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Job Satisfaction Among Psychologists in a Managed-Care Environment

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Andrews University

School of Education

JOB SATISFACTION AMONG PSYCHOLOGISTS IN
A MANAGED-CARE ENVIRONMENT

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
Walter R. Vyhmeister

June 2001
JOB SATISFACTION AMONG PSYCHOLOGISTS IN A MANAGED CARE ENVIRONMENT

A dissertation presented in partial fulfillment of the requirements for the degree Doctor of Philosophy

by

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ABSTRACT

JOB SATISFACTION AMONG PSYCHOLOGISTS IN A
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by

Walter R. Vyhmeister

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
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Title: JOB SATISFACTION AMONG PSYCHOLOGISTS IN A MANAGED-CARE ENVIRONMENT

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The Problem

The efforts of managed care to balance resources, cost, and quality of services have created new issues among mental health professionals, affecting their careers and having the potential to affect their job satisfaction. Therefore, the purpose of the study was to investigate how managed care has impacted career satisfaction among professional psychologists.

The Method

The present investigation examined 21 factors in the prediction of job satisfaction among licensed psychologists. A sample of 1,000 licensed
psychologists located in California, Oregon, and Washington was randomly selected from the National Register of Health Service Providers in Psychology. Three hundred seventeen participants responded and 312 provided useable data. Participants completed a 44-question survey; 20 items were from the Short-Form Minnesota Satisfaction Questionnaire (Short-Form MSQ; Weiss et al., 1967) and 24 items measured job characteristics and attitudes regarding managed care.

The Results

Bivariate correlations indicated that only 4 of the 21 variables were significantly related. Job satisfaction was positively correlated with the number of colleague providers present in a psychologists' practice and negatively correlated with (1) the general perception that managed care has a negative impact on the quality of care, (2) the specific perception that managed care has a negative impact on the quality of care by taking control of patient care, and (3) the perception that managed care has a negative impact on treatment by affecting the types of interventions used.

Conclusions

Stepwise regression procedures that were used in combination with theoretical and statistical criteria resulted in a prediction model of job satisfaction that included annual income, number of colleagues in practice, the general perception that managed care has a positive impact on the quality of care, and the specific perception that managed care has a negative impact on the
quality of care by controlling of patient care. Results were interpreted using Herzberg’s (1966) Motivator-Hygiene theory of job satisfaction. Implications were proposed and directions for future research offered.
To my wife, Cheryl, and my sons, Aric and Ross who sacrificed so much during my training.
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CHAPTER I

INTRODUCTION

Background and Rationale for the Study

Job satisfaction has been the subject of intensive discussion, speculation, and research by a variety of professional disciplines. It has been associated with absenteeism (Ewen, 1967), self-esteem (Greenhaus, 1971), the capacity to adjust to general life issues (Williams, 1962), and to productivity (Locke, 1968). Within the mental health profession, poor job satisfaction has been linked to burnout, poor job performance, and inferior patient care (Raquepaw & Miller, 1989).

In studies of counseling psychologists in private practice, it was found that 80% to 87% reported to be at least slightly satisfied with their careers (Watkins, Lopez, Campbell, & Himmell, 1986, 1989). However, when the same individuals were asked what career they would enter if life could be lived over, only 34% to 48% said they would choose counseling. Evidence suggests, however, that clinical psychologists have somewhat higher levels of satisfaction than counseling psychologists. Studies of job satisfaction among clinical psychologists indicate that 54% to 89% were more inclined to choose clinical psychology if their lives could be lived over again (Kelly, Goldberg,
In recent years, job satisfaction among psychologists has become a more salient and important issue because of the impact that managed care has had on psychologists' job security. Difficulties with managed care began to surface in the late 1980s as employers searched for methods to diminish their expenses (Borenstein, 1996). At that time, national health care costs were greater than 11% of the gross national product and policies that included coverage for the treatment of mental illness provided adequate inpatient benefits, but had significant limitations for outpatient treatments. There were unnecessary and prolonged hospitalizations because restrictions on outpatient care gave no other alternatives to many patients who otherwise could not afford treatment. This kind of insurance discrimination towards the mentally ill continued in spite of the fact that the Federal Employee's Health Benefits Program had demonstrated that the services could be provided for less than 7.5% of the total medical expense. Mental health providers were blamed as the length of inpatient stay and the number of outpatient visits consistently corresponded to the available reimbursement (VanLeit, 1996). After significant public attention to this matter, care benefits were increased, but mainly for alcohol and substance abuse problems.

Although managed-care plans have helped reduce the kind of insurance abuses that were once common, managed-care directives limit autonomy and threaten the livelihoods of psychologists (Knowlton, 1995).
Baumwart and Parr (1994) concluded that non-psychologists are in a better position to be the frontline therapists of the future, which means fewer therapist jobs for psychologists. In fact, within the managed-care industry, psychologists are widely being replaced by master's-level therapists. In their investigation, Baumwart and Parr (1994) found that this situation has created tremendous anger and dissatisfaction among many psychologists. In support of this conclusion, these authors cited a psychologist who typified these feelings: “The proliferation of other mental health professionals, (especially those requiring only a master's degree) have ruined the profession of psychology. If I could live over again, I would be a lawyer specializing in suing the other mental health professionals” (p. 74).

Although stress and burnout in the mental health professions have always been present, in recent years the changes caused by managed care have significantly increased stress reactions and the rate of burnout. Furthermore, Raquepaw and Miller (1989) found that burnout was predictive of therapists' intentions to leave psychotherapy for a different kind of occupation. Even though managed care may be a substantial source of this dissatisfaction, it is not necessarily the sole source. For instance, Baumwart and Parr (1994) reported that psychologists in community counseling clinic work settings also experience high degrees of dissatisfaction. This was summarized by one of the subjects who stated that “1993 was my first year in private practice. My answers on the satisfaction section would have been
more negative prior to private practice when I could not make decisions according to my own conscience and profession [sic] ethics” (p. 75).

Evidence exists to suggest that poor job satisfaction by psychologists not only affects the quality of patient care, but also affects the psychological adjustment of the practitioner. In a series of studies of British clinical psychologists, Cushway and Tyler (1996) found that one of the main risk factors for the presence of psychological distress was low job satisfaction. These researchers further reported that “professional self-doubt” was one of the most significant stressors experienced by clinical psychologists. Yet, this does not appear to be an important factor for other mental health professionals who are not engaged in providing mental health services. These findings imply that conducting therapy is an inherently stressful and emotionally demanding activity.

Still, coping with stress is not necessarily a serious problem for most professionals, as long as they are involved in meaningful work (Benner, 1984). When work is meaningful to the person, and when the person sand no internal or external factors interfere with performance, the person is able to focus on the work at hand, is free to develop a sense of salience, and experiences fewer stressful episodes at work even when they are very involved in their work (Benner, 1984). The level of stress and dissatisfaction reported by psychologists raises questions as to whether or not they perceive their work as meaningful. However, given the limited data available on job
satisfaction among psychologists, relatively few definitive conclusions can be reached.

Statement of the Problem

The efforts of managed care to balance resources, cost, and quality of services are perceived by many mental health professionals as efforts mainly to control expenses (VanLeit, 1996). Clinicians often complain about the loss of provider control over clinical decisions. They feel that managed care too often wrongly denies or limits psychotherapy, reduces provider choice, and second-guesses decisions that mental health professionals should make (Knowlton, 1995). These trends have a direct impact on job satisfaction because professionals lose not only income, but also the sense of dignity that occurs when one is not respected as a highly trained professional. These issues are compounded by the worry that patients are not getting the necessary care they need. Managed-care also requires mental health professionals to focus on short-term, symptom-focused interventions which do not allow them the opportunity to explore the root of the symptoms, which can require more time than is granted by managed care organizations.

Although issues related to job satisfaction have been researched for years, few studies have focused on career satisfaction among mental health professionals, let alone psychologists. For example, Locke (1983) estimated that by 1972, 3,300 articles and dissertations had been written on job satisfaction. The results from a current literature search on the PsychInfo database revealed that the number of studies through 1998 addressing the
topic of job satisfaction was well over 8,400 (PsychInfo On-line, 1998). However, an annotated bibliography reported that of 946 abstracts on job satisfaction, only 13 of these studies were related to the field of psychology; and, of these studies, only 1 was related to the job satisfaction of psychologists (Walsh & Birkin, 1979).

Because job satisfaction has tremendous impact upon the well-being of psychologists and the quality of care they provide, further understanding concerning the job satisfaction of psychologists is of critical importance. A clearer understanding of the issues involved can enable us to minimize the problem and then help us to consider new actions to manage it.

**Purpose of the Study**

The primary purpose of the present study was to investigate how managed care has impacted career satisfaction among professional psychologists. A secondary purpose of the study was to determine if job satisfaction among psychologists varies as it relates to hours of work, income, involvement with third-party reimbursement, number of colleague providers in their private practice, the number of memberships that psychologists have on HMO and PPO panels, and the number of years of involvement in clinical practice. It also sought to learn if the psychologist's job satisfaction varies as it relates to the perceived negative impact of managed care on quality of care, treatment, assessment and diagnosis, and confidentiality.
Definition of Terms

For purposes of this study the following terms are defined.

Employment setting: The primary place of employment.

Managed care:

A means of providing health care services within a defined network of health providers who are given the responsibility to manage and provide quality, cost-effective care. Increasingly, the term is being used by many analysts to include (in addition to HMOs) PPOs and even forms of indemnity insurance coverage that incorporate preadmission certifications and other utilization controls. (Austad & Berman, 1991, p. 6)

In this study, the term managed care is used specifically in reference to Health Maintenance Organizations (HMOs) and/or Preferred Provider Organization (PPOs).

Psychologist: A member of the National Register of Health Service Providers in Psychology.

National Register of Health Service Providers in Psychology: An organization that regulates the field of psychology with the highest requirements in the USA for membership. Among the requirements, psychologist must have a degree from an institution that is accredited by the American (APA) or Canadian (CPA) Psychological Association. In the event that the school is not accredited, psychologists may still qualify if their degree is from a school designated by the Association of State and Provincial Psychology Boards and by the National Register. Psychologists must have completed an APA accredited internship or one that meets the criteria as outlined in the "Guidelines for Defining an Internship or Organized Health
Service Training Program in Psychology." Member psychologists are also required to have 1,500 hours of supervised postdoctoral experience, and must be licensed at the independent practice level.

**Years of work as clinicians:** The number of years of experience as clinicians starting from the time of graduation.

**Significance of the Study**

A study of job satisfaction among psychologists is of great significance in light of the fact that many changes continue to take place in the mental health field. It is important to continue to monitor these issues because how psychologists feel about their career is likely to have an effect on both the quality of their lives and on the quality of the services they provide.

**Research Questions**

The research questions for this project include the following:

1. Is the number of hours worked per week related to the job satisfaction of psychologists?
2. Is annual income related to the job satisfaction of psychologists?
3. Is the percentage of private practice income generated by third party reimbursement related to the job satisfaction of psychologists?
4. Is the number of colleague providers in private practice related to the job satisfaction of psychologists?
5. Is the number of memberships in HMO and/or PPO panels related to the job satisfaction of psychologists?

6. Is the number of years of clinical experience in private practice related to the job satisfaction of psychologists?

7. Is the extent to which managed care is perceived to have a positive or negative impact on quality of care related to the job satisfaction of psychologists?

8. Is the extent to which managed care is perceived to have a negative impact on treatment related to the job satisfaction of psychologists?

9. Is the extent to which managed care is perceived to have a negative impact on assessment and diagnosis related to the job satisfaction of psychologists?

10. Is the extent to which managed care is perceived to have a negative impact on confidentiality related to the job satisfaction of psychologists?

Hypotheses

Given that research on career satisfaction among psychologists suggests a declining trend in job satisfaction, the focus of the present investigation is to determine if the impact of managed care has had an effect on psychologists' career satisfaction. The following hypotheses were tested:

Hypothesis 1: There is a relationship between the number of hours worked per week and the job satisfaction of psychologists.
Hypothesis 2: There is a relationship between annual income and the job satisfaction of psychologists.

Hypothesis 3: There is a relationship between private practice income generated by third party reimbursement and the job satisfaction of psychologists.

Hypothesis 4: There is a relationship between the number of colleague providers in private practice and the job satisfaction of psychologists.

Hypothesis 5: There is a relationship between the number of memberships in HMO and/or PPO panels and the job satisfaction of psychologists.

Hypothesis 6: There is a relationship between the number of years of clinical experience in private practice and the job satisfaction of psychologists.

Hypothesis 7: There is a relationship between the extent to which managed care is perceived to have positively impacted the quality of care provided and the job satisfaction of psychologists.

Hypothesis 8: There is a relationship between the extent to which managed care is perceived to have negatively impacted the quality of care provided and the job satisfaction of psychologists.

Hypothesis 9: There is a relationship between the extent to which managed care is perceived to have negatively impacted quality of care by giving managed-care companies control over aspects of patient care/treatment that clinicians should have control over and the job satisfaction of psychologists.
Hypothesis 10: There is a relationship between the extent to which managed care is perceived to have negatively impacted quality of care by interfering with service delivery by capping the number of sessions that a patient can receive and the job satisfaction of psychologists.

Hypothesis 11: There is a relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to inappropriate treatment and/or insufficient treatment and the job satisfaction of psychologists.

Hypothesis 12: There is a relationship between the extent to which managed care is perceived to have negatively impacted treatment by affecting the type of interventions used and the job satisfaction of psychologists.

Hypothesis 13: There is a relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to an increased use of nondoctoral providers for service delivery and the job satisfaction of psychologists.

Hypothesis 14: There is a relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to a rejection of patients with certain diagnoses and the job satisfaction of psychologists.

Hypothesis 15: There is a relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to medication being used in lieu of psychotherapy and the job satisfaction of psychologists.
Hypothesis 16: There is a relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s Diagnostic Statistical Manual (DSM) diagnosis to help the patient get reimbursed and the job satisfaction of psychologists.

Hypothesis 17: There is a relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s DSM diagnosis to help the psychologist get reimbursed and the job satisfaction of psychologists.

Hypothesis 18: There is a relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to submit the lowest level diagnosis that is reimbursable and the job satisfaction of psychologists.

Hypothesis 19: There is a relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by leading to inappropriate or inadequate assessment and the job satisfaction of psychologists.

Hypothesis 20: There is a relationship between the extent to which managed care is perceived to have negatively impacted confidentiality by failing to keep client information confidential and the job satisfaction of psychologists.
**Hypothesis 21**: There is a relationship between the extent to which managed care is perceived to have negatively impacted confidentiality by using utilization reviews that compromise patient confidentiality and the job satisfaction of psychologists.

**Hypothesis 22**: There is a relationship between a linear combination of the variables related to health care and job satisfaction.

**Delimitations**

The scope of this study includes psychologists who are members of the National Register of Health Service Providers in Psychology. The participants were chosen from this group in an attempt to find clinicians with similar professional training but who work in different work settings.

**Limitations of the Study**

Some of the conditions that limit the study include the fact that because the participants will volunteer their responses, it is likely that there may be a significant difference in the feelings and attitudes of those who choose to participate and those who do not. The sample population was randomly chosen from the National Register of Health Service Providers in Psychology. Thus, it will be important to generalize the findings of this study only to the group mentioned above.
Organization of the Study

The organization of this study is as follows: Chapter 1 includes the background and rationale for the study, statement of the problem, the purpose of the study, definition of terms, research hypotheses, delimitations, limitations, and organization of the study. Chapter 2 reviews the pertinent literature on this topic. Chapter 3 discusses research methodology, including the sample group, instrumentation, and method of analysis. Chapter 4 presents the results of the study. Chapter 5 summarizes the findings, conclusions, implications of findings, and provides recommendations for further research.
This review summarizes and critically examines the empirical and theoretical literature pertinent to job satisfaction and managed care. This chapter begins by reviewing the literature pertaining to the development of the concept of job satisfaction. Subsequent to this, a review of the research on career satisfaction among psychologists is provided, along with a discussion pertaining to the issues faced by psychologists as they integrate managed care into their careers.

**Distress and Job Performance Among Psychologists**

One of the most pressing problems facing psychologists today is how to maintain a level of career satisfaction that can help provide quality care and prevent burnout. Although career satisfaction in other fields has been well researched, only a few studies have examined psychologists and other mental health professionals (Baumwart & Parr, 1994).

A study by Guy, Poelstra, and Stark (1989) on the effects of personal distress on therapeutic effectiveness found that a total of 74.3% of the 749 psychologists surveyed had experienced “personal distress” during the
previous 3 years. In addition, more than one-third of the respondents reported that their personal problems decreased the quality of the care that they provided to their patients. This study also found that those whose practice consisted primarily of individual psychotherapy patients were the most likely to note a decrease in patient care.

