteristics of professional and bureaucratic work have similar or different effects on the job stress of frontline workers and managers. That is, it will examine whether the determinants contribute to frontline workers' and managers' stress to the same degree. For example, does formalization result in more stress for managers than for frontline workers? Does autonomy lower stress for frontline workers more than for managers? This is an exploratory component of this study for two reasons. Firstly, it has not been discussed explicitly in the relevant theoretical literature, and secondly, it has not been examined empirically in other studies.

A second exploratory component of this study will examine whether frontline workers and managers differ significantly in their work experiences. This involves comparing the extent to which they experience the professional and bureaucratic characteristics of work examined in the study. Since frontline workers spend more time with clients than managers do, it may be that they report more professional rewards associated with practicing social work. They may derive more satisfaction from clients as they have more interaction with them, more autonomy because they have more control over their daily tasks, and more collegiality because they can seek support and advice from other professionals on client matters.

In contrast, it is likely that managers experience more bureaucratic characteristics because a larger part of their duties are administrative. Consequently, they may report, for example, more formalization and routinization. As well, they may report more unmet expectations, as their jobs are not as involved with helping people as they likely expected when they entered the profession. This study will explore whether there are indeed differences in the amounts of professional rewards and bureaucratic stressors that managers and frontline workers experience.

### **Control Variables**

For the model to be properly specified, control variables must also be included. Negative affectivity is argued to be an important control when studying stress (Fogarty, et al., 1999). It is a stable personality trait characterized by negative emotionality and a

negative view of self. Watson and Clark (1984) argue that individuals high in negative affectivity are more sensitive to stress than others, and are thus more likely to experience greater distress in any situation. Thus, the trait has the potential to influence self-reports of stress. Another personality characteristic used as a control is work motivation, which is defined as the degree to which work is a central part of a person's life (Kanungo, 1982). This is also considered a fairly stable personality trait, and refers to the value workers attach to their work in general, as opposed to specific tasks or jobs (Wallace, 1995a).

Completion of a university degree is controlled for, as amount of training may reflect the respondents' perceptions of themselves as professionals. University trained workers likely hold higher professional expectations and ideals than those without degrees. Tenure, or length of time in the organization, is another control, with the expectation that those who have worked in the organization longer will experience lower levels of stress. This may be due to having more realistic expectations of one's job and of one's capabilities to influence clients. It has also been postulated that job stress decreases over the course of one's career because older workers have learned how to cope with stress more effectively (Turnage and Speilberger, 1991).

It is expected that the more hours that are worked, the more stress will be experienced, thus number of hours worked is included as a control. Gender is also controlled for. Although there is no agreement in the literature, a common argument is that women experience more job stress than men (Ratliff, 1988). It is also suggested that women are more likely to report psychological distress, whereas men are more likely to develop stress-related illnesses (Speilberger and Reheiser, 1994). Earnings is the last control variable, with the assumption that salary is related to job level, with management earning more than front-line workers. Higher earnings should contribute to job satisfaction and decrease stress.



## CHAPTER THREE: METHODS

### Data

This study is a secondary analysis of data collected through a 1993 survey administered to human service workers throughout Alberta who provide services to people with developmental disabilities. A stratified random sample based on agency size, type of service provided, and rural versus urban population was used. Two hundred organizations were approached, and senior administrators from 62 organizations agreed to participate. From these organizations, all human service workers were surveyed, which excluded clerical, accounting and payroll positions. The sample was composed of people who work in both residential and vocational settings, and in frontline and management (including middle management) positions. Of 1,600 surveys distributed, 576 were returned, which represents a 36% response rate.

This likely represents an under-estimation of the response rate, however. Because of the sampling strategy used, it is difficult to compute an accurate response rate for two reasons. First, of the 62 organizations who agreed to participate, surveys were sent to the senior administrators to distribute to their staff. These administrators were asked to estimate the number of surveys required. Extra surveys were included in each package to ensure a sufficient number were sent, thus more questionnaires were sent out than could actually be completed. Second, upon receipt of the surveys, some administrators decided they would not distribute them to their staff. Thus, some surveys were sent that were not actually received by eligible participants. Both of these factors likely contribute to an underestimation of the true response rate in this study.

Of the 575 respondents, 22% were male and 78% were female, with an average age of 35. They had worked in the human services field for an average of ten years, and they earned an average of \$24,720. In regard to education, 7% of the sample possessed a graduate degree, 28% an undergraduate degree, and 35% a college diploma. Of the remaining 30%, half had some postsecondary training and half had high school or less. After list-wise deletion, the sample consisted of 514 respondents.

### Statistical Procedures

Several statistical techniques were used to analyze the data in this study. Preliminary analyses involved univariate and bivariate statistics, such as frequency distributions, means, standard deviations, and cross tabulations. Factor analyses were used to confirm the dimensionality of the sets of items used to measure particular variables. Zero-order correlations were examined to ensure that multicollinearity did not exist. The final data analysis used three statistical procedures: ordinary least squares regression, ordinary least squares regression with interaction terms, and t-tests for the difference of means.

Exploratory factor analyses were used for the multiple item measures, applying maximum-likelihood methods of extraction with oblique rotation to determine their factor structure. Oblique rotation solutions were used based on the assumption that there is some degree of association among the determinants (Kim and Mueller, 1978). Factor analyses indicate if the items used to measure a particular variable form a single factor with high loadings (i.e., greater than  $\pm .30$ ). First, the Likert items used to tap all the variables were entered simultaneously. Following this, a more confirmatory approach was taken by entering the items for the professional factors, the bureaucratic factors, and the control variables as three separate groups.