Of special interest in this study were the factors associated with reports that personal distress had no impact on the quality of patient care. A puzzling finding was that older practitioners were more likely than younger practitioners to report that high levels of job stress were not having an impact on their job performance. Given the fact that job stress was the most frequently identified source of distress, such confidence in their performance suggested the possibility that older, more experienced therapists may have been in denial about the effects of distress and lack of satisfaction in the workplace and its impact on psychotherapy.

**Conceptualization of Job Satisfaction**

Studies in the area of motivation have resulted in a number of theories that help to conceptualize job satisfaction. Abraham Maslow (Schunk, 1991) developed a humanistic theory of motivation that emphasizes the possibility of achieving one’s potential. Maslow conceptualized human behavior from a holistic point of view and believed that “one’s behaviors are unified by being directed toward goal attainment” (p. 234). He argued that human activity represents a constant striving to satisfy needs which are hierarchical in nature.
On the hierarchy, there are lower-order needs that must be satisfied adequately before higher-order needs can influence and modify behavior.

The ERG theory, which is similar to Maslow's theory, postulates three rather than five basic needs. These needs comprise the ERG acronym: (1) existence, (2) relatedness, and (3) growth. Similar to Maslow's theory, the ERG theory proposes that these three needs can be satisfied by some aspect of the job or work environment (Alderfer, 1972).

Need-Achievement theory, which is another well-known theory of motivation, argues that individuals have an inherent need to accomplish, to do a good job, and to be the best in whatever they do. They have been able to measure the need for achievement (i.e., n Ach) by asking people to write stories about a series of ambiguous pictures. Behind this projective technique, is the idea that people will project their thoughts, feelings, and needs onto an ambiguous stimulus to give it meaning and structure. The expectation is that those with a high need to achieve will make up stories that focus on achieving or accomplishing a goal while those who are low on need to achieve may write a story in which the man is daydreaming about his family or reminiscing about a pleasant family experience (Atkinson & Feather, 1966; McClelland, Atkinson, Clark, & Lowell, 1953).

The Need-Achievement theory is well-supported by research that consistently finds a high correlation between need for achievement (i.e., n Ach) among executives and the financial success of their organizations. For instance, a study of 141 salespersons found that their behavior at work
changed as a function of their level of achievement motivation. In fact, those who were high on their need to achieve were also high on social behavior, a fact that was exhibited through the performance of acts beyond their formal job duties. They were found to perform acts that would benefit the organization such as assisting other salespersons or keeping display areas tidy (Puffer, 1987).

Motivator-Hygiene theory is a simple one and somewhat controversial, but it has had significant implications for the structure of some jobs. This theory somewhat follows Maslow's hierarchy of needs. The assumption of this theory is that lower-level needs have generally been satisfied in contemporary society. When basic needs have not been satisfied, job dissatisfaction is the outcome. This is why the Motivator-Hygiene theory has suggested that there are two sets of needs: (1) motivator needs, which refer to the nature of the work and the level of achievement and responsibility and (2) hygiene needs, which refer to aspects of the work environment, such as pay and supervision. In this theory, motivation needs may produce job satisfaction and hygiene needs may result in job dissatisfaction if the working conditions are not adequate. According to the Motivator-Hygiene theory, hygiene needs cannot produce job satisfaction even when the working conditions are great (Herzberg, 1966).

Motivator-Hygiene theory inspired the redesign of jobs to maximize motivation, which is commonly referred to as job enrichment. Job enrichment comprises removing controls over employees and increasing their personal
responsibility for their work, providing employees with units of work, giving employees more authority and freedom, providing feedback directly to the workers, encouraging the workers to take new and more difficult tasks, and allowing them to become experts in certain tasks (Herzberg, 1966). For instance, it has been found that the physical environment in which a job is performed including factors such as lighting, temperature, and noise level can affect job satisfaction (Sundstrom, 1986).

The Job-Characteristics theory of motivation suggested that differences in the need for growth and the worker's perception of job characteristics influence their motivation. According to the research, some individuals have more of a need to grow than others. Individuals who had a greater need for growth appeared to be more influenced by changes in the job characteristics than did those who had a lower need for growth. The theory proposes that the changes in job characteristics do not directly influence job behavior. Instead, this theory proposes that the modification of job behavior is the result of the worker's subjective or psychological experiences in reaction to the job changes. In other words, the presence of positive job characteristics causes employees to feel a positive emotional state when they perform well on the job. This internal psychological state motivates employees to continue to perform well because they have found that good performance leads to good feelings. The strength of an employee's motivation depends on the individual's need to grow and develop (Hackman & Oldham, 1975).
The Job-Characteristics theory of motivation has five core job dimensions that lead to motivation, satisfaction, and performance: (1) skill variety, (2) task identity, (3) task significance, (4) autonomy, and (5) feedback. There are five specific ways in which jobs may be redesigned in order to enhance performance and satisfaction: (1) combining tasks, (2) forming natural work units, (3) establishing high-end relationships, (4) vertical loading (giving workers more authority, responsibility, and control), and (5) opening feedback channels (Hackman & Oldham, 1975).

Although the theories mentioned above address the content of motivation, some theories have attempted to conceptualize the process involved in making decisions and choices about work. For instance, Expectancy theory (Vroom, 1964) focuses on a person’s perceived expectancy that certain behaviors will result in certain rewards. In other words, people will choose to perform at the level that results in the greatest payoff or benefit. They will tend to work harder if they expect these efforts to lead to desirable rewards such as higher pay or a promotion. Individuals are motivated to obtain a particular outcome that varies with each individual. The person’s perception of the psychological value of the outcome determines its motivating strength. This theory is well researched and studies have been highly supportive. It is also well supported by personal experience and good common sense as most people agree that the higher our expectation of receiving some reward, the harder we are willing to work for it (Mitchell, 1974).
Goal-Setting theory has argued that the individual’s intention to achieve a particular goal defines the person’s motivation (Locke, 1968). The theory argues that having goals results in higher performance than not having goals. The theory also suggests that specific goals are more motivating than general goals, and that difficult goals are more motivating than easy goals. However, goals that seem impossible are worse than having no goals. Goals facilitate performance in four ways: (1) they direct attention and action, (2) they mobilize energy and effort, (3) they increase persistence, and (4) they motivate the development of behaviors that are necessary and appropriate to attain the goals. This theory has been found to produce substantial results in terms of work productivity. It is among the highest in both scientific validity and in usefulness on the job (Hunter & Schmidt, 1983).

The theory used as the basis for the present investigation is known as Work Adjustment theory (Lofquist & Dawis, 1969). This theory postulates that there is a correspondence between the individual and the environment. It argues that there is a relationship in which the individual and the environment are mutually responsive. According to Lofquist and Dawis (1969), the person brings to this relationship “his requirements of the environment; the environment likewise has its requirements of the individual. In order to survive in an environment the individual must achieve some degree of correspondence” (p. 45). According to this theory, the individual seeks to achieve and maintain correspondence with his environment. Work environment correspondence is considered to be the extent to which the
individual fulfills the conditions of the work environment, and the work environment fulfills the prerequisites of the individual. Lofquist and Dawis add that “the continuous and dynamic process by which the individual seeks to achieve and maintain correspondence with his work environment is called work adjustment” (p. 46).

Based on the concept of correspondence, the concepts of satisfactoriness and satisfaction are derived. These two concepts are said to indicate the correspondence between the individual and his or her work environment (Lofquist & Dawis, 1969). Satisfactoriness is an external indicator of correspondence. It is obtained from sources other than the worker’s own appraisal of his or her fulfillment of the requirements of the work environment. Satisfaction, on the other hand, is an internal indicator of correspondence. It is said to represent the worker’s appraisal of the extent to which the work environment fulfills his or her requirements.

Extensive research on the Theory of Work Adjustment has been conducted by the staff of the Work Adjustment Project. The Minnesota Satisfaction Questionnaire (MSQ) was developed by this organization to measure satisfaction. The Short-Form of the MSQ has been used effectively to measure Intrinsic Satisfaction (i.e., internal satisfaction), Extrinsic Satisfaction (i.e., satisfactoriness) and General Satisfaction (Weiss, Dawis, England, & Lofquist, 1967).

The Theory of Work Adjustment is believed to be a good choice for this study because it appears to embrace some of the same concepts suggested by

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other theoretical orientations. For instance, Albright (1972) reports that there is similarity between the MSQ intrinsic factors and Herzberg's hygiene factors. Baumwart and Parr (1994) find that the intrinsic satisfaction items of the MSQ tend to be quite similar to the items that Locke refers to as values (Locke, Fitzpatrick, & White, 1983). Second, it appears that instruments to specifically measure career satisfaction among psychologists and other similar professions are non-existent (Baumwart, & Parr, 1994). Third, the MSQ has been used, in a slightly modified form, in an investigation that surveyed school psychologists (Levinson, Fetchkan, & Hohenshil, 1988) and by Baumwart and Parr (1994) in their research on predictors of career satisfaction among mental health professionals. Given the fact that this instrument appears to be the main choice to measure job satisfaction among psychologists, the present study used the MSQ Short-Form.

The Theory of Work Adjustment is appropriate for this study because the issues psychologists face with the present climate of managed care are likely to have had an effect on their Intrinsic Satisfaction as well as their Extrinsic Satisfaction. As psychologists encountered difficulties in their attempt to provide adequate care to their clients, it was likely that they would have become more and more dissatisfied with themselves and with their environment. It is also likely that, as their income diminishes, their Intrinsic and Extrinsic satisfaction would be affected. As psychologists increasingly face more ethical issues and their liability increases, it could be anticipated
that they would feel less satisfaction with themselves and with their work environment, all which are factors that affect the General Satisfaction score.

**Research on Job Satisfaction Among Clinical and Counseling Psychologists**

The investigation of job satisfaction of psychologists has its root in the post-World War II era. As World War II ended, the Veterans Administration was faced with the enormous task of rehabilitation of many soldiers who were in need of psychiatric services (Kelly & Goldberg, 1959). In an effort to increase the number and the effectiveness of professional personnel trained to perform such services, the Veterans Administration began to train clinical psychologists. They simultaneously sponsored a research program aimed at improving the process used to select effective clinical psychologists. To that end, a major study by Kelly and Fiske (1951/1969) was launched to determine the factors that would predict successful performance in clinical psychology. Approximately 10 years after this initial investigation, a follow-up study was conducted on the psychologists who participated in the original study. Kelly and Goldberg (1959) found that only one half of the total sample of 245 psychologists reported that they would again choose to pursue a degree in clinical psychology if they had their lives to live over again. The sample included students in a master's program in psychology, a Ph.D. program in psychology, and medical students.
These psychologists were again surveyed two decades later by Kelly et al. (1978). The study found that 49% of the same psychologists would again choose their careers if given the opportunity. The study also found that diagnosticians (88%) and teachers (77%) were the most satisfied, and therapists (53%) and researchers (47%) were the least satisfied with their chosen professions. This investigation also found that within this group of psychologists, who were now near retirement age, job satisfaction was not significantly related to the time spent achieving the Ph.D. or to scholarly productivity. This study suggested that satisfaction may be more related to employment in a Veterans Administration installation and/or employment in other government agencies because 78% of these individuals reported that they would reenter psychology if they were to live their lives over again. Kelly et al. (1978) found that psychologists who were in universities, private practice, or other types of hospital clinics exhibited a lower level of satisfaction than what was reported by Kelly and Goldberg (1959).

In their study of career satisfaction among clinical psychologists, Garfield and Kurtz (1975) found that over 59% of their sample of 855 indicated that they were "very satisfied" with clinical psychology as a career, and slightly over 30% were "quite satisfied." Thus, the number of clinical psychologists who selected the two most positive choices represented almost 90% of the total sample. These results were substantially more positive than what was reported by Kelly and Goldberg (1959) over 15 years earlier.
However, Kelly and Goldberg’s study did not include the question, “If I had my life to live over again (knowing what I know now), I would try to end up in __________.” Kelly and Goldberg (1959) provided five choices: “Clinical Psychology, Some Other Field of Psychology, Medicine, Psychiatry, Law or business, and Other.” For the sake of comparison with the earlier study, Garfield and Kurtz (1975) also included the same question in their study. They found that 71% of their sample would again choose clinical psychology as their life’s career, whereas slightly fewer than 29% would choose some other profession. Garfield and Kurtz (1975) suggested that the items used by Kelly and Goldberg probably led to a greater estimate of dissatisfaction than a more straightforward question related to the individual’s satisfaction with their career. They argued that the opportunity to live one’s life over again may present too many pleasing possibilities in fantasy for some individuals to pass over.

In a study of perceived congruence of attitude and job satisfaction in a mental health setting, Phillips and Hays (1978) found that congruence of attitude between worker and supervisor was positively related to satisfaction with supervisor and agency policy. The subjects with the highest satisfaction with their supervisors and with agency policy were the individuals with the lightest workload and the least education. This study included psychiatrists, Ph.D.s in psychology, M.A.s in psychology, social workers, and mental health workers with Bachelor’s degrees, and a few workers with less than Bachelor’s
degrees. Of these, psychiatrists exhibited the lowest level of satisfaction and the Ph.D.s in the sample scored just under the satisfied level. Those who had less than a Bachelor’s degree, and those with light workloads, reported the highest levels of satisfaction with the working conditions. The survey also found that satisfaction levels with agency policies and practices received the lowest scores. Those least satisfied with agency policy and practice were the Ph.D.s.

A study on gender and job satisfaction of women psychologists in medical schools found a moderate increase in their status since 1964 (Nathan, Rouce, & Lubin, 1979). However, the increase was reported to be disproportionate to the number of female doctoral-level psychologists in the labor force recommended by the American Psychological Association’s Task Force on the Status of Women in Psychology (1973). Although there appeared to be no difference in the rates of promotion between men and women, the findings in this study suggested that male psychologists had preferential status when compared with female psychologists. For instance, the study found that female psychologists earned significantly less than did male psychologists in medical schools and that they expected to earn less than their male colleagues in the future. Some subtle forms of discrimination experienced by the same women included reports that women spent more of their time doing the less preferred job of psychodiagnosis; and, they were not consulted as frequently on an informal basis, suggesting that their opinions
were not esteemed as highly as that of their male counterparts. The study also found that women in medical school settings did not indicate that they were less satisfied or felt less autonomous than men in the same environment. This raises the possibility that women psychologists may be satisfied with a lower job status than their male counterparts.

A similar study on gender differences by Nathan, Lubing, and Matarazzo (1981) found that psychologists who worked in medical schools were well aware of the professional advantages of the settings. They expected and hoped for greater salaries in such settings where they experienced freedom of choice in professional pursuits and where they found themselves increasingly satisfied. Psychologists in medical schools maintained vocational interests that were found to be largely independent of their current salaries. In essence, salary expectations versus present salaries and the freedom to teach, do research, and provide clinical services of one’s choice were significantly related to increases in personal satisfactions.

In a study of 210 doctoral-level psychotherapists in independent practice (90% PhDs; 1% PsyDs) who were members of APA Division 29, Norcross and Prochaska (1983) found that 9 out of 10 therapists reported being “quite” or “very” satisfied with their present career. However, when they were asked to select a fantasy career if they could live their lives over again, only 69.4% reported that they would choose psychotherapy as their career. Interestingly, many psychotherapists reported that psychiatry was
their career of choice, mostly because of the associated increases in power, status, and income. Additionally, these authors reported that these independent practitioners were significantly older and experienced, worked fewer hours, and that a major focus of their practice was marital therapy.

After concluding that much of the research had been done with older and experienced practitioners, Walfish et al. (1985) decided to examine career satisfaction among a sample of recent graduates of clinical psychology programs at both the master’s and doctoral levels. The researchers found that 88% of the masters and 85% of the doctoral clinical psychologists would again choose psychology as their career. The researchers hypothesized that these results occurred because therapists were fresh out of graduate school and thereby happy and enthusiastic about their new careers. The researchers, however, pointed out that a limitation of the study was that the participants were predominantly females. They argued that the results may not be representative of all new clinical psychologists as the predominant number of new psychology doctorates were males. This limitation may also be a valid concern given the fact that women psychologists appear to be satisfied with lower job status (Nathan et al., 1979).

Eight years later Walfish et al. (1991) followed up these same participants and queried them on satisfaction with their training and career. These investigators found that the level of satisfaction was remarkably similar
to that found in the initial study; after 8 years, 89.4% of the respondents indicated that they would still choose psychology as a career.

Watkins et al. (1986) examined counseling psychologists and found that approximately 4 out of 5 individuals were satisfied with their graduate schools and internship training. They also found that 77% of the sample (n = 532) were "quite" or "very satisfied" with counseling psychology as a career. Only 13% expressed some degree of dissatisfaction with their careers in counseling psychology; yet, when these dissatisfied individuals were asked what career they would like to enter if life could be lived over, 47.8% (n = 32) stated that they would choose counseling psychology again.

In a study of psychologists who left counseling centers (May, Corazzini, & Robbins, 1990), it was found that most counseling center psychologists began to leave about 5 years after entry, and that most eventually left counseling centers. The study also found that 48% of those who went into private practice gave money or status as a reason. Income was found to be a significant variable in the retention of psychologists in counseling centers. The researchers also noted that 21% of the subjects cited conflict and stress as a reason for leaving. Of these individuals, the most frequent conflicts and stressors included conflict with their boss, ethical differences, powerlessness to affect change, lack of professionalism, and political infighting. Approximately 26% of all therapists reported leaving for autonomy and growth reasons.
In a study of job satisfaction among police psychologists (Bergen, Aceto, & Chadziewicz, 1992), it was found that most psychologists were extremely satisfied with their jobs. The study also found that more of their professional time was spent doing counseling, and screening and selecting, than doing training and organizational development; additionally, counseling was done mostly in-house, and largely by female police psychologists.

When the members of the Association for Counselor Education and Supervision were asked to rate on a questionnaire their overall level of career satisfaction, 89.2% of the respondents rated their career in the satisfied range. When asked questions about their stress level, more than half of the respondents rated their career stress as no more than moderate. When the same individuals were asked “If you had it to do all over again, would you choose counseling as a career?,” 88.6% replied yes (Parr, Bradley, Lan, & Gould, 1996).

One of the most recent comprehensive studies of career satisfaction was conducted by Baumwart and Parr (1994) on 933 mental health professionals. These authors found that there were few differences between master’s-level counselors and clinical psychologists in terms of their job satisfaction. The study also found that pastoral counselors appeared to have a higher proportion of satisfied practitioners. Additionally, job satisfaction was found to be a function of employment settings. Specifically, practitioners in private
practice had a significantly higher satisfaction rating than persons employed in hospitals or clinics. Those in church settings, pastoral counseling centers, and teachers also had significantly greater levels of satisfaction than those in clinic settings. The level of satisfaction of those in church settings was lower than, but close to, the level of satisfaction of private practitioners. The lowest general satisfaction was reported among those who were employed in clinics. No significant difference was found on the general satisfaction among those in church, pastoral counseling, private practice, or teaching settings.

Baumwart and Parr’s findings corroborated earlier findings by Raquepaw and Miller (1989). In their research, Raquapaw and Miller found that therapists who worked for agencies had more symptoms of burnout than did colleagues who worked in private practice. These findings were directly related to their satisfaction with the size of their caseload. The respondents who indicated that their ideal case-load would be smaller were more burned out than those who were satisfied with their caseload. The study also found that burnout was predictive of the therapist’s reported intentions to leave psychotherapy for a different kind of occupation.

Although these studies provide some clarity on the career satisfaction of psychologists, none of these investigations directly examined the influence of managed care on satisfaction. The advent of managed care has greatly changed the work environment of psychologists and, therefore, has tremendous potential for adversely affecting their job satisfaction. This review
will next summarize the relevant history of managed care and psychologists' response to it.

**Managed Care and Psychologists**

A free enterprise system is based on the principle that the consumer evaluates the products to determine their value against the cost. The old health-care system did not follow the free market principle: insurance companies instead of consumers paid for health care. As a result, nothing prevented the providers from increasing the costs in their pursuit of better services for consumers (Miller, 1994). Managed care became the answer to this dilemma.

In the managed-care system, the insurance company evaluates both the cost and value of services offered by a system, which effectively removes the consumer from the decision-making process. The insurance company decides the value of types of treatments, the value of providers, and how much can be paid for treatment. The consumer's decision involves choosing the management of these services (i.e., the insurance company) by weighing the cost and value of the total management service. In essence, the managed-care approach does not follow principles of a free enterprise system as the insurance company, and not the consumer, weighs the value of services against the cost. The insurance company increases revenues by withholding services and all money spent on the consumer's treatment is a business
expense (Miller, 1994). This system was born out of a way to reduce the costs of patient care.

The costs of mental health and substance abuse services have been outpacing costs in other areas of medical services, both in the public and private sectors (VanLeit, 1996). Medicaid expenditures, which are a significant source of funding for public mental health services, rose from 8.1% in 1987 to 18.4% in 1993 and have surpassed the cost of higher education, which is the largest category of state spending. As a result, most mental health and substance abuse benefits are now managed through utilization review and case management, which is indicative of a managed-care paradigm. However, there is evidence that, in spite of escalating costs, the reimbursement for mental health and substance abuse services continues to lag behind other medical services in terms of available reimbursement.

Surveys of psychologists clearly indicate that significant problems exist with managed mental health care. For instance, a national survey found that 72% of 718 responding psychologists reported that, based on their overall experience, managed care had an effect on the quality of treatment; 90% reported that reviewers interfered with treatment plans that were in the client's best interest; 79% reported that they were dissatisfied with the utilization reviewer's knowledge and expertise; and 49% reported that their clients experienced negative consequences in response to treatment delays or denial (Tucker & Lubin, 1994). A survey by Murphy, Debernardo, and Shoemaker (1998) of members of the American Psychological Association's
Division of Independent Practice (Division 42) found that the private practice of 91% of the 442 respondents had been affected by managed care. They reported that about half of their services to patients were provided under a managed-care plan at the time of the survey. They estimated that 5 years earlier, only about 10% to 15% of their patients were under managed-care plans. The survey also found that 70% of the respondents reported that managed care has had a highly negative impact on their business. Only 10% indicated that there had been no negative impact from managed care.

A survey by the New Jersey Psychological Association (NJPA) on the impact of managed mental health care, on both the practice of psychology and patient well-being, found that managed-care companies impinge on the ability to deliver quality psychological services and also damage the integrity of care by limiting access, restricting the number of sessions, and micromanaging treatment. The study also found that managed care raises legal and ethical issues related to contracts and demands to violate confidentiality. The eight items that were most frequently endorsed were as follows: Being unable to get on the panel, having to go through lengthy pre-certification processes, having to fulfill lengthy screening requirements, being forced to discharge before the patient is clinically ready, having untrained personnel making patient care decisions, dealing with slow response from the company to requests for approval of sessions, having a clinically inadequate number of sessions, and dealing with increased paperwork (Rothbaum, Bernstein, Haller, Phelps, & Kohout, 1998).
The largest survey of psychological practice in the managed-care era confirms impressionistic and anecdotal reports that changes in the health care delivery system have had a definite effect on thousands of members of the APA’s practice community (Phelps, Eisman, & Kohout, 1998). The study found that four out of every five participants reported having a negative impact on their practices. While the effects were felt mostly among those in independent practice and medical settings, the concerns about managed care were widespread regardless of setting or generation. However, over half of the respondents reported spending three-quarters of their time delivering traditional services in an independent-practice setting. In fact, the study found that more new graduates were working in private practice than in any other work setting. The study also found that, because of the aggressive cost-containment policies of managed care, psychologists are facing an increasing number of situations that have the potential for conflict of interest.

A survey in California found that 55% of 173 psychologists reported situations where treatment had been denied because of a rigid criteria that did not consider the needs of specific cases, and 57% reported that their clients' progress had been damaged by managed-care denials (Denkers & Clifford, 1994). In Colorado, 64% of 223 psychologists surveyed reported incidents of managed care discontinuing treatment when it was still indicated, and 59% reported clients being misled by managed-care advertising (Hipp, Atkinson, & Pelc, 1994).
Bachrach (1995) recently conducted a review of the present literature on managed care and drew several conclusions regarding its impact. First, Bachrach reported that managed care has come to dominate the medical marketplace, particularly in major metropolitan areas. Second, managed care is seen as profoundly affecting the course of medical care and related services. Third, the rapid growth of managed care has created confusion and uneasiness on the part of providers and patients alike. Bachrach also indicated that new approaches to service delivery have precipitated a variety of ethical concerns having to do with patients' quality of care and quality of life. She added that the resulting apprehension associated with these changes has generated new service practices, which are directed towards professional survival in an effort to maintain or find a niche.

The ethical issues faced by psychologists include quality of care because of the clinician's loss of control over making treatment decisions and their related issues of caps or limits on sessions (Murphy et al., 1998). Other issues reported include the "decreased flexibility and room for clinical judgment, premature termination, decreased amount of assessment time, restrictions on patients served, increased referrals for medication, increased use of protocols for treatment, and use of treatment outside primary orientation" (p. 49). Psychologists also report that contact with managed-care and utilization review compromises patient confidentiality. Psychologists have little confidence that information disclosed to managed care companies will be kept confidential.
Furthermore, psychologists face liability issues when providing therapy in a managed-care environment. For instance, managed care's focus on providing brief therapy may result in only partial treatment thereby making the psychologist liable for the consequences related to under treatment (Miller, 1996). In fact, partial treatment could be construed as abandoning the client. Brief therapy could also be misleading to the client as he or she may conclude that all effective treatment has been exhausted at the end of brief therapy.

There is also the issue of coding diagnoses, called Current Procedural Terminology (CPT), in order to protect the patient's confidentiality, future employment, or future medical insurance. In fact, psychologists generally believe that their colleagues submit the lowest level of diagnosis that is reimbursable and that psychologists leave off an Axis II diagnosis when the patient has a reimbursable Axis I diagnosis (Murphy et al., 1998).

The therapeutic process is a powerful experience, but this process is also fragile. Research corroborates the fact that with well-trained and experienced therapists, individuals receiving psychotherapy can make great improvements in their personal, emotional, occupational, and interpersonal lives (Smith, Glass, & Miller, 1980). However, when the therapeutic relationship which involves acceptance, confidentiality, and patience is changed, it is likely that the therapeutic process will become a conversation, a class, or a lecture (Miller, 1994).

The therapeutic process is being altered by the new conditions created by managed care in a number of ways (Miller, 1994). For instance, managed-
care companies are increasingly functioning as "gatekeepers," as they are the ones who must authorize treatment prior to the first session. Some companies use their own psychotherapist to provide an initial evaluation of the client to determine if treatment is recommended. The fact that some managed-care companies are understaffed causes them to be overextended, resulting in fewer intakes as patients feel discouraged and do not return. The fact that managed-care companies have a restricted list of participating providers compounds the problem because consumers are not able to go to the therapist of their choice who may have been recommended by someone they know. Managed-care companies also disrupt long-lasting relationships between patients and therapists, preventing the treatment of personality problems and serious psychological disorders.

Managed-care companies are selecting providers who see their patients the fewest number of times—a fact that they believe is indicative of the therapist being highly skilled. However, this may also suggest that therapy is brief because the patient is unsatisfied and leaves treatment prematurely (Miller, 1994).

At the present time, psychology is going through the greatest resocialization process since the explosion of clinical psychology after World War II (Cummings, 1995). The differences between the various schools of psychology are blurring in favor of psychotherapy integration, and psychologists are forming multimodal groups where they can focus on their particular skills. Solo practitioners are rapidly becoming an endangered
psychologists are forming multimodal groups where they can focus on their particular skills. Solo practitioners are rapidly becoming an endangered species. To succeed as a provider, therapists have to change from the dyadic model to the time-effective approaches known as the catalyst model. The supply-demand focus brought about by managed care has shifted health services from practitioner to industrial interests. Health care is in the process of industrializing itself. Those who provide the services are losing control of the production as business interests gain control.

While new studies continue to evaluate the difficulties faced by psychologists in the era of managed care, generally the studies have failed to measure job satisfaction in such an environment with the exception of a study by Stevens (1997). His random invitation to participate in his study to 700 practitioners from the general membership of APA resulted in 155 subjects. In the study, Stevens found that increased involvement with managed care was associated with a decrease in General Satisfaction. He found that the decrease in General Satisfaction was significantly related to the following six predictor variables: reporting family or couples therapy as individual treatment; selecting a treatment approach to conform with third party reimbursement; third party payors' influence over treatment decisions; third party payors impact on the treatment relationship; the availability of case managers; and the licensure status of utilization review personnel. He was also able to identify six demographic variables related to General Satisfaction on the MSQ Short-Form: (1) gender, where males were significantly more satisfied with
their career than females, (2) family income, where higher income was positively correlated with job satisfaction, (3) percentage of case load, where the increased proportion of clients who were white collar was positively correlated with job satisfaction, (4) worktime performing non-reimbursable tasks, where performing non-billable tasks was negatively correlated with job satisfaction, (5) worktime involved in utilization review, where the time spent with utilization review was negatively correlated with General Satisfaction, and (6) work setting, where practitioners in solo independent or group independent practice had the highest levels of General Satisfaction while psychologists employed in community mental health centers and staff HMOs had the lowest.

While my study used the Minnesota Satisfaction Questionnaire as did the study by Stevens (1997) to measure the job satisfaction of psychologists, I used a different set of questions than did Stevens to investigate psychologist's perceptions of managed care. In addition, my population sample was restricted to the states of California, Oregon, and Washington. The purpose of my study was not to find new facts about the challenges of working with managed care; but rather, to measure how psychologists feel about their work in a managed care environment.
CHAPTER III

METHOD

Introduction

The methodology of this research project included the following sections: (1) Purpose of the Study; (2) Research Questions; (3) Design; (4) Sample Group; (5) Instrumentation; (6) Testing Procedures; (7) Null Hypotheses; (8) Treatment and Analysis of Data.

Purpose of Study

The primary purpose of this study was to evaluate the level of satisfaction among clinical and counseling psychologists. This study evaluated job satisfaction in terms of the Adjustment to Work theory. The secondary purpose of the study was to report any differences among psychologists' job satisfaction in terms of hours of work per week, income, percentage of private practice generated by third party-reimbursement, number of colleague providers in their private practice, the number of years of experience in clinical work the psychologist has, the number of memberships that psychologists have on HMO and PPO panels, and the number of years of involvement in clinical practice. The study also investigated if the
psychologist's job satisfaction varied as it relates to the perceived negative impact of managed care on quality of care, treatment, assessment and diagnosis, and confidentiality.

The rationale for this study was based on the fact that few studies exist in the area of job satisfaction among mental health professionals, and the studies that exist have provided mixed results. In addition, managed care has become a powerful influence among mental health professionals (Bachrach, 1995; Denkers & Clifford, 1994; Murphy et al., 1998; Tucker & Lubin, 1994). The influence of managed care has intensified, and it is appropriate at this time to evaluate the present level of job satisfaction among psychologists as they face innumerable changes in their fields.

**Null Hypotheses**

These research questions were answered through the testing of the following 22 hypotheses, stated in the null form.

**Hypothesis 1**: There is no relationship between the number of hours worked per week and the job satisfaction of psychologists.

**Hypothesis 2**: There is no relationship between annual income and the job satisfaction of psychologists.

**Hypothesis 3**: There is no relationship between private-practice income generated by third-party reimbursement and the job satisfaction of psychologists.

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Hypothesis 4: There is no relationship between the number of colleague providers in private practice and the job satisfaction of psychologists.

Hypothesis 5: There is no relationship between the number of memberships on HMO and/or PPO panels and the job satisfaction of psychologists.

Hypothesis 6: There is no relationship between the number of years of clinical experience in private practice and the job satisfaction of psychologists.

Hypothesis 7: There is no relationship between the extent to which managed care is perceived to have positively impacted the quality of care provided and the job satisfaction of psychologists.

Hypothesis 8: There is no relationship between the extent to which managed care is perceived to have negatively impacted the quality of care provided and the job satisfaction of psychologists.

Hypothesis 9: There is no relationship between the extent to which managed care is perceived to have negatively impacted quality of care by giving managed-care companies control over aspects of patient care/treatment that clinicians should have control over and the job satisfaction of psychologists.

Hypothesis 10: There is no relationship between the extent to which managed care is perceived to have negatively impacted quality of care by
interfering with service delivery by capping the number of sessions that a patient can receive and the job satisfaction of psychologists.

**Hypothesis 11:** There is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to inappropriate treatment and/or insufficient treatment and the job satisfaction of psychologists.

**Hypothesis 12:** There is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by affecting the type of interventions used and the job satisfaction of psychologists.

**Hypothesis 13:** There is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to an increased use of nondoctoral providers for service delivery and the job satisfaction of psychologists.

**Hypothesis 14:** There is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to a rejection of patients with certain diagnoses and the job satisfaction of psychologists.

**Hypothesis 15:** There is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to medication being used in lieu of psychotherapy and the job satisfaction of psychologists.
Hypothesis 16: There is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s DSM diagnosis to help the patient get reimbursed and the job satisfaction of psychologists.

Hypothesis 17: There is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s DSM diagnosis to help the psychologist get reimbursed and the job satisfaction of psychologists.

Hypothesis 18: There is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to submit the lowest level diagnosis that is reimbursable and the job satisfaction of psychologists.

Hypothesis 19: There is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by leading to inappropriate or inadequate assessment and the job satisfaction of psychologists.