These results showed that there were four distinct professional rewards, as expected, and five distinct bureaucratic factors. Initially, seven bureaucratic scales were entered, but they were reduced to five for two reasons. First, role demands and role conflict were initially two separate constructs, but one of the role demand items did not factor with any of the other items, and the other role demand item factored with the two role conflict items. Thus, these three items were combined to form one measure of role conflict. Second, the items measuring the amount of paperwork and meetings loaded with the three workload items, to form a single scale tapping work overload.

A zero-order correlation matrix of the variables used in this study (Table 1) was examined to ensure that there was no multicollinearity among the variables. Multicollinearity refers to high correlations among the independent variables in the model. Its existence is problematic because it does not allow for precise estimates of the

unique effects of the independent variables (Berry, 1993). A general rule is that zero-order correlations under .8 indicate an absence of multicollinearity (Pedhazur, 1997). Since there are no independent variables in this model that have a correlation over .5, multicollinearity was not a concern.

To test each hypothesis, ordinary least squares (OLS) regression was used. This technique estimates the relative effect of each independent variable on the dependent variable, which is job stress. The regression equation includes all the determinants and the control variables as outlined above. When multiple variables are entered into a regression equation in this manner, the unique effect of each variable, while controlling for the effects of the other variables, is determined. The standardized regression coefficients, or Beta coefficients (B), for each independent variable are used to assess their relative importance in affecting job stress. Whether the Beta coefficients are negative or positive indicates the direction of the relationships that the determinants have with stress.

The coefficient of multiple determination, or R-squared statistic ( $R^2$ ), indicates the proportion of the dependent variable that is explained jointly by the independent variables (Elitson, Runyon, and Haber, 1998). The magnitude of the R-squared statistic for this model indicates the degree to which the professional and bureaucratic factors and control variables included in the model explain variation in job stress.

To test the buffer hypothesis (hypothesis 2a), the coworker support variable was multiplied by each bureaucratic variable to create five multiplicative terms (e.g., coworker support\*formalization and coworker support\*role conflict). Following this, the supervisor support variable was multiplied by each bureaucratic variable to create another five multiplicative terms (e.g., supervisor support\*work overload and supervisor support\*unmet expectations). The coworker support multiplicative terms were added to the main effects model as a block, and in a separate equation, the supervisor support multiplicative terms were added as a block, in order to determine if either set of interactions significantly increased the R-squared statistic.

To better interpret statistically significant coworker support multiplicative terms, median splits were used. The sample was divided into higher and lower levels of

**Table 1: Zero-Order Correlation Matrix of Variables in the Job Stress Model (N=514)\***

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Job Stress	-																	
2. Autonomy	-.39	-																
3. Coworker Support	-.32	.26	-															
4. Supervisor Support	-.42	.44	.49	-														
5. Satisfaction (Clients)	-.51	.18	.14	.16	-													
6. Formalization	.19	-.18	-.02	-.07	.03	-												
7. Routinization	.32	-.40	-.21	-.23	-.30	.25	-											
8. Work Overload	.38	.02	-.06	-.06	-.09	.11	-.16	-										
9. Role Conflict	.58	-.25	-.15	-.27	-.29	.21	.16	.44	-									
10. Unmet Expectations	.62	-.47	-.34	-.47	-.43	.05	.33	.11	.36	-								
11. Position (Frontline=1)	.02	-.22	.05	-.06	-.05	.10	.33	-.36	-.05	.11	-							
12. Negative Affectivity	.57	-.15	-.15	.10	-.43	.12	.10	.22	.39	.26	-.02	-						
13. Work Motivation	.02	.13	.09	.17	.12	.01	-.22	.15	.05	-.18	-.06	.14	-					
14. Education (Univ.=1)	.02	.04	-.01	-.08	-.15	-.07	-.04	.08	.03	.10	-.12	.00	-.07	-				
15. Tenure	-.05	.03	-.02	-.04	.09	.06	-.11	.07	.06	-.11	-.26	-.05	-.04	-.10	-			
16. Hours Required	.04	.07	.00	.04	.01	.09	-.19	.20	.06	-.02	-.24	.08	.13	.04	.08	-		
17. Gender (Male=1)	-.00	-.02	-.10	-.03	-.08	-.00	.01	.01	.02	.09	.02	-.05	-.07	.14	-.10	.02	-	
18. Earnings	-.07	.15	.03	-.02	.03	-.00	-.35	.30	.07	-.08	-.45	-.02	.02	.26	.43	.48	.01	-

\*All correlations greater than +/- .09 are statistically significant at the .05 level (two-tailed test).

support, with approximately half of the sample in each group. Dummy variables were then created with lower coworker support coded as 0 and higher coworker support coded as 1. The model was then estimated separately for each group. The effect of the variable included in the significant interaction term on each group was determined by comparing the unstandardized b coefficients (b) across the two groups.

Further multiplicative terms were created to explore whether the determinants affect the stress levels of managers and frontline workers differently. Nine multiplicative terms with position were created, four for the professional variables and five for the bureaucratic variables. The terms were entered into the regression equation as a block. These interactions were exploratory and the directions of the relationships were not specified. Thus, a 2-tailed test (at the .05 level) was used to determine the statistical significance of the effects. To examine the nature of the significant multiplicative terms, separate equations were estimated for managers and frontline workers. The unstandardized b coefficients of the variables in question were then compared across the two groups.

In order to test whether managers and frontline workers experience different amounts of professional rewards and bureaucratic stressors, one-tailed t-tests for the difference of means were used. These tests determine whether statistically significant differences exist between the mean values of the professional and bureaucratic factors and the control variables for individuals in each of the two positions.

### **Measures**

This section explains the operationalizations of the variables used in the study. The measure used for the dependent variable is first described, followed by the measures used for the professional and bureaucratic variables. The measure for position in the organization, and the control variable measures are then discussed. For most of the items, the respondents were asked to choose from the following Likert responses: "Strongly Agree" (coded 5), "Agree" (coded 4), "Neither Agree nor Disagree" (coded 3), "Disagree" (coded 2), and "Strongly Disagree" (coded 1), unless otherwise specified. "(R)" at the end of an item indicates that the item is reverse coded. For the measures composed of multiple items, the scores of each item are summed and then divided by the

number of items, to provide a mean score on the measure.

Validity of the measures was considered. Validity refers to the extent to which a measuring instrument measures what it is intended to measure. Thus, a measure is valid if its conceptual and operational definitions mesh with each other (Neuman, 2000). Factor analysis is a method that ascertains construct validity by assessing how well indicators of a single measure converge, and how well indicators of different measures diverge. The results of the factor analysis, as discussed above, support the validity of the measures.

The reliability of multiple item measures was also a concern. A reliable measure has consistent results across different indicators for the same measure (Neuman, 2000). To assess the reliability of the multiple item measures, the internal consistency among items is measured by Cronbach's alpha. This coefficient ranges from 0 to 1.00, with a higher number indicating a more reliable scale. All of the multiple item measures used in this study have reliability coefficients that indicate acceptable levels of internal consistency. Table 2 provides a descriptive summary of the variables examined in this study, showing for each the number of items, the mean, the standard deviation, and the alpha coefficient (if applicable).

### **Job Stress**

The construction of the job stress measure was based on open-ended interviews with 21 social workers in an earlier stage of the data collection. Participants were asked, "What does it mean to you to be stressed?" The answers to this question were compiled to form the following seven items: "I am discouraged about my work," "I feel that things are out of my control at work," "I feel overwhelmed by my work," "I feel like giving up on my job," "I feel unable to get out from under my work," "I feel frustrated with my work," and "I lack patience with the people at work." The reliability for the seven items was .83. Because this was an original scale, exploratory factor analysis was used to assess the measurement properties of the items. The item, "I lack patience with the people at work," factored with the negative affectivity items. Since this item was not consistent with the other items, it was dropped from the scale. The alpha coefficient for the remaining six items was .84.

**Table 2: Descriptive Statistics for the Job Stress, Professional Conditions, Bureaucratic Conditions, and Control Variables**

Variable Name (number of items)	Mean	S.D.	Range	Alpha*
<b>Job Stress (6)</b>	2.132	.708	1-4.17	.838
<b>Professional Conditions</b>				
Autonomy (3)	3.712	.683	1-5	.654
Collegiality: Coworker Support (3)	3.867	.677	1-5	.817
Collegiality: Supervisor Support (3)	3.813	.978	1-5	.924
Satisfaction From Clients (4)	4.202	.528	1.75-5	.717
<b>Bureaucratic Conditions</b>				
Formalization (2)	3.371	.950	1-5	.773
Routinization (3)	2.339	.829	1-5	.748
Work Overload (5)	2.804	.749	1-4.80	.780
Role Conflict (3)	2.697	.778	1-5	.693
Unmet Expectations (4)	2.235	.662	1-5	.649
<b>Position (Frontline=1)</b>	.639	.481	0, 1	n/a
<b>Control Variables</b>				
Negative Affectivity (3)	2.451	.738	1-4.33	.633
Work Motivation (3)	2.660	.781	1-5	.650
Education (University=1)	.359	.480	0, 1	n/a
Tenure in Organization (1)	3.696	3.857	0-29	n/a
Hours Required to Work (1)	34.982	9.178	4-90	n/a
Gender (Male=1)	.230	.421	0, 1	n/a
Earnings (1)	24,494	10,888	1,000-68,000	n/a

\* not estimated for single item measures.

### **Professional Conditions**

As discussed in the literature review, this study examines three characteristics of professional work that are expected to lower individuals' job stress levels. These are autonomy, collegiality, and satisfaction from working with clients.

The measure of **autonomy** was adapted from Wallace (1995a), and was composed of three Likert items: "I take part in decisions that affect my job," "I have

input in deciding what tasks or parts of tasks I will do in my job,” and “I influence the things that affect me in my job” ( $\alpha=.65$ ). **Collegiality** was measured by two scales, coworker support and supervisor support, adapted from Caplan, Cobb, and French (1975). **Coworker support** was measured by three items: “My coworkers are willing to listen to my job-related problems,” “My coworkers can be relied upon when things get tough at work,” and “My coworkers help me get through difficulties I have at work” ( $\alpha=.82$ ). **Supervisor support** was measured by similar items: “My supervisor is willing to listen to my job-related problems,” “My supervisor can be relied upon when things get tough at work,” and “My supervisor helps me get through difficulties I have at work” ( $\alpha=.92$ ). **Satisfaction from working with clients** was measured by four items adapted from Brayfield and Rothe’s (1951) job satisfaction scale, except that “working with clients” was substituted for reference to one’s “job.” The items were: “I find working with my clients very rewarding,” “I definitely dislike working with my clients” (R), “Most days, I am enthusiastic about working with my clients,” and “I am often very frustrated with my clients” ( $\alpha=.72$ ).