Hypothesis 20: There is no relationship between the extent to which managed care is perceived to have negatively impacted confidentiality by failing to keep client information confidential and the job satisfaction of psychologists.
Hypothesis 21: There is no relationship between the extent to which managed care is perceived to have negatively impacted confidentiality by using utilization reviews that compromise patient confidentiality and the job satisfaction of psychologists.

Hypothesis 22: There is no relationship between a linear combination of the variables related to health care and job satisfaction.

The names given to the independent variables are listed in Appendix D.

Sample

Participants in this study were a random sample of 1,000 licensed psychologists located in California, Oregon, and Washington selected from the National Register of Health Service Providers in Psychology. The list of psychologists was acquired from the National Register of Health Service Providers in Psychology. Three hundred seventeen surveys were received for a return rate of 31.7%.

Design

This study used a mail-out survey research methodology. Additionally, to answer the research questions both comparative and descriptive designs were used. Most of the hypotheses in this investigation relied upon a correlational design in which job satisfaction was examined for its association with the other survey questions. The dependent variable in
this comparison was job satisfaction, as defined by the Short-Form of the Minnesota Satisfaction Questionnaire, described below.

Because this design is correlational in nature, all of the research questions in this study were examined by the use of correlations. Although this type of design is useful in assessing the degree of association that exists among the selected variables, it does have limitations that must be acknowledged, which include: (a) the correlation design does not necessarily identify cause-and-effect relationships, and (b) it is less rigorous than the experimental approach because it exercises less control over the independent variables (Issac & Michael, 1984).

Instrumentation

The survey used in this investigation was comprised of the Short-Form Minnesota Satisfaction Questionnaire and additional items (Appendix A).

Short-Form Minnesota Satisfaction Questionnaire

This investigation used the Short-Form Minnesota Satisfaction Questionnaire (Short-Form MSQ; Weiss et al., 1967) as its self-report measure of job satisfaction. This 20-item instrument is one of the most widely used measures of job satisfaction and has several qualities that make it desirable for research. Specifically, the Short-Form MSQ can be completed in less than 5-10 minutes, is easy to administer and score, and has clear directions. Respondents are asked to indicate on a 5-point Likert-type scale (i.e., 1 = “very
dissatisfied” to 5 = “very satisfied”) how satisfied they are with different aspects of their job.

Numerous factor analytic studies have supported a three-factor simple structure of the MSQ (Weiss et al., 1967). These three factors represent the three subscales of the MSQ: (1) General Satisfaction scale, which provides an index of respondents’ overall level of job satisfaction; (2) Intrinsic Satisfaction, which provides a measure of individuals’ internal satisfaction with the work environment; and (3) Extrinsic Satisfaction, which measures satisfactoriness, which is an external appraisal of the individual’s fulfillment of the requirements of the work environment (Lofquist & Dawis, 1969; Weiss et al., 1967). The raw scores for each of these scales are determined by summing the weights for the responses chosen for the items in each scale. Total scores are determined by summing scale values for all 20 items. Higher scores are indicative of greater job satisfaction. The raw scores for each Short-Form MSQ scale can be converted to percentile scores by using the test manual norms for the appropriate occupation. However, because no norms have been developed for psychologists or counselors, the authors of the test recommend using norms of careers that are similar or using the general Employed Non-Disabled norms. They also recommend using raw scores for all scales by ranking them. These rankings indicate areas of relatively greater, or lesser, satisfaction. For purposes of this study, the summative raw scores were used.
Additionally, each of the items on the Short-Form MSQ is representative of subscales resulting in the measuring of 20 different unique dimensions. These single-item subscales were the result of how the Short-Form MSQ was created. The Short-Form MSQ was developed by choosing 20 representative items, one from each of the 20 Long-Form MSQ subscales, from the Long-Form Minnesota Satisfaction Questionnaire, which consists of 100 items. The items chosen for the Short-Form MSQ were those that correlated the highest with their respective scales (Weiss et al., 1967). These 20 scales and their corresponding items are as follows:

1. **Ability utilization**: The chance to do something that makes use of abilities.

2. **Achievement**: The feeling of accomplishment I get from the job.

3. **Activity**: Being able to keep busy all the time.

4. **Advancement**: The chances for advancement on this job.

5. **Authority**: The chance to tell other people what to do.

6. **Company policies and practices**: The way company policies are put into practice.

7. **Compensation**: My pay and the amount of work I do.

8. **Co-workers**: The way my co-workers get along with each other.

9. **Creativity**: The chance to try my own methods of doing the job.

10. **Independence**: The chance to work alone on the job.
11. Moral values: Being able to do things that do not go against my conscience.

12. Recognition: The praise I get for doing a good job.


15. Social service: The chance to do things for other people.

16. Social status: The chance to be "somebody" in the community.

17. Supervision—human relations: The way my boss handles his men.


19. Variety: The chance to do different things from time to time.

20. Working conditions: The working conditions.

The psychometric properties of the Short-Form MSQ are favorable. Hoyt internal consistency reliability coefficients across various studies have indicated that, for the Intrinsic Satisfaction Scale, coefficients ranged between .84 to .91. For the Extrinsic Satisfaction scale, coefficients ranged from .77 to .82. On the General Satisfaction scale, the coefficients ranged from .87 to .92. Median reliability coefficients were .86 for Intrinsic Satisfaction, .80 for Extrinsic Satisfaction, and .90 for General Satisfaction (Weiss et al., 1967).

Although less data are available regarding the stability of this measure, the reports thus far have been favorable. Test-retest coefficients for the General
Satisfaction scale have been reported as .89 over a 1-week time period and .70 over a 1-year time span (Weiss et al., 1967).

The validity of the MSQ as a measure of general job satisfaction is evidenced by other construct validation studies that have been based on the Theory of Work Adjustment. The studies have indicated that the MSQ measures satisfaction in accordance with expectations from the Theory of Work Adjustment. Because the short-form MSQ is based on a subset of the long-form items, the validity for the short-form may be partly inferred from the validity from the long-form MSQ (Weiss et al., 1967).

As reported above, numerous studies have supported the factorial validity of the MSQ in that the simple structure consistently represents the General, Intrinsic, and Extrinsic satisfaction scale. Evidence for the discriminant validity of this measure has also been supported in that the MSQ has demonstrated statistically significant differences between occupational groups that would be expected to differ in job satisfaction (Weiss et al., 1967).

Specifically, these results indicate that on the Intrinsic, Extrinsic, and General satisfaction scales, electronic assemblers had the lowest scores and salesmen the highest. The divergent validity of the MSQ is supported by low correlations between the MSQ scales and satisfactoriness, which are theoretically different constructs (Weiss et al., 1967).
**Additional Questions**

For the purpose of this study, the survey contains another 24 items, in addition to the Short-Form MSQ, for a grand total of 44 questions. These additional items are listed in Appendix C.

**Procedures**

The licensed psychologists were randomly selected from the database of psychologists who are members of the National Register of Health Service Providers in Psychology. Within each envelope was (1) a cover letter that introduced the study and encouraged participation (see Appendix B); (2) the survey, which contained both the Short-Form of the MSQ and the additional items; and (3) a self-addressed reply envelope. In the cover letter, participants were asked to fill out the questionnaire and to mail it back within a 2-week period. A follow-up letter was planned, but was not necessary because there was a sufficient number of subjects.

**Data Analysis**

The data collected in this investigation was analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows. Before analyses began, the database was inspected for data-entry errors; any such errors were corrected.

Once the integrity of the data was established, descriptive statistics were calculated on all variables. Means, medians, and standard deviations
were produced for continuous variables. Frequencies and percentages were produced for categorical variables, such as gender. These descriptive statistics were displayed in both tabular and chart form, whichever was most appropriate to summarize the particular data being represented.

Before testing the hypotheses, a correlation matrix was produced between all of the variables of interest to determine their degree of association with each other. These associations were inspected and discussed appropriately. Because there were a large number of correlations produced, each coefficient was evaluated at a more conservative alpha of .01 to reduce the effects of cumulative type I error. The overall squared multiple correlation, $R^2$-change, and the beta coefficients for each variable were examined at an alpha of .01. Hypothesis 22 was tested by multiple regression.
CHAPTER IV

RESULTS

Description of the Sample

Age of participants in the sample ranged from 32 to 67, with the mean age being 48.38 years old \((SD = 9.03)\). Demographic characteristics of the sample that were on a nominal or ordinal scale of measurement are summarized in Table 1. The majority of psychologists in the sample resided in California (75.0%), 17.5% were from Washington State, and 7.5% were from Oregon. The sample was fairly equally represented on gender with 51.9% of the sample being male. Approximately 24.0% of the sample reported working more than 40 hours per week in their practice, with 54.9% reporting working between 20 and 40 hours per week. The majority of psychologists reported earning over $60,000 per year (57.7%), over 83.3% had 10 or more years of clinical experience, and 63.7% were not in practice with any other providers. Approximately 40.4% of participants reported receiving less than half of their income from third party payers and 22.4% were not members of any managed care panels.
Table 1

Demographic Characteristics of the Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>231</td>
<td>75.0</td>
</tr>
<tr>
<td>Washington</td>
<td>54</td>
<td>17.5</td>
</tr>
<tr>
<td>Oregon</td>
<td>23</td>
<td>7.5</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>163</td>
<td>51.9</td>
</tr>
<tr>
<td>Female</td>
<td>151</td>
<td>48.1</td>
</tr>
<tr>
<td>Weekly Hours in Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10 hours</td>
<td>33</td>
<td>10.4</td>
</tr>
<tr>
<td>10-19 hours</td>
<td>34</td>
<td>10.7</td>
</tr>
<tr>
<td>20-29 hours</td>
<td>70</td>
<td>22.1</td>
</tr>
<tr>
<td>30-40 hours</td>
<td>104</td>
<td>32.8</td>
</tr>
<tr>
<td>40+ hours</td>
<td>76</td>
<td>24.0</td>
</tr>
<tr>
<td>Annual Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; $30,000 per year</td>
<td>68</td>
<td>21.5</td>
</tr>
<tr>
<td>$30,000-$60,000 per year</td>
<td>66</td>
<td>20.8</td>
</tr>
<tr>
<td>$60,000+ per year</td>
<td>183</td>
<td>57.7</td>
</tr>
<tr>
<td>Years as a Clinician</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 years</td>
<td>29</td>
<td>9.1</td>
</tr>
<tr>
<td>5-9 years</td>
<td>24</td>
<td>7.6</td>
</tr>
<tr>
<td>10-14 years</td>
<td>49</td>
<td>15.5</td>
</tr>
<tr>
<td>15-19 years</td>
<td>86</td>
<td>27.1</td>
</tr>
<tr>
<td>20+ years</td>
<td>129</td>
<td>40.7</td>
</tr>
<tr>
<td>Number of Colleague Providers in Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solo Practitioner</td>
<td>202</td>
<td>63.7</td>
</tr>
<tr>
<td>2-4 Colleagues</td>
<td>51</td>
<td>16.1</td>
</tr>
<tr>
<td>5-9 Colleagues</td>
<td>37</td>
<td>11.7</td>
</tr>
<tr>
<td>10+ Colleagues</td>
<td>27</td>
<td>8.5</td>
</tr>
<tr>
<td>Percentage Income From Third Party Payers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>128</td>
<td>40.4</td>
</tr>
<tr>
<td>50%-74%</td>
<td>64</td>
<td>20.2</td>
</tr>
<tr>
<td>75%-89%</td>
<td>65</td>
<td>20.5</td>
</tr>
<tr>
<td>90%+</td>
<td>60</td>
<td>18.9</td>
</tr>
<tr>
<td>Number of Panel Memberships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>71</td>
<td>22.4</td>
</tr>
<tr>
<td>1-4 Panels</td>
<td>96</td>
<td>30.3</td>
</tr>
<tr>
<td>5-9 Panels</td>
<td>81</td>
<td>25.6</td>
</tr>
<tr>
<td>10+ Panels</td>
<td>69</td>
<td>21.8</td>
</tr>
</tbody>
</table>

Note. Some N's < 317 because of missing data.
Preliminary Analyses

In the first preliminary analysis, all research variables were converted to standardized z scores to examine for any outliers on the criterion or predictor variables. In accordance with the recommendations of Tabachnick and Fidell (1996), cases that exceeded the absolute value of 3.00 were classified as outliers. Using this criterion, five univariate outliers on MSQ total job satisfaction scores were obtained (Zs = -3.12, -3.26, -3.55, -3.55, and -4.69), all of which were from psychologists who were low on job satisfaction. No other univariate outliers were found.

Because hypotheses 1 through 21 involved bivariate correlations between MSQ scores and the 21 variables of interest, Cook’s distance scores were calculated for each of these covariations to assess for influential bivariate outliers. Cook’s distance scores were saved into the data matrix and examined for each case. According to Tabachnik and Fidell (1996), a large Cook’s D value indicates that excluding the case from the analysis would change the covariation between the variables substantially. As recommended by Fox (1991), the cut-off score for detecting influential cases was defined as values of D being greater than 4/(n - k - 1), where n was the number of cases and k was the number of predictor variables. Using this formula, the cut-off value for this study was .01 (4/[317 - 1 - 1]).

For the 21 variable pairs, D values ranged from .00 to .45. Although most cases had Cook’s D values of .00 across all variable pairs, five cases
exceeded the .01 cut-off value. These cases were the same five cases that were identified as univariate outliers on the MSQ. For the case whose z score was -3.12, D values ranged from .02 to .45; for the case with a z score of -3.26, D values ranged from .02 to .05. Cook’s D scores ranged from .06 to .18 for the first case that had a z score of -3.55 and between .03 and .17 for the second case with an identical z score. Cook’s D scores for the most extreme univariate outlier (i.e., z = -4.69) ranged from .04 to .29 across the 21 variable pairs.

Because hypothesis 22 predicted that a linear combination of the 21 predictors would be associated with the MSQ scores, Cook’s D scores were also calculated for the linear combination of these variables. These influence scores were .05, .01, .05, .05, and .12 for the five univariate outliers, respectively; values for all other cases were .00.

Before deciding whether to eliminate these cases, the hypotheses were tested both with and without these five influential cases. When the influential cases were included, six bivariate correlations (i.e., MSQ correlated with positive impact on treatment, negative impact on treatment, control over treatment, capped sessions, types of interventions, and utilization review that compromises confidentiality) were not statistically significant, but were significant when these outlying cases were excluded from the analyses. Thus, including the outliers within the data analyses appeared to contribute to Type II error, which is the acceptance of a false null hypothesis (i.e., thinking there is no association when there is). These findings, in combination with the
influence statistics, indicated that these five cases were influential outliers that may not have adequately represented the population of interest. For this reason, these five cases were eliminated from the data set resulting in a sample size of \( N = 312 \) for evaluation of the hypotheses. Analyses hereafter include only these non-outlying cases.

Bivariate scatterplots were examined between MSQ scores and each of the 21 research variables. These scatterplots revealed a linear association between job satisfaction and all 21 variables. The five aforementioned cases that were influential outliers were visible as bivariate outliers on these plots.

Descriptive statistics were next calculated for each of the predictor and criterion variables (see Table 2). An acceptable amount of variability was present for each of the variables indicating that correlation coefficients would not be deflated due to a restriction of range in the scores. For most measures, the means were not close to the extremes.

There is some evidence that psychologists view managed care negatively. Most psychologists responded negatively to the following questions: To what extent do you feel managed care has positively impacted the quality of care that you provide? (mean = 1.90 on a 9-point Likert scale where 1 = No positive impact and 9 = Highly positively impacted) To what extent do you feel managed care has negatively impacted the quality of care you provided? (Mean = 6.64 where 1 = No negative impact and 9 = Highly negatively impacted) To what extent do you feel managed care companies
have control over aspects of patient care/treatment that you, as the clinician, should have control over? (Mean = 6.77 where 1 = Not at all and 9 = A great deal) To what extent have you found managed care caps on the number of sessions you can provide patients interfering with services you deliver? (Mean = 6.72 where 1 = Not at all and 9 = A great deal) To what extent do you feel managed care has led to inappropriate and/or insufficient treatment? (Mean = 6.81 where 1 = Not at all and 9 = A great deal) To what extent do you feel managed care has led to medication being used in lieu of psychotherapy? (Mean = 6.75 where 1 = Not at all and 9 = A great deal)

The next analyses were conducted to examine the extent to which demographic characteristics shared variance with job satisfaction. The Pearson correlation between MSQ scores and age indicated a small, inverse association that did not reach statistical significance, r(310) = -.06, p = .276. An independent samples t test on MSQ scores between males (M = 66.11, SD = 12.77) and females (M = 66.76, SD = 12.08) indicated no statistically significant gender difference on job satisfaction, t(310) = -.46, p = .645. Lastly, a one-way analysis of variance revealed that MSQ scores did not differ significantly between the three states, F(2, 301) = .42, p = .655 (Washington: M = 66.00, SD = 12.16; Oregon: M = 64.52, SD = 12.95; California: M = 66.85, SD = 12.39).