### **Bureaucratic Conditions**

As indicated in the literature review, this study considers five bureaucratic characteristics that are expected to increase workers’ stress. These are formalization, routinization, work overload, role conflict, and unmet expectations.

**Formalization** was measured by two Likert items adapted from Hackman and Oldham (1980): “This organization has a very large number of written rules and regulations,” and “This organization places a lot of emphasis on following rules and procedures” ( $\alpha=.77$ ). The measure of **routinization** was adapted from Withey, Daft and Cooper (1983) and used three Likert items: “My job has lots of variety” (R), “My duties are repetitious in my job,” and “I have the opportunity to do a number of different things in my job” (R) ( $\alpha=.75$ ). **Work overload** was measured by five Likert items. The first two, constructed for this survey, were “I have to attend too many meetings in this job,” and “My job involves a lot of paperwork.” The remaining three, adapted from Caplan, et al. (1975), were “I have to work very fast to get everything done in my job,” “My workload is too heavy in my job,” and “I do not have enough time to get everything



done in my job" ( $\alpha=.78$ ). Originally, the three items regarding workload were treated as a separate variable from the first two about meetings and paperwork, but the five loaded together in the factor analysis, and were thus combined into one measure. Also, the reliability improved by combining the two administrative tasks items, which had a reliability of .59, with the three workload items, which had a reliability of .75. The **role conflict** measure was constructed for this study and included three Likert items: "It is difficult to balance the demands of my clients, my coworkers, my supervisor, and this organization," "It is hard to fulfill my responsibilities to both my clients and this organization," and "It is difficult to always meet the needs of my clients" ( $\alpha=.69$ ). This measure originally contained a fourth item, "It is hard to provide adequate services to all my clients," but this item was dropped because it did not load with the other items in factor analysis, but loaded with the work overload measure instead. **Unmet expectations** was adapted from Wallace and Mueller (1994), and was measured by four Likert items: "All in all, I am disappointed in this job," "My experiences in this job have been better than I originally expected" (R), "Generally, this job is not what I thought it would be," and "This job has lived up to the expectations I had when I first started" (R) ( $\alpha=.65$ ).

#### **Position in the Organization**

The measurement of **position** in the organization was based on the question, "What level is your position?" with the response categories of "Frontline (primarily work directly with clients)," "Middle Management (staff supervision *and* work with clients)," and "Management (primarily staff supervision)." This was then dummy coded, with frontline assigned 1 and the remaining two categories of middle management and management combined and assigned 0.

#### **Control Variables**

As described in the literature review, this study includes seven control variables. These are negative affectivity, work motivation, education level, tenure in organization, hours required to work, gender, and earnings.

**Negative affectivity**, adapted from Agho, Mueller and Price (1993), was measured by three Likert items: "I always expect the worst to happen," "Minor setbacks

sometimes irritate me a lot,” and “There are days when I’m ‘on edge’ all of the time” ( $\alpha=.63$ ). **Work motivation** was measured by three Likert items adapted from Kanungo (1982): “Work is only a small part of my life” (R), “My work is central to my very existence,” and “The most important things that happen in my life involve my work” ( $\alpha=.65$ ).

**Education level** was measured by the question “What is the highest level of education you have completed?” with response categories of “Elementary School,” “Junior High School,” “Some High School,” “High School,” “Some post-secondary,” “College diploma/certificate,” “University undergraduate degree,” and “University graduate degree.” This was dummy coded into two categories with “University undergraduate degree” and “University graduate degree” coded as 1 and the remaining categories coded as 0. **Tenure in organization** was tapped by the open-ended question, “In what year did you start working at this organization?” This figure was subtracted from the year of the survey to calculate the number of years respondents have worked at the organization. **Hours required to work** was measured by the open-ended question, “On average, how many hours a week are you *required* to work (i.e., what are the number of regular work hours you are expected to work)?” This measure was used in place of average hours *actually* worked because fourteen cases were lost with the latter question. The correlation between these two variables is .86, suggesting that the measure used is valid. **Gender** was measured by the question “What is your sex?” which was dummy coded 1 for males and 0 for females.

The measure of **earnings** was based on the open-ended question, “At present, what is your total yearly income from *this job* before taxes and other deductions are made?” 75 cases were lost because of respondents who did not answer the question. As a remedy, estimated incomes were assigned to these cases based on the mean incomes of other respondents who shared their positions (frontline, middle management, or management), the type of work they do (residential or vocational), and the average number of hours they worked. For example, income was missing for several respondents who worked 40 hours a week. A table was produced showing the average earnings of the 85 cases who worked 40 hours a week, broken down by position and type of work.

Incomes were assigned to the missing cases based on the mean incomes of other cases who did the same type of work in the same position. Estimating income in this manner allowed 46 of the 75 cases missing income to be included in the analysis. Regression equations were run with and without these 46 cases to ensure that they did not affect the results. The changes were negligible between the two regression equations and the inclusion of the extra cases did not influence whether any specific variables were statistically significant or not.

## CHAPTER FOUR: RESULTS

The results of this study are presented in the following section. Firstly, to determine the most appropriate model, the results of the interactions with the collegiality variables and then for the interactions with the position variable are examined. The results for the main effects model are then presented. Lastly, the results for the difference of means tests which compare levels of determinants between frontline workers and managers are presented.

Before examining the effects of the independent variables on job stress, it first must be determined whether or not the model is additive or if there are interactions with social support, indicating a buffer effect. When the social support multiplicative terms created to test hypothesis 2a were entered as blocks into the main effects equation, the F-change statistic for the change in R-squared was not significant. When the coworker support interactions were added, the increment in R-squared was .003 with the addition of the five multiplicative terms ( $F=1.186$ ;  $df\ 5$ ;  $p=.315$ ). One of the interaction terms in the set, coworker support\*work overload, was significant however ( $B=-.311$ ;  $t=-1.715$ ;  $p=.087$ ).

The median split approach was used to divide the sample by degrees of coworker support in order to better interpret this interaction. Work overload had a stronger positive effect on stress for individuals with less coworker support ( $b=.315$ ;  $t=5.813$ ;  $p=.000$ ) than for individuals with more coworker support ( $b=.129$ ;  $t=3.870$ ;  $p=.000$ ). In other words, workers with lower coworker support find work overload more stressful than workers with higher coworker support do.

The increment in R-squared for the addition of the five supervisor support multiplicative terms was .003 ( $F=1.12$ ;  $df\ 5$ ;  $p=.348$ ), which is not statistically significant. One variable in the set, supervisor support\*routinization, was significant ( $B=.245$ ;  $t=2.31$ ;  $p=.021$ ). The positive direction of effect is opposite to the predicted direction.

When the regression equations were run separately for individuals with higher and lower supervisor support, routinization had a significant positive effect for those with more supervisor support ( $b=.092$ ;  $t=2.111$ ;  $p=.036$ ) and no effect for those with less supervisor support ( $b=.050$ ;  $t=1.458$ ;  $p=.148$ ). This suggests that individuals with more

supervisor support experience stress from routinization, whereas for individuals with less supervisor support, routinization has no effect. This was not the anticipated result.

Since the change in R-squared was not significant when the interactions were entered as a block for either form of support, and since there were only two significant effects out of the ten multiplicative terms (including one whose direction of effect was opposite of what was expected), it suggests that a main effects model is most appropriate. Collegiality, or social support, does not appear to act as an important buffer in social workers' job stress.

Interaction effects were also considered in regard to position in the organization. The nine multiplicative terms for position were entered as a block into the regression equation. The increment in R-squared was .004 ( $F=.780$ ;  $df$  9;  $p=.636$ ) and was not statistically significant and none of the nine terms were statistically significant. This suggests that a multiplicative model in regard to position is not appropriate.

As the above two interaction models were deemed inappropriate, an additive model appears most useful for understanding job stress in this study. The regression results for the main effects model are shown in Table 3. Of the first three hypotheses regarding the professional rewards that were expected to reduce job stress, hypotheses 2 and 3 were supported. Satisfaction from working with clients had the greatest impact on reducing social workers' stress ( $B=-.17$ ). Following this, the two collegiality variables of supervisor support ( $B=-.12$ ) and coworker support ( $B=-.05$ ), also reduced stress as predicted. Contrary to the prediction of hypothesis 1, autonomy did not have a statistically significant effect on stress.

Four of the five bureaucratic stressors had statistically significant positive effects on job stress. Routinization ( $B=.07$ ), role conflict ( $B=.17$ ), work overload ( $B=.22$ ), and unmet expectations ( $B=.28$ ) increased stress, providing support for hypotheses 5, 6, 7 and 8. Hypothesis 4 regarding formalization, however, received no support in this model.

Hypothesis 9 was not supported; position was not found to have a significant effect. Three of the seven control variables had statistically significant effects. Of these three variables, negative affectivity had the strongest effect ( $B=.26$ ), indicating that workers who have higher levels of the trait report more stress. Work motivation ( $B=.06$ )

**Table 3: Regression Results for Social Workers' Job Stress (N=514)**

Determinants	b	B
<b>Professional Conditions</b>		
Autonomy	-.041	-.039
Collegiality: Coworker Support	-.050	-.048*
Collegiality: Supervisor Support	-.090	-.124***
Satisfaction From Clients	-.228	-.170***
<b>Bureaucratic Conditions</b>		
Formalization	.027	.036
Routinization	.062	.072*
Work Overload	.207	.220***
Role Conflict	.153	.168***
Unmet Expectations	.299	.282***
<b>Position (Frontline=1)</b>	.059	.040
<b>Control Variables</b>		
Negative Affectivity	.248	.258***
Work Motivation	.052	.058*
Education (University=1)	-.038	-.026
Tenure in Organization	.003	.017
Hours Required to Work	.002	.028
Gender (Male=1)	-.066	-.039
Earnings	-.000	-.074*
R <sup>2</sup>		.710
F (df)	71.384	(17, 496)

\*p<.05; \*\*p<.01; \*\*\*p<.001 (one-tailed test).

also had a positive effect, such that individuals with higher motivation experience more stress than those with lower levels. Income had a negative effect (B=-.07); higher earnings are associated with less stress. Education level, tenure in organization, hours required to work, and gender did not have statistically significant effects.

The R-squared statistic for the model was .71. An R-squared statistic of this

magnitude suggests that the specified model is a good fit and that the independent variables explain a significant proportion of the variation in social workers' job stress.