According to Tabachnik and Fidell (1996), two criteria must be met to use variables as covariates. First, covariates must have high reliability in that they are measured without error. Second, they must have statistically
Table 2
Descriptive Statistics on Research Variables

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSQ Job Satisfaction \textsuperscript{a}</td>
<td>66.52</td>
<td>12.48</td>
<td>28</td>
<td>95</td>
</tr>
<tr>
<td>Number of hours worked per week \textsuperscript{b}</td>
<td>2.44</td>
<td>1.25</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Annual income \textsuperscript{c}</td>
<td>1.40</td>
<td>.82</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Percentage of income generated from 3rd party payers \textsuperscript{d}</td>
<td>2.50</td>
<td>1.32</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Number of colleague providers in practice \textsuperscript{e}</td>
<td>2.98</td>
<td>1.35</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Number of panel memberships \textsuperscript{f}</td>
<td>2.36</td>
<td>1.13</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Years as a clinician \textsuperscript{g}</td>
<td>1.96</td>
<td>1.21</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Managed care has a positive impact on the quality of care \textsuperscript{h}</td>
<td>1.90</td>
<td>1.58</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on the quality of care \textsuperscript{h}</td>
<td>6.64</td>
<td>2.55</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on the quality of care by taking control of patient care \textsuperscript{h}</td>
<td>6.77</td>
<td>2.64</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on the quality of care by capping the number of sessions \textsuperscript{h}</td>
<td>6.72</td>
<td>2.79</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on treatment by leading to Inappropriate / insufficient treatment \textsuperscript{h}</td>
<td>6.81</td>
<td>2.49</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on treatment by affecting the types of interventions used \textsuperscript{h}</td>
<td>5.43</td>
<td>2.79</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on treatment by using nondoctoral providers \textsuperscript{h}</td>
<td>6.40</td>
<td>3.07</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on treatment by rejecting patients with certain diagnoses \textsuperscript{h}</td>
<td>5.73</td>
<td>2.93</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on treatment by using medications in lieu of psychotherapy \textsuperscript{h}</td>
<td>6.75</td>
<td>2.44</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on assessment and diagnosis by encouraging alternations to diagnoses to help patients get reimbursed \textsuperscript{h}</td>
<td>5.69</td>
<td>2.70</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on assessment and diagnosis by encouraging alternations to diagnoses to help psychologists get reimbursed \textsuperscript{h}</td>
<td>5.45</td>
<td>2.85</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on assessment and diagnosis by encouraging submission of lowest level of diagnosis to help psychologists get reimbursed \textsuperscript{h}</td>
<td>4.98</td>
<td>2.86</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on assessment and diagnosis by leading to inadequate assessment \textsuperscript{h}</td>
<td>5.74</td>
<td>2.75</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on confidentiality by failing to keep client information confidential \textsuperscript{h}</td>
<td>3.56</td>
<td>2.37</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Managed care has a negative impact on confidentiality by using utilization reviews that compromise confidentiality \textsuperscript{h}</td>
<td>6.17</td>
<td>2.96</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. MSQ = Minnesota Satisfaction Questionnaire. \textsuperscript{a} Scores range from 20 to 100. \textsuperscript{b} Scores range from 1 (< 10 hrs/week) to 5 (> 40 hrs/week). \textsuperscript{c} Scores range from 1 (< $30,000) to 3 (> $60,000). \textsuperscript{d} Scores range from 1 (< 50%) to 4 (90% +). \textsuperscript{e} Scores range from 1 (solo practice) to 4 (10 + providers). \textsuperscript{f} Scores range from 1 (not on panels) to 4 (10 + panels). \textsuperscript{g} Scores range from 1 (< 5 years) to 5 (> 20 years). \textsuperscript{h} Scores range from 1 (not at all) to 9 (a great deal).
significant and moderate associations with the dependent variable. The goal of removing the influence of a covariate from the dependent variable is to increase the sensitivity of the statistical test by decreasing the error term through removing unwanted variability. However, if the covariate does not share much variance with the dependent variable, the error term will actually increase, thereby decreasing (instead of increasing) the sensitivity of the test.

Although the demographic variables were likely measured without error, their lack of association with job satisfaction indicated that none of these variables were appropriate to use as covariates in the testing of the hypotheses.

**Testing of the Hypotheses**

This investigation proposed 22 hypotheses, each of which predicted a significant association of job satisfaction with various psychologist characteristics and attitudes. Consistent with statistical hypothesis testing procedures, each hypothesis was formulated as a null hypothesis that stated there would be no association between the variables of interest. Because the assessment of the hypotheses resulted in conducting numerous statistical analyses, the chance for cumulative Type I error was present (i.e., increasing the probability of the false rejection of a true null hypothesis). To control for this increase in Type I error, all statistical procedures that were used to test the hypotheses were evaluated at a more conservative level of significance. All
zero-order correlations and beta coefficients obtained from regression analyses were evaluated at a two-tailed alpha of .01. The only exception to this was the evaluation of predictors for the backward and forward stepwise regression analyses. Although .01 was the desirable alpha level in these analyses, the theoretical importance of variables was also considered when considering them for inclusion in a final predictive model.

Two statistical procedures were used to examine hypotheses 1 to 21. First, Pearson product-moment correlation coefficients were produced between job satisfaction scores and each variable of interest. These zero-order correlations allowed for the assessment of the relationship between job satisfaction and each variable without reference to the variable's covariation with the other variables. In addition, Spearman's rho rank order correlations were produced for hypotheses 1 to 6 because the items in these hypotheses could be argued to be rank-order data in that all extreme numbers were assigned the highest value of the variable (e.g., annual income: more than $60,000 = 3). All nonparametric correlations approximated the parametric Pearson correlations, and the pattern of significance between the parametric and nonparametric statistics was identical. For this reason, the nonparametric correlations are not reported in the text.

Second, the 21 variables were entered as predictors in a simultaneous linear regression analysis that used MSQ scores as the outcome. In this analysis, inspection of the part correlations and beta coefficients revealed the
unique contribution of each variable, after controlling for the other 20 variables.

Results of three regression analyses were used to test Null Hypothesis 22, which predicted that the linear combination of variables would predict job satisfaction. In addition to the simultaneous regression mentioned above, a stepwise linear regression analysis using a backward deletion procedure was employed, as was a stepwise linear regression analysis that employed a forward selection procedure. The statistical criterion for selecting the model was .01. However, for the forward stepwise regression procedure, the probability for variable entry was set to .05, and for the backward regression the probability for variable removal was set to .001. These probability values were chosen in order to be more liberal in the consideration of a higher number of prediction models. Results of all four methods of data analysis can be seen in Table 3 for comparison.

In this table, the results presented for the forward and backward stepwise regression analyses represent a summary of the final models obtained using both empirical and theoretical considerations. Thus, these results are not just based on statistical findings; they incorporate professional judgment in producing the best predictive model. The selection of these final regression models is described in detail when discussing the results for Null Hypothesis 22. Results from the forward and backward stepwise regression
analyses are also presented in the description of Null Hypotheses 1 to 21 to provide a comparison of the findings from the different methods.

Null Hypothesis 1

Null Hypothesis 1 stated that there is no relationship between the number of hours worked per week and the job satisfaction of psychologists. Contrary to expectations, there was no significant zero-order relationship between the number of hours psychologists worked per week and their self-reported levels of job satisfaction, $r(310) = .104, \text{ ns}$. Although the coefficient between these variables was positive as anticipated, it was relatively small in magnitude and failed to reach statistical significance. Thus, this null hypothesis was retained when examined with Pearson correlations.

Number of weekly hours approached statistical significance when examined with the simultaneous regression ($p < .10$). It was retained as a statistically significant predictor when analyzing the data using the backward stepwise regression ($p < .05$), and was not retained in the model in the forward regression. Given this overall pattern of nonsignificance, and that the significance in the backward stepwise regression model did not meet the $p < .01$ criterion, this null hypothesis was also accepted using the linear regression procedures.
Null Hypothesis 2

Null Hypothesis 2 stated that there is no relationship between annual income and the job satisfaction of psychologists. This null hypothesis could not be rejected when examining the Pearson coefficient between satisfaction and annual income at the .01 level of significance. However, a significant association did emerge at the .05 level indicating that as income increased, satisfaction also increased, $r(310) = .123, p < .05$. Thus, given that this association was not significant at the predetermined .01 level, this null hypothesis was retained when assessing it with zero-order correlations.

This null hypothesis could be rejected, however, when analyzing the unique influence of income using the simultaneous regression in that this procedure indicated that income was positively associated ($p < .01$) with job satisfaction. Annual income was a significant predictor in the backward regression model ($p < .05$), it did not reach the .01 level; annual income was not entered as a significant predictor in the forward regression. The rejection of this null hypothesis occurred only when using the simultaneous regression method. Thus, this hypothesis had mixed support.

Null Hypothesis 3

Null Hypothesis 3 stated that there is no relationship between private-practice income generated by third-party reimbursement and the job satisfaction of psychologists. The zero-order coefficient between these
variables, however, was zero, indicating a complete independence of these dimensions, $r(310) = .000, \text{ns}$. This finding led to the acceptance of the third null hypothesis when analyzing the zero-order association.

The simultaneous regression supported this conclusion in that income generated by third parties was not significantly predictive of job satisfaction when simultaneously controlling for the other 20 variables in the model and when examined within the forward and backward stepwise regressions. These findings led to the retention of Null Hypothesis 3.

**Null Hypothesis 4**

Null Hypothesis 4 stated that there is no relationship between the number of colleague providers in private practice and the job satisfaction of psychologists. The more colleague providers who were reported to be in private practice with respondents, the higher their self-reported job satisfaction, $r(310) = .188, p < .01$. This coefficient was significant at the .01 level thereby leading to the rejection of this null hypothesis and acceptance of the alternative hypothesis that indicates an increase in job satisfaction as a function of increased number of the colleague providers in the practice.

The rejection of this null hypothesis was also supported by the simultaneous, backward, and forward stepwise regression analyses that all showed number of colleagues as being a statistically significant predictor of job satisfaction ($ps < .01$). Thus, the results of these bivariate and multivariate
analyses provide clear evidence to support the alternative hypothesis that number of colleague providers in private practice with psychologists is positively related with their job satisfaction.

**Null Hypothesis 5**

Null Hypothesis 5 stated that there is no relationship between the number of memberships on HMO and/or PPO panels and the job satisfaction of psychologists. The number of memberships in HMO and/or PPO panels was not significantly related to psychologists' self-reported job satisfaction, $r(310) = .088$, ns, thereby leading to the acceptance of this null hypothesis.

This null hypothesis could also not be rejected with all three multiple regression procedures. The number of panel memberships was not a statistically significant predictor in the simultaneous and backward regressions, and was only statistically significant at the .05 level, not the required .01 level, in the forward regression.

**Null Hypothesis 6**

Null Hypothesis 6 predicted that there is no relationship between the number of years of clinical experience in private practice and the job satisfaction of psychologists. Although this association was positive, it did not significantly differ from zero, $r(310) = .053$, ns, therefore, this hypothesis was not supported.
This null hypothesis was also retained with the simultaneous and stepwise multiple regression procedures, which indicated that the number of panel memberships did not significantly predict job satisfaction.

**Null Hypothesis 7**

Null Hypothesis 7 predicted that there is no relationship between the extent to which managed care is perceived to have positively impacted the quality of care provided and the job satisfaction of psychologists. Although a positive correlation between these variables was significant at the .05 level, $r(310) = .125, p < .05$, the coefficient did not reach the .01 criterion. Therefore, this hypothesis was not supported.

The positive impact of managed care did not reach statistical significance in the simultaneous ($p < .10$), backward, and forward stepwise regressions thereby leading to the retention of the null hypothesis.

**Null Hypothesis 8**

Null Hypothesis 8 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted the quality of care provided and the job satisfaction of psychologists. This null hypothesis was rejected when examining the zero-order association in that the more negative the psychologists' perceptions were, the less job satisfaction they reported, $r(310) = -.146, p < .01$. 

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However, when examining the unique predictive ability of the negative impact on the quality of care, the simultaneous, backward, and forward regression analyses indicated that this variable was not a statistically significant predictor of job satisfaction. Thus, this analysis of this hypothesis demonstrated contradictory results depending upon the procedure used. Although the zero-order correlation led to the rejection of the null hypothesis, the multivariate procedures led to the acceptance of Null Hypothesis 8.

**Null Hypothesis 9**

Null Hypothesis 9 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted quality of care by giving managed-care companies control over aspects of patient care/treatment that clinicians should have control over and the job satisfaction of psychologists. This null hypothesis was also rejected when examining the zero-order association between these variables. The more that psychologists perceived that managed care negatively impacted the quality of care by giving managed-care companies too much control over patient care and treatment that they should have, the less job satisfaction they reported, $r(310) = -.169$, $p < .01$.

Although Null Hypothesis 9 could not be rejected when using simultaneous linear regression, the lack of control over treatment was a
significant predictor in the backward (p < .05) and forward (p < .01) stepwise regressions.

**Null Hypothesis 10**

Null Hypothesis 10 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted quality of care by interfering with service delivery by capping the number of sessions that a patient can receive and the job satisfaction of psychologists. The zero-order correlation coefficient between these two variables reached statistical significance at the .05 level, $r(310) = -.139$, $p < .05$. Although this correlation was in the expected direction, this null hypothesis could not be rejected because it did not reach the a priori .01 significance level.

The simultaneous and backward and forward stepwise regression analyses indicated that this variable was not a statistically significant predictor of job satisfaction. Thus, this analysis yielded consistent results with the zero-order correlation and led to the retention of Null Hypothesis 10.

**Null Hypothesis 11**

Null Hypothesis 11 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to inappropriate treatment and/or insufficient treatment and the job satisfaction of psychologists. Analysis indicated that job satisfaction was not significantly correlated with psychologists' perceptions
that managed care has negatively impacted treatment by leading to inappropriate or insufficient treatment of patients, $r(310) = -.103, \text{ns.}$ Thus, this null hypothesis could not be rejected.

The simultaneous and backward and forward stepwise regression analyses indicated that inappropriate treatment was also not a statistically significant predictor of job satisfaction when controlling for the other variables in the model. Thus, the multivariate analyses also led to the retention of Null Hypothesis 11.

**Null Hypothesis 12**

Null Hypothesis 12 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by affecting the type of interventions used and the job satisfaction of psychologists. This null hypothesis was rejected. The more that psychologists negatively perceived that managed care has negatively impacted treatment by affecting the types of interventions they could use, the lower their reported job satisfaction, $r(310) = -.160, p < .01.$

However, this null hypothesis could not be rejected when analyzing this hypothesis with the linear regression procedures. The simultaneous, backward, and forward regressions indicated that impact through the types of interventions was not significantly predictive of job satisfaction. Thus, although there was shared variability between these two variables, the
multivariate analysis indicated that the amount of unique variance between them was not statistically significant.

**Null Hypothesis 13**

Null Hypothesis 13 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to an increased use of nondoctoral providers for service delivery and the job satisfaction of psychologists. This null hypothesis was retained. The correlation coefficient between psychologists’ self-reported job satisfaction and their perceptions of how negatively managed care has affected treatment by leading to an increase in nondoctoral providers for service delivery did not differ significantly from zero, $r(310) = -.032$, ns.

Null Hypothesis 13 was also retained when this hypothesis was analyzed with the simultaneous and stepwise regression procedures in that the impact of using nondoctoral providers was not significantly predictive of job satisfaction.

**Null Hypothesis 14**

Null Hypothesis 14 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted treatment by leading to a rejection of patients with certain diagnoses and the job satisfaction of psychologists. This null hypothesis could not be rejected in
that the zero-order correlation between these variables was small and
nonsignificant, \( r(310) = .079, \text{ ns.} \)

Null Hypothesis 14 was also retained when this hypothesis was
analyzed with the simultaneous and stepwise regression procedures in that
the predictor examined in this hypothesis was not significantly related with
job satisfaction.

**Null Hypothesis 15**

Null Hypothesis 15 stated that there is no relationship between the
extent to which managed care is perceived to have negatively impacted
treatment by leading to medication being used in lieu of psychotherapy and
the job satisfaction of psychologists. This null hypothesis was retained. The
zero-order association between psychologists' job satisfaction and their
perceptions of how managed care has negatively impacted treatment of
patients by emphasizing medications over psychotherapy did not reach
statistical significance, \( r(310) = -.059, \text{ ns.} \)

Null Hypothesis 15 was also retained when this hypothesis was
analyzed with the simultaneous and stepwise regression procedures: All three
found the variable examined in this hypothesis to be a nonsignificant
predictor of job satisfaction.
Null Hypothesis 16

Null Hypothesis 16 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s DSM diagnosis to help the patient get reimbursed and the job satisfaction of psychologists. This null hypothesis could not be rejected because the association between these variables did not significantly differ from zero, \( r(310) = -.034, \text{ ns} \).