To explore whether the amounts of professional and bureaucratic conditions differed between frontline workers and managers, t-tests were used to determine whether there were statistically significant differences in the mean levels of these factors between the two groups. These results are presented in Table 4. Of the professional rewards, managers reported significantly more autonomy (mean=3.91) than front-line workers (mean=3.60). The two groups of workers, however, reported similar levels of collegiality and satisfaction from working with clients.

Of the bureaucratic stressors, frontline workers reported higher levels of formalization and routinization (means=3.44 and 2.54, respectively) than managers (means=3.25 and 1.98, respectively). Frontline workers also reported higher levels of unmet expectations (mean=2.30) than managers (mean=2.14). Workload differed, with managers (mean=3.17) reporting more than frontline workers (mean=2.60). The two groups reported similar levels of role conflict.

There were several control variables that showed statistically significant differences between the two groups. Managers had higher levels of education; 43% of managers and 31% of frontline workers were university educated. Managers were required to work more hours per week on average than frontline workers, 38 hours compared to 33 hours. Managers, on average, had worked about five years in the organization and earned \$31,091 per year, both higher than frontline workers, who, on average, had worked close to three years in the organization and earned \$20,698 per year.

**Table 4: Mean Differences in Determinants for Frontline Workers (N=328) and Managers (N=186)**

	Frontline Workers		Managers	
	Mean	S.D.	Mean	S.D.
<b>Job Stress</b>	2.161	.725	2.085	.677
<b>Professional Conditions</b>				
Autonomy	3.601	.705	3.907***	.593
Collegiality: Coworker Support	3.891	.670	3.815	.695
Collegiality: Supervisor Support	3.765	1.015	3.892	.906
Satisfaction From Clients	4.179	.568	4.241	.445
<b>Bureaucratic Conditions</b>				
Formalization	3.436	.940	3.247*	.967
Routinization	2.542	.847	1.978***	.657
Work Overload	2.603	.696	3.167***	.711
Role Conflict	2.665	.782	2.751	.768
Unmet Expectations	2.296	.701	2.138**	.592
<b>Control Variables</b>				
Negative Affectivity	2.440	.736	2.469	.742
Work Motivation	2.629	.798	2.725	.758
Education (University=1)	.317	.466	.435**	.497
Tenure in Organization	2.939	3.229	5.011***	4.479
Hours Required to Work	33.369	10.343	37.866***	5.596
Gender (Male=1)	.235	.424	.220	.416
Earnings	20,761	9,194	31,072***	10,509

\*p&lt;.05; \*\*p&lt;.01; \*\*\*p&lt;.001 (one-tailed test).



## CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

This study set out to explain job stress using the professional-bureaucratic conflict model as an application of the person-environment fit model. The model specified explained 71% of the variance, indicating its relative success in explaining job stress. Three of the four professional characteristics had statistically significant negative effects on stress as hypothesized, and four of the five bureaucratic characteristics had significant positive effects on stress as hypothesized. Position in the organization did not appear important in understanding stress for social workers.

In the discussion that follows, the key findings of this study are discussed, the practical implications of the findings are highlighted, the limitations of the study are addressed, and suggestions for future research in this area are presented. In doing so, first the findings reflecting professional work are discussed. Second, the results pertaining to the effects of the bureaucratic context are presented. Third, the unexpected findings of this study are examined. Next, findings regarding position in the organization are discussed. Lastly, overall conclusions are drawn.

### **Professional Conditions**

Starting first with professional rewards, satisfaction from working with clients was the strongest stress reducer. This corresponds with the view of professional work that emphasizes the service ideal of helping others. That the satisfaction human service workers gain from helping clients acts to reduce stress seems to indicate that this service ideal is salient to them, and suggests that working with people is an appropriate occupation for them.

Both coworker and supervisor support, or collegiality, were also important in stress reduction. Although this study did not find that collegiality acts to buffer the effects of bureaucratic stressors, it still has an important main effect on stress. The exchange of work-related information between colleagues is likely critical for any knowledge-based occupation, not just for professionals, and general support from coworkers probably reduces stress for individuals in a wide variety of occupations.

A more indepth study of the kinds of social support and their effects on stress is a possible area for future research on stress for professionals in bureaucracies. For

example, social support may be differentiated in regard to whether it is instrumental support, which is direct assistance, or emotional support, which demonstrates caring (Kaufmann and Beehr, 1989). This study focuses on the support that coworkers and supervisors offer by listening to problems and by helping deal with job difficulties. It would be useful for future studies to tap more specifically into different types of support and who offers them. For instance, perhaps supervisors are in a better position to provide instrumental support by actually reducing stressors through such measures as reducing workload, clarifying roles, or increasing task variety. In contrast, coworkers may provide more emotional support by sharing similar concerns and experiences with one another.

### **Bureaucratic Conditions**

Turning next to the organizational characteristics that are stress inducing, unmet expectations had the greatest effect overall. This lends support to the professional-bureaucratic conflict model, as professionals may be disappointed with the fit between their expectations and the realities of their jobs in bureaucratic organizations. Being that this is so crucial, it is recommended that individuals interested in working in any given profession carefully research the day-to-day duties of practicing professionals so that they better know what to expect before they decide to pursue that occupation. Similarly, professional schools could prepare their students as to what to expect through such measures as practiciums prior to graduating and entering the profession.