Null Hypothesis 16 was also retained when this hypothesis was analyzed with the simultaneous and stepwise regression procedures in that all three methods found alterations to a patient’s DSM diagnosis to help the patient get reimbursed to be a nonsignificant predictor of job satisfaction.

Null Hypothesis 17

Null Hypothesis 17 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to make alterations to a patient’s DSM diagnosis to help the psychologist get reimbursed and the job satisfaction of psychologists. The zero-order correlation between these variables was not statistically significant, \( r(310) = -.041, \text{ ns} \); therefore, this hypothesis was not supported.
Null Hypothesis 17 was also retained when this hypothesis was analyzed with the simultaneous and stepwise regression procedures in that all three found alterations to a patient’s DSM diagnosis to help the psychologist get reimbursed to be a nonsignificant predictor of job satisfaction.

Null Hypothesis 18

Null Hypothesis 18 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by encouraging psychologists to submit the lowest level diagnosis that is reimbursable and the job satisfaction of psychologists. This null hypothesis could not be rejected because the zero correlation between these variables did not reach statistical significance, $r(310) = -.081, \text{ ns.}$

This null hypothesis could also not be rejected when analyzed with linear regression. The simultaneous and two stepwise regressions indicated that this predictor was not a statistically significant predictor of job satisfaction.

Null Hypothesis 19

Null Hypothesis 19 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted assessment and diagnosis by leading to inappropriate or inadequate assessment and the job satisfaction of psychologists. This null hypothesis was retained. The association between psychologists’ job satisfaction and their
perceptions of the extent to which managed care negatively impacted assessment and diagnosis by leading to inappropriate or inadequate assessment was not statistically significant, $r(310) = -0.076$, ns.

Null Hypothesis 19 was also retained when tested through the multivariate statistical procedures. Inappropriate or inadequate assessment did not reach statistical significance when predicting job satisfaction with the simultaneous and stepwise regression tests.

**Null Hypothesis 20**

Null Hypothesis 20 predicted that there is no relationship between the extent to which managed care is perceived to have negatively impacted confidentiality by failing to keep client information confidential and the job satisfaction of psychologists. The correlation between these variables did not significantly differ from zero, $r(310) = 0.012$, ns; therefore, this hypothesis was not supported.

Because the failure to keep information confidential was not statistically significant in the simultaneous and stepwise regression models, Null Hypothesis 20 was also retained when examined by these multivariate procedures.

**Null Hypothesis 21**

Null Hypothesis 21 stated that there is no relationship between the extent to which managed care is perceived to have negatively impacted
confidentiality by using utilization reviews that compromise patient confidentiality and the job satisfaction of psychologists. An inverse zero-order correlation between these variables was observed, $r(310) = -.114, p < .05$, but the association was not significant at the .01 level. Therefore, this hypothesis was not supported.

Furthermore, this variable was not a statistically significant predictor of job satisfaction when analyzed by the simultaneous and stepwise regression procedures. Thus, Null Hypothesis 21 was also retained when using these methods of hypothesis testing.

**Null Hypothesis 22**

Null Hypothesis 22 predicted that there is no relationship between a linear combination of the variables related to health care and job satisfaction. As mentioned earlier, to test this hypothesis, three different regression analyses were used. A simultaneous linear regression was conducted first in which all predictor variables were entered at once into the model predicting MSQ scores. When all 21 predictors were included in the model, together they explained a statistically significant 13.2% of the variance in job satisfaction, $R^2 = .132, F(21, 290) = 2.108, p < .01$. When examining the unique predictive ability of each variable, however, only psychologists’ annual income ($\beta = .176, p = .005$) and the number of colleague providers ($\beta = .215, p = .001$) reached statistical significance (see Table 3). Thus, when analyzed together, this null
### Table 3

Results for Zero-Order Correlations and Simultaneous, Backward, and Forward Stepwise Regression Analyses Predicting Minnesota Satisfaction Questionnaire (MSQ) Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero-Order</th>
<th>Simultaneous Regression&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Backward Regression&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Forward Regression&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Sr&lt;sup&gt;2&lt;/sup&gt; Beta</td>
<td>Sr&lt;sup&gt;2&lt;/sup&gt; Beta</td>
<td>Sr&lt;sup&gt;2&lt;/sup&gt; Beta</td>
</tr>
<tr>
<td>1. Weekly hours</td>
<td>.104</td>
<td>.011 .113+</td>
<td>.014 .128*</td>
<td></td>
</tr>
<tr>
<td>2. Annual income</td>
<td>.123*</td>
<td>.015 .176**</td>
<td>.016 .138*</td>
<td></td>
</tr>
<tr>
<td>3. 3&lt;sup&gt;rd&lt;/sup&gt; party income</td>
<td>.000</td>
<td>.000 .109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. No. colleagues</td>
<td>.188**</td>
<td>.033 .215***</td>
<td>.020 .146**</td>
<td>.028 .168**</td>
</tr>
<tr>
<td>5. No. panel memberships</td>
<td>.088</td>
<td>.004 .078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Years as a clinician</td>
<td>.053</td>
<td>.006 .084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Positive impact&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.125*</td>
<td>.008 .103+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Negative impact&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.146**</td>
<td>.000 .001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. No control over treatment&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.169**</td>
<td>.007 -.131</td>
<td>.014 -.121*</td>
<td>.021 -.146**</td>
</tr>
<tr>
<td>10. Capped sessions&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.139*</td>
<td>.000 -.026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Inappropriate treatment&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.103</td>
<td>.000 .043</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Types of interventions&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.160**</td>
<td>.005 -.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Use of nondoctoral providers&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.032</td>
<td>.000 .025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Rejection of patients with  certain diagnoses&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.079</td>
<td>.001 -.038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Medication in lieu of psychotherapy&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.059</td>
<td>.003 .080</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Alterations to DSM diagnosis to help patients get reimbursed&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.034</td>
<td>.000 .031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Alterations to DSM diagnosis to help clinicians get reimbursed&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.041</td>
<td>.000 .019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Submission of lowest level of reimbursable diagnosis&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.081</td>
<td>.004 -.083</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Inappropriate / inadequate assessment&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.076</td>
<td>.000 -.013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Failure to keep information confidential&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.012</td>
<td>.002 .057</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Utilization Review that compromises confidentiality&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.114*</td>
<td>.000 .006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Results in forward and backward regressions are final models obtained based on empirical results and professional judgment. Row in bold represents variables that were significant across all four analysis procedures.  

<sup>a</sup> $R^2 = .132$, $F(21, 290) = 2.108, p < .01$.  
<sup>b</sup> $R^2 = .104$, $F(6, 305) = 5.916, p < .001$, using POUT = .001.  
<sup>c</sup> $R^2 = .083$, $F(4, 307) = 6.939, p < .001$, using PIN = .05.  
<sup>d</sup> Scores range from 1 (not at all) to 9 (a great deal).  
+ $p < .10$.  * $p < .05$.  ** $p < .01$.  *** $p < .001$.  

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hypothesis could be rejected in that the linear combination of all variables was significantly predictive of job satisfaction.

Next, backward and forward linear regression analyses were conducted to assist in choosing a model that was empirically and theoretically predictive of job satisfaction. When considering variables for retention in final backward and forward regression models, the significance criterion of .01 or lower was desirable, but not the sole determinant of variable selection. To be included in the model, variables had to be theoretically meaningful to job satisfaction. A significant zero-order association with job satisfaction was also considered preferable, but was not a clear-cut exclusionary criterion. Thus, both empirical and professional judgment were used in this model-building approach.

In the backward stepwise linear regression method, MSQ total scores served as the outcome and all variables started in the model; variables were deleted one at a time if they did not significantly contribute to the regression model. The significance criterion for variable removal was set at .001. As mentioned earlier, this liberal level was chosen in order to consider the greatest number of models. Using this criterion, the model building stopped at model 21, which was a one-predictor model. In this model, the number of colleague providers explained a statistically significant 3.5% of the variance in job satisfaction, $R^2 = .035$, $F(1, 310) = 11.33$, $p < .001$; this variable was the only predictor that met the .001 removal criterion.
Prior models produced by the backward regression procedure were next examined to determine which model was the best predictive model of job satisfaction. A three-variable model (model 19) was the only model in which all variables were statistically significant at the .01 level: (1) number of colleague providers ($sr^2 = .03, p = .005$); (2) annual income ($sr^2 = .02, p = .01$); and (3) weekly hours ($sr^2 = .02, p = .01$). Together, these variables explained a statistically significant 6.4% of the variability in job satisfaction, $R^2 = .064$, $F(3, 306) = 7.05$, $p < .001$. Number of colleague providers and annual income, which were both in the subsequent model 20, were correlated and theoretically related with job satisfaction. Although weekly hours worked did not have a significant zero-order association with job satisfaction, the addition of this variable added 1.9% more to the prediction of job satisfaction than what was found in the two-variable model (two-variable model without weekly hours: $R^2 = .045$, $F(2, 309) = 7.20$, $p < .001$). Given this meaningful increment, the decision was made to keep this variable in the final backward regression model. A complete description of the model is found in Table 4.

In the four-variable model (model 18), having no control over treatment was included, and all four variables (i.e., number of colleagues, annual income, weekly hours worked, and no control over treatment) explained 7.8% of the variance in job satisfaction scores, $R^2 = .078$, $F(4, 307) = 6.51$, $p < .001$. Although the inclusion of the perception of no control over treatment was only significant at the .05 level, its inclusion in the model resulted in the model
explaining an additional 1.4% of the variance in job satisfaction. This, along with the fact that the no-control-over-treatment variable was significantly and theoretically related to job satisfaction, led to the conclusion that this four-variable model was a good predictive model of the outcome.

Although the five-variable model that included the percentage of income obtained from third-party payers explained a total of 9.2% of the variance in job satisfaction, $F(5, 306) = 6.17$, $p < .001$, reflecting in a 1.4% increase over the four-variable model, the zero-order correlation between the percentage of income from third-party payers and job satisfaction approached zero and was not statistically significant. Thus, the four-variable model containing number of colleagues ($r^2 = .020$, $p = .010$), annual income ($r^2 = .016$, $p = .021$), weekly hours worked ($r^2 = .014$, $p = .032$), and no control over treatment ($r^2 = .014$, $p = .032$) seemed most appropriate for the final backward regression model. This model is shown in Table 4.

This model-building process was done again after obtaining the results from the stepwise linear regression that used a forward selection procedure (see Table 4). As with the other regression analyses, MSQ total scores served as the outcome. In this analysis, however, all variables started outside of the model and were entered one at a time if they significantly contributed to the model. The significance criterion for variable entry was set at .05. With this forward regression, 4 of the 21 (19.0%) predictors were retained for the final
Table 4

Results for Final Regression Models Predicting Minnesota Satisfaction Questionnaire (MSQ) Scores Using Theoretical and Empirical Criteria

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>t</th>
<th>Sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final Model from Backward Regression a</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>74.24</td>
<td>2.83</td>
<td>–</td>
<td>26.28***</td>
<td>–</td>
</tr>
<tr>
<td>Weekly hours</td>
<td>1.28</td>
<td>.60</td>
<td>.13</td>
<td>2.15*</td>
<td>.014</td>
</tr>
<tr>
<td>Annual income</td>
<td>2.11</td>
<td>.91</td>
<td>.14</td>
<td>2.31**</td>
<td>.016</td>
</tr>
<tr>
<td>No. colleagues</td>
<td>1.35</td>
<td>.52</td>
<td>.15</td>
<td>2.61**</td>
<td>.020</td>
</tr>
<tr>
<td>No control over treatment b</td>
<td>.57</td>
<td>.27</td>
<td>.12</td>
<td>2.15*</td>
<td>.014</td>
</tr>
</tbody>
</table>

| **Final Model from Forward Regression c**     |      |      |      |      |      |
| Constant                                      | 73.90| 2.53 | –    | 29.16*** | –    |
| No. colleagues                                | 1.55 | .51  | .17  | 3.02**| .028 |
| No control over treatment b                   | .69  | .26  | .15  | 2.63* | .021 |

| **Final Model c**                             |      |      |      |      |      |
| Constant                                      | 73.90| 2.53 | –    | 29.16*** | –    |
| No. colleagues                                | 1.55 | .51  | .17  | 3.02**| .028 |
| No control over treatment b                   | .69  | .26  | .15  | 2.63* | .021 |

Note. SEB = Standard error of the unstandardized regression coefficient (B). a \( R^2 = .078, F(4, 307) = 6.51, p < .001. \)
b Scores range from 1 (not at all) to 9 (a great deal). c \( R^2 = .056, F(2, 309) = 9.21, p < .001. \)
* \( p < .05. \) ** \( p < .01. \) *** \( p < .001. \)
model. Combined, all four predictors explained 8.3% of the variability in job satisfaction, $R^2 = .083, F(4, 307) = 6.939, p < .001$, which was 2.1% less than that obtained by the initial backward regression model.

The number of colleague providers in private practice was the first variable to be entered in the model. This variable explained 3.5% of the variance in job satisfaction scores, $R^2 = .033, F(1, 310) = 11.346, p < .001$. Psychologists’ perceptions regarding the extent to which managed care was perceived as having a negative impact on the quality of care by exercising too much control over treatment were entered in the next step and this variable accounted for 2.1% of the variance in job satisfaction above the influence of the number of colleagues, $R^2 \text{ change } = .021, F(1, 309) = 6.916, p < .01$. These two variables combined explained 5.6% of the variance in the outcome, $R^2 = .056, F(2, 309) = 11.346, p < .001$. In the third step, psychologists’ number of memberships in HMO and/or PPO panels was entered into the model and explained 1.4% of the variance in job satisfaction above the influence of the two previously entered predictors, $R^2 \text{ change } = .014, F(1, 308) = 4.588, p < .05$. All three predictor variables combined explained a statistically significant 7% of the variance in MSQ scores, $R^2 = .070, F(3, 308) = 7.76, p < .001$.

Psychologists’ perception of the extent to which managed care is believed to have positively impacted the quality of care provided was the last variable to be entered into the forward regression model, and this variable
contributed an additional 1.3% of the variance to the outcome, above the influence of the previous predictors, $R^2$ change = .013, $F(1, 307) = 4.22, p < .05$.

At this last step, inspection of the squared semi-partial correlations indicated that the number of colleagues in practice uniquely explained 3.3% of the variance in job satisfaction ($p = .001$), number of managed-care panel memberships that psychologists belonged to explained 1.7% ($p = .019$), psychologists' perceptions regarding the extent to which managed care was perceived as having a negative impact on the quality of care by exercising too much control over treatment explained 1.6% ($p = .021$), and psychologists' perceptions on the extent to which managed care was believed to have positively impacted the quality of care explained 1.3% ($p = .041$) of the variance in job satisfaction.

Thus, in contrast to the backward regression procedure, the forward selection method did not include weekly hours or annual income and added the number of panel memberships and the positive impact on the quality of treatment. Given that number of colleagues and managed care's negative impact on treatment by removing control were significant in both the forward and backward procedures, were theoretically meaningful predictors, and were related to job satisfaction by themselves, these variables were deemed to most likely belong in a forward regression model predicting job satisfaction.

However, because the number of panel memberships was not significantly correlated to job satisfaction and was not a significant predictor
in the simultaneous and backward regressions, a three-variable model that included this predictor did not seem tenable. Additionally, when comparing the two-variable model (i.e., number of colleague providers and no control over treatment) with the three-variable model that also contained the number of panel memberships, the two-variable model accounted only for 1.4% less of the variability in job satisfaction than what was found in the three-variable model (i.e., two-variable model: $R^2 = .056$; three-variable model: $R^2 = .07$).

Thus, the best model using the forward regression procedure was the two-variable model that contained the number of colleagues and no control over treatment, which together explained 5.6% of the variability in job satisfaction, $R^2 = .056$, $F(3, 308) = 7.25$, $p < .001$.

The last efforts in model building were aimed at producing a final model that represented the best compromise between the final forward and backward regression models (see Table 4). A model that contained number of colleague providers and no control over treatment was produced first because these two variables were retained in both the backward and forward models. Together, these two variables explained a significant 5.6% of the variance in job satisfaction, $R^2 = .056$, $F(2, 309) = 9.21$, $p < .001$. When weekly hours was entered into the model using a hierarchical approach, this three-variable model explained 6.2% of the variance in job satisfaction, $R^2 = .062$, $F(3, 308) = 6.80$, $p < .001$, indicating a nonsignificant .6% increment over number of
colleague providers and no control over treatment, $R^2$-change = .006, $F(1, 308) = 1.90$, $p = .169$.

To test the increment of annual income over the two-variable model, this variable was entered in step two of a hierarchical regression resulting in a three-variable model that accounted for 6.4% of the variance in job satisfaction, $R^2 = .064$, $F(3, 308) = 7.05$, $p < .001$. The increment of annual income over the number of colleague providers and perceptions of no control over treatment was a nonsignificant .8%, $R^2$-change = .008, $F(1, 308) = 2.63$, $p = .106$. Because neither weekly hours nor annual income could independently contribute to the two-variable model, it was determined that control over treatment and the number of colleague providers was the best final model that best explained job satisfaction. This decision was further confirmed in that both variables had a strong theoretical relation to job satisfaction and, of all 21 variables examined in the current study, had the strongest zero-order correlations with job satisfaction.

Post hoc Analysis

A single-sample $t$ test was conducted to determine the extent to which MSQ scores in the present sample were similar to those of the standardization sample. A test value of 77.66 was obtained from the MSQ manual that reported descriptive statistics for employed non-disabled adults ($N = 360$). This subgroup most closely approximated the current sample of
psychologists. This analysis revealed that the sample of psychologists in the present study endorsed a lower level of job satisfaction ($M = 66.52$, $SD = 12.48$) than reported in the standardization sample ($M = 77.66$, $SD = 9.91$), $t(311) = -15.77$, $p < .001$. 

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CHAPTER V

DISCUSSION

Review of the Purpose and Objectives of the Study

The primary purpose of this study was to evaluate the level of satisfaction among clinical and counseling psychologists. This study evaluated job satisfaction using the MSQ which is based on the Adjustment to Work theory. The secondary purpose of the study was to report any differences among psychologists' job satisfaction in terms of hours of work per week, income, percentage of private practice generated by third-party reimbursement, number of colleague providers in their private practice, the number of years of experience in clinical work the psychologist has, the number of memberships that psychologists have on HMO and PPO panels, and the number of years of involvement in clinical practice. It evaluated whether psychologists' job satisfaction varied as it related to the perceived negative impact of managed care on quality of care, treatment, assessment and diagnosis, and confidentiality. Overall, 22 specific hypotheses were tested, each of which examined an association of these characteristics with job satisfaction.
The rationale for this study was based on the fact that few studies exist in the area of job satisfaction among mental health professionals, and the studies that exist have provided mixed results. In addition, managed care has become a powerful influence among mental health professionals (Bachrach, 1995; Denkers & Clifford, 1994; Murphy et al., 1998; Tucker & Lubin, 1994). The influence of managed care has intensified making it a necessity to evaluate the present level of job satisfaction among psychologists as they face innumerable changes in their field.

Participants in this study were a randomly selected sample of 1,000 licensed psychologists located in California, Oregon, and Washington, chosen from the National Register of Health Service Providers in Psychology. The list of psychologists was acquired from the National Register of Health Service Providers in Psychology. A response from 317 subjects was received, however, only 312 subjects were used in the study. Data were collected using a 44-question survey: 20 items from the Minnesota Satisfaction Questionnaire (MSQ) and 24 additional items.

Summary and Interpretation of the Findings

Summary of the Findings

Out of the 21 variables investigated in this study, only a small number were found to demonstrate significant relationships with psychologists' job satisfaction. Moreover, the findings from this study demonstrated that the
contributions of variables to job satisfaction depended largely upon which statistical data analysis procedures were used: (1) bivariate correlations, (2) simultaneous regression, (3) backward regression, or (4) forward regression. The divergence in findings obtained using these different approaches has a cautionary moral: If the complexity of relationships is to be best understood, the relationships among variables should be examined using more than one statistical approach. To help illuminate this complexity, this discussion of the findings will briefly summarize the results from all of these statistical procedures and then will draw conclusions regarding which variables are most meaningfully related to job satisfaction among psychologists.

When examining the associations with job satisfaction from a simplistic bivariate perspective, only 4 of the 21 variables (19%) demonstrated significant associations that were above chance levels (i.e., \( p < .01 \)): (1) the number of colleague providers in psychologists' practice, (2) the general perception that managed care had a negative impact on the quality of patient care, (3) the perception that managed care had a negative impact on the quality of patient care by taking control of patient care, and (4) the perception that managed care had a negative impact on the quality of patient care by affecting the types of interventions psychologists can use. More specifically, job satisfaction appeared to be associated with psychologists having a fewer number of colleagues in their practice and negative perceptions of managed care that
centered on perceptions of the quality of care related to psychologists' control over treatment.

Although these four variables were the ones that demonstrated the most unambiguous associations with job satisfaction, four other variables also demonstrated significant bivariate associations with job satisfaction at a less conservative level of statistical significance (p < .05); thus, the significance of these variables could have been an artifact of cumulative Type I error. Nevertheless, it is important to acknowledge the presence of these less dominant associations. Low job satisfaction was weakly associated with psychologists' low annual income, perceptions that managed care does not have a positive impact on the quality of care, negative perceptions of the quality of care by capping the number of sessions, and negative perceptions that managed care has a negative impact on confidentiality by using utilization reviews.

Out of all of the bivariate associations, the number of colleague providers in psychologists' practices was most strongly related to psychologists' satisfaction. Still, this variable shared only approximately 3.5% of its variability with job satisfaction, indicating that approximately 96.5% of the variability in job satisfaction was explained by some other aspects. This clearly indicates that, although the number of colleagues was statistically significant, it was not a large contributor in explaining the variability in psychologists' satisfaction with their jobs. In fact, all of the bivariate
associations were relatively small in magnitude (rs < .19) indicating very weak associations with job satisfaction.

Bivariate associations, however, provide a very incomplete view of the associations with job satisfaction because the unique contribution of each variable is not considered. Since the advent of multivariate statistics, focus in the behavioral sciences has been in understanding what variables uniquely contribute to an outcome, after keeping in mind other variables (Tabachnik & Fidell, 1996). Although the bivariate associations are interesting, they are overly simplistic. In the present study, a simultaneous regression analysis gave insight into the unique contribution to job satisfaction that each of the 21 variables offered. That is, analyzing the hypotheses in this manner revealed each variable's contribution to job satisfaction after holding constant for the other 20 variables. When using this multivariate approach, only 2 of the 21 variables (9.5%) were uniquely predictive of job satisfaction: annual income and the number of colleague providers present in psychologists' practices. As was found in the bivariate analyses, increased job satisfaction was associated with an increased income and the number of colleagues in the practice. The unique contribution of each of these variables was still relatively small. Annual income only uniquely accounted for 1.5% of the variability in job satisfaction among psychologists, and the number of colleagues uniquely explained only 3.3% of this variability. When using this multivariate approach, the other 19 variables failed to uniquely explain job satisfaction.
above chance. Thus, when using the bivariate and multivariate approaches, the only variable that demonstrated a significant association with job satisfaction was the number of colleagues. The fact that this variable was significant both by itself and in combination with all the other variables speaks to the fact that this variable had an unambiguous relationship with job satisfaction.

Despite the fact that only 2 of the 21 variables uniquely explained job satisfaction above chance, a little over 13% of the variability in psychologists' reports of job satisfaction was significantly explained by the combination of all 21 variables. This finding supported the prediction that there would be a relationship between the linear combination of variables related to health care and job satisfaction. This finding also indicated that the combination of the 21 variables explained more than annual income and the number of colleagues did alone. The natural question that emerged from these findings was, "What variables in combination best explained job satisfaction among psychologists?"

To try to answer this question, the current study tried to produce a model that theoretically and empirically best explained job satisfaction among psychologists. Both backward and forward stepwise regression procedures were used to produce this model. After careful empirical and theoretical scrutiny, a set of two variables was chosen that seemed to explain best psychologists' satisfaction on their jobs: the number of colleague providers in
psychologists’ practice and the perception that managed care had a negative impact on the quality of patient care by taking control of patient care. Together, these two variables produced the most parsimonious explanation of job satisfaction. Although combined these four variables explained only 5.6% of the variability in psychologists’ ratings of job satisfaction, the sum of these variables’ unique contributions was approximately 4%, indicating very little redundancy in the model. Both variables contributed equally with each variable uniquely contributing 2% to explaining job satisfaction.

Interpretation of the Findings

The responses of the psychologists indicated a negative view of certain aspects of managed care. Psychologists saw managed care as having a negative impact on the quality of care. They saw managed care as taking control of aspects of patient care/treatment that they believe the clinician should control. Capping sessions by managed care was seen as interfering with the psychological services that clinicians deliver. Psychologists saw managed care as leading to inappropriate and/or insufficient treatment. They saw managed care as encouraging the use of medication rather than psychotherapy in treatment. This dissatisfaction with various aspects of managed care may contribute to overall job dissatisfaction among psychologists.
Despite the fact that the model produced from this study does not explain most of the variability in job satisfaction among psychologists, it nevertheless provides some insight into the variables that are related to job satisfaction. Given that some studies suggest that 11 to 46% of clinical psychologists are dissatisfied with their careers (Kelly et al., 1978; Walfish et al., 1985; Walfish et al., 1991), these findings provide information that may be useful in understanding what factors contribute to this dissatisfaction.

The present study clearly implicates the importance of the number of colleagues present in psychologists’ workplace when considering their job satisfaction. In the sample of psychologists examined in the current study, satisfaction decreased when fewer colleagues were present in psychologists’ practices. This variable clearly demonstrated a consistent pattern of associations with job satisfaction, regardless of what data analysis strategy was employed. Thus, regardless of psychologists’ perceptions of managed care, satisfaction seems to be directly related to having peers in the workplace.

The question that is raised by this finding, however, is, exactly, What factors may be responsible for this association? That is, why is the number of colleagues an important contributor to job satisfaction among psychologists? The most obvious explanation is that an increased number of colleagues in the office provides an environment where social support is readily available. If this is true, then the quality of the social relations may be an even stronger predictor of job satisfaction than found when examining the quantity of this
support. However, this is not the only explanation. It is also possible that the greater number of colleagues creates higher job satisfaction because it reduces loneliness and isolation. Given this, it seems important that others begin to determine more specifically what underlying factors are responsible for the association between the number of colleagues and job satisfaction.

The findings that the environmental condition of the number of colleagues was related to job satisfaction are consistent with Herzberg's (1966) Motivator-Hygiene theory that proposes that such hygiene issues can minimize dissatisfaction. However, according to this theory, hygiene needs cannot produce job satisfaction even when the working conditions are great. They serve simply to keep individuals from being dissatisfied. In order for job satisfaction to occur, Herzberg suggests that motivators, which satisfy individuals' needs for meaning and personal growth, are the factors that create satisfaction by creating personal fulfillment. These types of issues, however, were not addressed sufficiently in the present study in that needs, such as achievement, recognition, the work itself, responsibility, and advancement, were not adequately measured. Nevertheless, results from the present study imply that the hygiene factor of workplace colleagues plays at least an indirect role in maintaining psychologists' job satisfaction.

The perception of a lack of control over treatment that was found to be inversely related to job satisfaction, however, could be considered a motivating factor that contributes to psychologists' satisfaction. That is, the
more psychologists perceived that managed care had a negative impact on the quality of patient care by reducing their control over treatment, the less satisfied they were in their jobs. This finding is predicted by Herzberg’s theory in that the motivating factor had a strong relationship with job satisfaction. Moreover, the findings from the current study imply that this one perception regarding managed care has a stronger association with job satisfaction than any other managed-care variable measured. The finding that perceived control over treatment was related to job satisfaction is not surprising in that perceived control over workplace demands has been found in other non-clinical studies to be associated with job satisfaction (Herzberg, Mausner, & Snyderman, 1993).

Implications

The findings from this study have several important implications for clinical practice. The discovery that the number of colleagues in practice with psychologists was positively related to their satisfaction in their jobs implies that part of job satisfaction in clinical practice will be derived from social contact with others. The direct implication from this finding is that increasing the number of colleagues in practice may contribute to increased job satisfaction. Furthermore, though the exact nature of this relationship is not yet understood, it may be wise for psychologists, or employers, to allow a reasonable amount of time for socialization, such as over lunch, during breaks,
or between patients. This type of behavior could expect to help psychologists develop a sense of camaraderie and teamwork. However, the quality of this support may also be important. For instance, interactions with colleagues that are considered negative might have a negative impact on job satisfaction. Thus, to enhance job satisfaction it might be beneficial to reduce rudeness, inappropriate behavior, and offensive comments. This recommendation implies that it is not only the quantity of social contact, but also the quality of social contact that may be crucial for job satisfaction to occur.

Because perceptions are more difficult to influence than the number of colleagues, it may be more difficult to change perceptions to improve job satisfaction. For instance, although perceptions of control are relatively subjective, part of working within the managed-care system involves relinquishing control over treatment. There may be very little about the system that can be changed to improve these perceptions of control. However, it may be important for psychologists to structure their work environment in such a way as to increase their perception of control over treatment. This may be accomplished by accepting only certain types of cases, by refusing referrals from certain panels, or by some other means within the control of the therapist.
Limitations

Although this investigation helped to advance our understanding of psychologists' job satisfaction, the results obtained should be interpreted in context of the limitations that were inherent in this study. In considering the external validity of this study, several limitations could have had a bearing on the results.

First, given that this study represents a very small proportion of psychologists in the United States, the results obtained from this study may not generalize to the population of licensed psychologists practicing in this country. Additionally, psychologists in this study were all members of the National Register of Health Service Providers; the results may not generalize to psychologists who are not members of this organization. Similarly, if there were unique characteristics about psychologists from the western United States region, then this too would restrict the generalization of the results to the entire population of psychologists.

Additionally, the present study was comprised mainly of psychologists who had been in practice more than 5 years. In fact, only 4.4% of the sample contained participants who had been in practice less than 5 years. Given that this study mainly represented clinicians who had been in practice for an extended duration, the findings may not generalize to a sample that is comprised of less experienced clinicians. That is, the factors that are related to job satisfaction for less experienced clinicians may not be the same ones that
are related for more experienced ones. Additionally, solo practitioners represented only 9% of the sample used in this study. The findings from this study may not generalize to this subset of psychologists. There may be factors that determine job satisfaction that are found for group-practice providers that are not found for independent practitioners. Additionally, it is also important to consider that even though the 32% response rate obtained in this study is respectable for these types of survey investigations, it is nevertheless possible that individuals who volunteered for the study have different factors associated with their job satisfaction than do individuals who chose not to participate. This problem is not unique to the present study; it is an issue inherent in any type of survey research.

In considering the internal validity of the study, several issues should be considered. First, this study assumes that the results obtained were not biased by a response bias, such as socially desirable responding. That is, respondents might have reported job satisfaction in a favorable manner. Although the effects of such response biases remain unknown, the likelihood of this occurring was reduced by using procedures that tend to reduce socially desirable responding, such as the use of anonymity and lack of time pressure in administering the questionnaire, both of which have been shown to reduce socially desirable responding (Paulhus, 1991).

It is important to acknowledge, however, that there might have been a central tendency bias among respondents. Although there was acceptable
variability among the scores, the mean represented a neutral level of satisfaction. That is, on average, participants endorsed the "I am neither satisfied nor dissatisfied" response choice. One explanation for this finding is that psychologists in this study were neutral about their jobs; they were neither excited nor disenchanted with their work. Another potential explanation, however, is that psychologists responded to items on the MSQ using a central tendency response bias because the items were perceived by respondents as not being pertinent to them. This latter explanation is possible in that a review of the literature revealed that this measure had not been used with a population of psychologists. Certain items may not have applied to participants in the sample, particularly the items that related to psychologists' perceptions of their boss or supervisor, which many did not have. Although this is a possible explanation, the MSQ in the current study demonstrated adequate internal consistency reliability.

Another potential limitation that must be acknowledged is the presence of third variable influences. Although this study assessed for such influences among the demographic variables that were collected, there exists the possibility that variables that were not measured played a role in creating the findings. For instance, one of the strongest findings from this study was the increase in job satisfaction as a function of the increased number of colleagues present in psychologists' practices. It is possible that this association is due to mediating factors that were not measured within the study. For instance,
social support may be directly related with both the number of colleagues and job satisfaction. If social support were related to both variables, then the association between the number of colleagues and job satisfaction may be better explained by the degree of social support experienced. Thus, if the influence of social support was controlled for, there may not be a significant association between job satisfaction and the number of colleagues in participants' offices. This issue is addressed further when discussing the possibilities for future research.

It is also important to acknowledge that this investigation was not able to establish the causes of job satisfaction among psychologists. Because of its correlational nature, the findings obtained from the data in the study should be limited only to associative, not causal, inferences. However, it is important to acknowledge that when causation does exist, so too will correlations (Tabachnik & Fidell, 1996). Given this principle, among those variables that did not evidence significant associations with job satisfaction, it may be said that there is likely not a causal association of these variables with job satisfaction. However, inferences such as these are speculative, and only through true experimental designs can causality be established; the use of such designs would be difficult, but important, in examining the set of inferences examined in this study.
Recommendations for Future Research

The present investigation was one of only a few studies that have examined job satisfaction among psychologists and the only study that was specifically designed to assess perceptions surrounding managed care. There are several avenues for future research that would greatly advance our understanding of this area.