A difference of means test which compared respondents with university education against those without revealed that those with university education experience *higher* levels of unmet expectations. This suggests that those who are receiving postsecondary training are being socialized into their professional roles and may enter their jobs with higher, more idealistic expectations than those who receive less training. This holds with Scott's (1966) argument that a longer training period provides more time for successful inculcation of values and norms. As a result, this may contribute to a greater likelihood of one's job expectations being unfulfilled.

Work overload had the next strongest effect on increasing job stress. This factor has been consistently shown to be an important predictor of stress in social work as well as most other occupations (Bhalla et al., 1991; Collings and Murray, 1996). Role conflict

also increases stress, demonstrating the difficulties that human service workers have trying to balance the demands of their organizations, supervisors, and clients. Organizations would be well advised to take steps to make these demands less conflicting in order to remedy this problem. Since the primary purpose of the organizations looked at in this study are to help clients, it is particularly unfortunate that the demands of clients and the organization cause conflict, and ultimately stress, for workers. Routinization also caused stress. Hence, although having too many challenges in one's job is a common stressor, the other extreme of too much repetition and lack of challenge causes stress as well. The descriptive statistics suggest, however, that few of the workers in this study experienced severe levels of routinization.

### **Unexpected Findings**

Autonomy and formalization were two variables that failed to have the hypothesized effects on workers' stress. An unexpected finding was that autonomy, which is considered a central characteristic of professional work, does not appear to reduce stress. A possible reason why it was not an important determinant could be because of the measure used. Professional autonomy refers to individuals' control of their work tasks. The measure used in this study, however, is composed of items that focus on rather broad aspects regarding decisions affecting respondents' jobs. Thus, respondents may have understood the questions to refer more to decision making in the organization, not the control they have over their client interactions. The items may have tapped better into autonomy if they were more sample specific and referred to such characteristics as the degree of discretion used when respondents provide help and services to their clients.

Formalization also did not affect job stress, and again this could be because of the measure used. The two items used for this variable are different from the items used for other variables in that they do not refer to how respondents experience their jobs, but to their perceptions of how the organization runs. While respondents may have recognized that their employing organizations are formalized, they may have experienced this formalization in varying degrees in their own particular jobs. Formalization refers more to an organizational characteristic, and while it may certainly affect one's job, it is not

like characteristics such as routinization or workload, which are characteristics of one's actual day-to-day duties.

Despite these two unexpected findings, the results demonstrate that sociological variables related to professional work and bureaucratic conditions are generally useful for explaining job stress. The significant effects of the two personality variables used as controls indicate that individual characteristics are also important in understanding stress, however. An unexpected finding is that negative affectivity had one of the strongest effects of all the variables in the model. Fogarty et al. (1999) remark that this trait is likely the individual differences variable with the greatest potential to influence self-report measures of occupational stressors and perceptions of strain.

Similarly, the positive effect of work motivation indicates how an orientation toward having work central in one's life increases stress. Although it is argued that individuals who possess this personality trait are likely to have a positive outlook toward their jobs and perform their jobs well (Kanungo, 1982), it appears that this functioned to increase, not lower stress. Since high motivation indicates that work is very important to these individuals, and they tend to put in extra effort and time, they experience greater stress from their work. This is consistent with the burnout literature that argues that dedicated and overcommitted workers are at the highest risk of burnout (e.g., Karger, 1981).

As well as these two personality variables, earnings was another significant control variable. The more people earn, the less stress they experience. This is an interesting finding for this sample because not only are the salaries generally low, there is not a wide range of salaries among respondents. Thus, a slight increase in earnings serves to significantly reduce the feelings of stress in one's job.

### **The Effect of Position**

One aspect where the model fits poorly is in regard to position. Not only did the interaction tests demonstrate that overall, the determinants of stress do not affect the stress of managers and frontline workers differently, the main effects model demonstrated that position does not have a direct effect on stress either. This may be because the managers in these organizations are not "true" bureaucrats as discussed in the

professional-bureaucratic conflict literature which sometimes refers to professionals and bureaucrats as two separate occupations existing in the same organization (e.g., Scott, 1966). In this sample, however, and as probably with most human services organizations, the managers were once frontline social workers who were promoted into managerial positions. Thus, frontline workers may have a great deal in common with their managers, as they share a common professional background. Freidson (1984) refers to this as occupational kinship with superiors. This may explain why the different variables have the same effect on frontline workers' and managers' stress levels.

The respondents in the two positions reported different work experiences however, and some of these results are contrary to what was expected. For example, frontline workers experienced more formalization and routinization than managers did. As these are bureaucratic characteristics, it was expected that managers should experience these more since they are in more administrative roles. These differences may be because of differing expectations of their jobs between managers and frontline workers. As they enter their positions, managers may be cognizant of the large administrative components of their jobs and are prepared to accept these aspects of their work.

Sorensen (1967) found in a study of accountants that individuals higher up in the organization, including managers, had higher bureaucratic orientations than those who are relatively new to the organization and that newer members of the profession hold more professional norms compared to bureaucratic norms. The shift to a more bureaucratic orientation may be due to longevity in an organization, which gives workers the ability to reconcile conflicting demands, because they have a larger stake in organization (Aranya and Ferris, 1984). This is applicable to the present study, as managers generally had longer tenure in the organization than frontline workers. In a study of probation officers, King (1998) argues that some managers may welcome bureaucratic tasks in an effort to distance themselves from the day-to-day pressures the frontline workers experience, which suggests that managers shed some of their professional orientation and take on more of a bureaucratic orientation. Future research may attempt to measure more directly the extent to which different workers hold more

bureaucratic or professional orientations towards their work.