First, this study focused predominantly on aspects of managed care that created dissatisfaction. Future research should consider measuring the potential benefits of managed care as well. Although most therapists discuss the negatives of managed care, some therapists have adapted well to the managed-care model and are proponents of this system. There may be aspects of working with managed care that actually increase job satisfaction. For instance, managed care has provided positive contributions to the clinical treatment of mental health problems, such as the focus on empirically supported treatment interventions and the documentation of the efficacy of the interventions used. Factors such as these may actually contribute to increased job satisfaction. This focus on the positive, beneficial aspects of managed care is consistent with the emphasis on positive psychology that is becoming an increasing focus of research (Seligman & Csikszentmihalyi, 2000). Thus, one could contend that the current study had an underlying bias that the negative contributions of managed care contribute to low job satisfaction. Because of this bias, the study failed to examine some of the
potential benefits of managed care; other research on this topic should not limit itself to examination of the negative influences.

Additionally, future research should be cautious in using a standardized measure of job satisfaction when assessing this construct among psychologists. In the current study, psychologists made many comments on their surveys that suggested they were much more dissatisfied than what was detected on the quantitative instrument used. Future studies should conduct additional research to develop a measure of job satisfaction that is more appropriate to the population of psychologists. Interviews and open-ended questionnaires could be used to obtain a list of the issues that contribute to job satisfaction and dissatisfaction among psychologists. From these data, appropriate items could be developed that adequately reflect the entire domain of this construct.

Future research will also want to replicate this study on a more diverse sample of psychologists. Ideally, future research should attempt to use a randomly selected sample that is not restricted to one region of the United States, as was the sample used in the current study. Additionally, future researchers should use sampling procedures that produce a sample comprised of psychologists that represents different ages, experience levels, and affiliations. Future studies should also be sure to include more psychologists who do not work with managed care so that job satisfaction comparisons can be made between psychologists who work with managed-care practices and those who do not have managed-care practices. Using these types of samples
will greatly assist researchers in being able to generalize the findings to the
population of interest.

Additional research in this area should also attempt to explain in more
detail the nature of the relationship between various variables and job
satisfaction. In this regard, researchers should include in their studies
variables that potentially mediate or moderate the associations that are under
scrutiny. The examination of these types of variables would assist in
developing a comprehensive model that helps explain the complexity of what
determines job satisfaction among psychologists.

Mediating variables are those variables that are responsible for making
it appear that two variables are correlated, when in fact there may not be a
direct relationship between the variables without the mediating variable
(Alloy, Abramson, Raniere, & Dyller, 1999). Mediating variables would be
those variables that are related to variables under examination and job
satisfaction. As mentioned earlier, the relationship between the number of
colleagues and job satisfaction that was found in the present study might be
explained by the mediating variable of social support. Thus, increased
number of colleagues in the office may lead to increased social support, which
in turn contributes to increased job satisfaction. Social support as a mediator
would exist if, after controlling for social support, the association between the
number of colleagues and job satisfaction is no longer statistically significant.
This would indicate that the relationship between these two variables was
merely a function of the mediator: social support.
Research should also examine moderating variables. A moderating variable is a variable that changes the nature of the relationship between two variables. A variable would be termed a moderator when it interacts with a variable to predict job satisfaction (Alloy et al., 1999). Examination of moderator variables has become increasingly important to understand the conditions under which a certain relationship exists. For instance, the relationship between the number of colleagues and job satisfaction may actually change as a function of social support. Instead of being a mediator, social support might function as a moderator. It could be that the association between the number of colleagues and job satisfaction exists only under conditions of high social support; under conditions of low social support, there might not be a significant association between these variables.

Identifying potential mediator and moderating variables will assist in creating an empirically based, comprehensive model of job satisfaction among psychologists. In sum, future research should not satisfy itself with the examination of simple bivariate associations; by understanding the nature of these associations, we will be able to better explain job satisfaction among psychologists.
APPENDIX A

JOB SATISFACTION QUESTIONNAIRE

Please refer to the following descriptors when reading questions 1 to 20. If some of the descriptors don't apply, leave them blank. Ask yourself: how satisfied am I with this aspect of my job?

1. **I am very dissatisfied** (I am usually very unhappy about this aspect of my career).
2. **I am dissatisfied** (I am more unhappy than happy about this aspect of my career).
3. **I am neither satisfied nor dissatisfied** (I can't decide whether I am satisfied or not with this aspect of my career).
4. **I am satisfied** (I am more happy than unhappy about this aspect of my career).
5. **I am very satisfied** (I am usually very happy about this aspect of my career).

In my present career, this is how I feel about...for each statement

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Circle a number

1. Being able to keep busy all the time.......................... 1 2 3 4 5
2. The chance to work alone on the job.......................... 1 2 3 4 5
3. The chance to do different things from time to time........... 1 2 3 4 5
4. The chance to be "somebody" in the community............... 1 2 3 4 5
5. The way my boss handles his/her workers...................... 1 2 3 4 5
6. The competence of my supervisor in making decisions...... 1 2 3 4 5
7. Being able to do things that don't go against my conscience................................................................. 1 2 3 4 5
8. The way my job provides for steady employment.................. 1 2 3 4 5
9. The chance to do things for other people...................... 1 2 3 4 5
10. The chance to tell people what to do.......................... 1 2 3 4 5
11. The chance to do something that makes use of my abilities 1 2 3 4 5
12. The way company policies are put into practice............ 1 2 3 4 5
13. My pay and amount of work I do.................................. 1 2 3 4 5
14. The chances for advancement on this job.......................... 1 2 3 4 5
15. The freedom to use my own judgment.......................... 1 2 3 4 5
16. The chance to try my own methods of doing the job........... 1 2 3 4 5
17. The working conditions.............................................. 1 2 3 4 5
18. The way my co-workers get along with each other............ 1 2 3 4 5
19. The praise I get for doing a good job......................... 1 2 3 4 5
20. The feeling of accomplishment I get from the job.......... 1 2 3 4 5

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21. How many hours per week are you involved in providing psychological services to patients?
   - More than 40 hours per week
   - 30-40 hours per week
   - 20-29 hours per week
   - 10-19 hours per week
   - Less than 10 hours per week

22. How much income did you earn (net independent fee for service income) in your private practice in 1999?
   - More than $60,000
   - $30,000 to $60,000
   - Less than $30,000

23. What percentage of your private practice income is generated by third party reimbursement?
   - 90% or more
   - 75-89%
   - 50-74%
   - Less than 50%

24. How many providers (licensed, psychologists, social workers, professional counselors) are affiliated with you in your private practice setting?
   - 10 or more providers work in my group practice setting
   - 5 to 9 providers work in my group practice setting
   - 2 to 4 providers work in my group practice setting
   - I am the only practitioner in my solo practice

25. How many HMO or PPO panels are you a member of?
   - 10 or more panels
   - 5 to 9 panels
   - 1 to 4 panels
   - I am not a member of any panels

26. How many years of clinical experience do you have in private practice?
   - More than 20 years
   - 15 to 19 years
   - 10 to 14 years
   - 5 to 9 years
   - Less than 5 years
27. To what extent do you feel managed care has positively impacted the quality of care you provide?

No positive impact 1 2 3 4  
Highly positively impacted 5 6 7 8 9

28. To what extent do you feel managed care has negatively impacted the quality of care you provide?

No negative impact 1 2 3 4  
Highly negatively impacted 5 6 7 8 9

29. To what extent do you feel managed care companies have control over aspects of patient care/treatment that you, as the clinician, should have control over?

Not at all 1 2 3 4 5 6 7 8 9

30. To what extent have you found managed care caps on the number of sessions you can provide patients interfering with services you deliver?

Not at all 1 2 3 4 5 6 7 8 9

31. To what extent do you feel managed care has led to inappropriate and/or insufficient treatment?

Not at all 1 2 3 4 5 6 7 8 9

32. To what extent do you feel managed care has adversely affected your use of treatment interventions?

Not at all 1 2 3 4 5 6 7 8 9

33. To what extent do you feel managed care has led to an increased use of nondoctoral providers for service delivery?

Not at all 1 2 3 4 5 6 7 8 9
34. To what extent do you feel managed care has led to a rejection of patients with certain diagnoses?

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35. To what extent do you feel managed care has led to medication being used in lieu of psychotherapy?

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36. To what extent do you feel managed care has led psychologists to make alterations to a patient DSM diagnosis to help the patient get reimbursed?

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37. To what extent do you feel managed care has led psychologists to make alterations to a patient DSM diagnosis to ensure that the psychologist gets reimbursed?

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38. To what extent do you feel managed care has led psychologists to submit the lowest level DSM diagnosis that is reimbursable?

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39. To what extent do you feel managed care has led to inappropriate or inadequate assessment?

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40. To what extent do you feel managed care organizations make an effort to keep clinical information confidential?

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41. To what extent do you believe that your contact with managed care/utilization review compromises patient confidentiality?

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42. Your gender (please circle the number of your answer)

1 Male
2 Female

43. The state in which you practice? ____________________

44. Your age? ______

Any additional comments about this research will be appreciated.

Your participation is greatly appreciated!
APPENDIX B
COVER LETTER TO PARTICIPANTS

Dear Colleague,

In recent years, job satisfaction among psychologists has become a more salient and important issue because of the impact that managed care is having on the psychologists' job security. Clinicians often report the loss of provider control over clinical decisions. They feel that managed care too often wrongly denies or limits psychotherapy, reduces provider choice, and second-guesses decisions that mental health professionals should make. Because job satisfaction has a tremendous impact upon the well-being of psychologists and the quality of care they provide, further understanding concerning the job satisfaction of psychologists is of critical importance. Therefore, it would be beneficial at this time to measure job satisfaction among psychologists as it relates to the current environment with managed care. A clearer understanding of the issues involved can enable us to minimize the problem and then help us to consider new actions to manage it.

Your name has been randomly selected from the National Register of Health Service Providers in Psychology to participate in this study. Enclosed is a survey which is straightforward and brief, requiring little time to complete. In an effort to truly represent the present experience of psychologists, it is important that each survey be completed and returned as soon as possible. Therefore, I am requesting that the surveys be completed and mailed back in two weeks.

You can be sure that your individual responses will be kept in strict confidentiality. Your name will never be placed on the questionnaire. No one will ever see your questionnaire except the investigator who is ethically bound to protect the anonymity of each participant. The data reported from your questionnaire will be used in an aggregate form only and will be reported as a group data. The only means of identifying your material will be the reference number on the questionnaire which is necessary for response follow-up.

The results of this research will be presented in a doctoral dissertation at Andrews University and will be submitted to a journal for publication. You may receive a summary of the results by writing “Send me a copy of the results” on the back of the return envelope, and printing your name and address below it. Please be sure you do not place this information on the questionnaire itself.

Your participation in this study and an expeditious return of the questionnaire will be very much appreciated. Thank you for your assistance.

Sincerely,

Walter R. Vyhnmeister
APPENDIX C

ADDITIONAL ITEMS INCLUDED IN THE QUESTIONNAIRE

a. How many hours per week are you involved in providing psychological services to patients?
   _____ More than 40 hours per week
   _____ 30-40 hours per week
   _____ 20-29 hours per week
   _____ 10-19 hours per week
   _____ Less than 10 hours per week

b. How much income did you earn (net independent fee for service income) in your private practice in 1999?
   _____ More than $60,000
   _____ $30,000 to $60,000
   _____ Less than $30,000

c. What percentage of your private practice income is generated by third party reimbursement?
   _____ 90% or more
   _____ 75-89%
   _____ 50-74%
   _____ Less than 50%

d. How many providers (licensed, psychologists, social workers, professional counselors) are affiliated with you in your private practice setting?
   _____ 10 or more providers work in my group practice setting
   _____ 5 to 9 providers work in my group practice setting
   _____ 2 to 4 providers work in my group practice setting
   _____ I am the only practitioner in my solo practice

e. How many HMO or PPO panels are you a member of?
   _____ 10 or more panels
   _____ 5 to 9 panels
   _____ 1 to 4 panels
   _____ I am not a member of any panels
f. How many years of clinical experience do you have in private practice?
   ______ More than 20 years
   ______ 15 to 19 years
   ______ 10 to 14 years
   ______ 5 to 9 years
   ______ Less than 5 years

g. To what extent do you feel managed care has positively impacted the quality of care you provide?
   No positive impact 1 2 3 4 5  
   Highly positively impacted 6 7 8 9

h. To what extent do you feel managed care has negatively impacted the quality of care you provide?
   No negative impact 1 2 3 4 5  
   Highly negatively impacted 6 7 8 9

i. To what extent do you feel managed care companies have control over aspects of patient care/treatment that you, as the clinician, should have control over?
   Not at all 1 2 3 4 5  
   A great deal 6 7 8 9

j. To what extent have you found managed care caps on the number of sessions you can provide patients interfering with services you deliver?
   Not at all 1 2 3 4 5  
   A great deal 6 7 8 9

k. To what extent do you feel managed care has led to inappropriate and/or insufficient treatment?
   Not at all 1 2 3 4 5  
   A great deal 6 7 8 9

l. To what extent do you feel managed care has adversely affected your use of treatment interventions?
   Not at all 1 2 3 4 5  
   A great deal 6 7 8 9
m. To what extent do you feel managed care has led to an increased use of nondoctoral providers for service delivery?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

n. To what extent do you feel managed care has led to a rejection of patients with certain diagnoses?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

o. To what extent do you feel managed care has led to medication being used in lieu of psychotherapy?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
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</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

p. To what extent do you feel managed care has led psychologists to make alterations to a patient DSM diagnosis to help the patient get reimbursed?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

q. To what extent do you feel managed care has led psychologists to make alterations to a patient DSM diagnosis to ensure that the psychologist gets reimbursed?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

r. To what extent do you feel managed care has led psychologists to submit the lowest level DSM diagnosis that is reimbursable?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>

s. To what extent do you feel managed care has led to inappropriate or inadequate assessment?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9</td>
</tr>
</tbody>
</table>
t. To what extent do you feel managed care organizations make an effort to keep clinical information confidential?

| Not at all | 1 | 2 | 3 | 4 | 5 | A great deal | 6 | 7 | 8 | 9 |

u. To what extent do you believe that your contact with managed care/utilization review compromises patient confidentiality?

| Not at all | 1 | 2 | 3 | 4 | 5 | A great deal | 6 | 7 | 8 | 9 |

v. Your gender (please circle the number of your answer)

3 Male
4 Female

w. The state in which you practice? ________________

x. Your age? ______
APPENDIX D

VARIABLE NAMES

Variable 1 - Weekly hours
Variable 2 - Annual income
Variable 3 - Income from 3rd party payers
Variable 4 - Number of colleague providers
Variable 5 - Number of panel memberships
Variable 6 - Years as clinician
Variable 7 - Positive impact on quality of treatment
Variable 8 - Negative impact on quality of treatment
Variable 9 - Control over treatment
Variable 10 - Capped sessions
Variable 11 - Inappropriate/insufficient treatment
Variable 12 - Type of interventions used
Variable 13 - Use of nondoctoral providers
Variable 14 - Rejection of patients with certain diagnoses
Variable 15 - Medication in lieu of psychotherapy
Variable 16 - Alterations to DSM diagnosis to help patients get reimbursed
Variable 17 - Alterations to DSM diagnosis to help clinicians get reimbursed
Variable 18 - Submission of lowest level of reimbursable diagnosis
Variable 19 - Inappropriate or inadequate assessments

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Variable 20 - Failure to keep information confidential
Variable 21 - Utilization review that compromises confidentiality
Variable 22 - Linear combination of variables
REFERENCE LIST


Knowlton, L. (1995, June 5). Health horizons; New stresses spark more burnout for counselors; experts say managed care is adding to an already significant professional hazard. For some, it's time to change jobs. *Los Angeles Times*, p. 10.


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EDUCATION

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_A. D. Counseling Psychology_

Andrews University, 1994
_M.A. in Community Counseling_

Andrews University, 1981
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Walla Walla College (WWC), 1978
BA Theology with minor in Modern Languages (Spanish)

River Plate College/Academy, Entre Rios, Argentina, 1973

PROFESSIONAL EXPERIENCE

1999-2001 Certified Mental Health Counselor in private practice

1998- Registered Counselor at Center for Counseling and Psychotherapy

1996-97 Intern at Crownsville Hospital Center (CHC), MD.

1992-96 Graduate Assistant for psychological assessment and projective testing classes.

1995- Psychometrician at The Rehabilitation Center at Tri-State Hospital.

1978-91 Minister in the state of Washington.