Frontline workers also reported that their expectations are met to a lesser degree than managers. This may be because frontline workers have a stronger professional orientation that reflects their commitment to the service ideal, and find that they are unable to help clients as much as they had hoped, which leads to greater unmet expectations. Managers, however, having worked in the field longer, have accepted the extent to which they are able to provide assistance for clients, as well as other unexpected aspects of their jobs, and experience less discrepancy between their expectations and the realities of their jobs.

The overall pattern is one in which frontline workers reported less autonomy, more formalization and routinization, and greater unmet expectations. This leads to a prediction that frontline workers would report higher levels of stress than managers, but they did not. This is partially explained by autonomy and formalization having no significant effects on stress, and routinization having a significant, but relatively weak, effect. Even though individuals in the two positions experience different work conditions, these contributed to stress in the same way and both groups experienced the same degree of stress.

### **Conclusions**

In conclusion, this study set out to explain job stress among social workers using the professional-bureaucratic model, and to explore whether frontline workers and managers experience work stress differently. The results lead to conclusions that are relevant to professionals, the bureaucratic organizations for which they work, and the positions that they hold.

Of the significant determinant of stress, several interesting patterns arise. Firstly, of the professional rewards, satisfaction from working with clients and the two collegiality variables of coworker and supervisor support act to reduce stress. These factors illustrate the importance of the social aspects of human services work, and of professional work in general.

While the service ideal may be a professional trait that social workers exhibit, social workers may not be an ideal example of professional workers. Social work does

not possess all the characteristics that are often used to define professional occupations in the sociological literature. In particular, some individuals in the sample do not have a university education, which is inconsistent with the high level of formal training and socialization that professionals are assumed to have (Scott, 1966). Professions are also thought to be self-regulated (Freidson, 1984). The social work profession, however, is not licensed, nor governed by a single body composed of its members, in the same way that other professional groups such as lawyers and doctors are. The application of this model to another group of professionals would therefore be worthwhile in future studies. As well, measuring additional aspects of professional work that may reduce stress, such as professional career opportunities, could be included in future studies.

A second notable pattern appears from examining the factors that are most important for increasing stress. These are work overload, role conflict, and unmet expectations, and all three may be characterized as role demands tied to one's job. That one's role demands are too burdensome is indicated by work overload. Role conflict indicates the difficulty the worker has balancing competing work roles and their inherent duties and responsibilities. And finally, when disappointed with the reality of one's job, the worker's role expectations may not be fulfilled. This pattern of findings is consistent with the general stress literature that emphasizes role factors over the more structural, bureaucratic aspects, such as formalization or routinization, which appear to be considerably less important in this study. These role variables are also widely applicable to stress for many jobs, not just professionals.

A limitation in regard to the structural factors examined in the model is that some of the respondents' jobs may not in fact be very bureaucratic. Many of the workers in this sample are located in either vocational or residential settings, some of which are likely far removed from a bureaucratic setting. The larger employing organizations may be bureaucratic, but the workers may work in smaller subunits where they do not experience highly bureaucratic conditions in their day-to-day jobs. As this model only includes two truly "bureaucratic" characteristics (routinization and formalization), a model that includes more bureaucratic features, such as decentralization or hierarchy of offices, could contribute more completely to our understanding of the effect of the

structural characteristics of bureaucracies on stress. As well, instead of simply testing a professional-bureaucratic conflict model by examining professional variables and bureaucratic variables separately, it would be useful to directly measure the degree of professional-bureaucratic conflict experienced by professionals. This might be an important mediating variable such that the professional and organizational characteristics contribute to professional-bureaucratic conflict, which in turn results in job stress.

Another important direction for future research would be to explicitly identify how professional workers' expectations are not met when they work in bureaucratic organizations. It may be that their professional ideals are unfulfilled because they do not receive as many professional rewards in their job, such as autonomy or collegiality, as they expected. Alternatively, bureaucratic demands may be responsible for their unmet expectations because they find the organization is, for example, too routinized or too formalized. Or, their unmet expectations could be as a result of a combination of both a lack of professional rewards and an excess of bureaucratic conditions.

A third notable pattern is that although there are a number of differences in frontline workers' and managers' work experiences, the same factors have the same effects for both groups who report the same levels of stress. Thus, it does not appear that frontline workers and managers experience stress in radically different ways, in spite of their different duties. Position is not important for predicting professionals' stress levels, which may be because the shared professional orientation of these workers supersedes the effect of position. As mentioned earlier in the discussion section, further study into the degree of professional and bureaucratic orientations would provide more insight into the issue. An examination of another occupation would be useful to see if the findings regarding position hold for other workers. Perhaps in an occupation that is more professional and is employed in more bureaucratic settings, the effects of position would be different.

As a final note, the data used in this study is cross-sectional, which means that stress and the effects of its determinants cannot be examined over time. The importance of longitudinal data in the study of stress has been noted in the literature (e.g., Lazarus, 1991; Handy, 1988). Longitudinal data allows a clearer understanding of the causal order



of the variables, and of the processes taking place over time. For this topic, longitudinal data could reveal whether length of tenure and/or change in position affect workers' work experiences, orientations and stress levels. The passage of time may result in changes in professionals' expectations in regard to their employing organizations, or in a shift from a professional orientation to a more bureaucratic one, and both of these may help to better explain the stress experienced by professionals in bureaucratic organizations.

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