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A PATH ANALYTIC STUDY OF FEMALE NURSE CAREER WITHDRAWAL

by

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A DISSERTATION

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ABSTRACT OF DISSERTATION
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Understanding female registered nurse (RN) withdrawal from the nursing profession is important to solving the problem of the nursing shortage. This study combines sociological variables related to female career withdrawal, such as family priority and family income; managerial variables related to organizational determinants of job satisfaction, such as supervision; pay and routinization; and career commitment in a causal model designed to test the following hypotheses regarding the major causes of RN career withdrawal:

1. Commitment to nursing directly influences withdrawal and intervenes between all other variables and withdrawal.
2. Job satisfaction and the antecedents of job satisfaction influence withdrawal indirectly through commitment. The antecedents of job satisfaction tested are pay equity, routinization, communication, participation, supervision, promotional opportunity, physician relations, patient care time, and continuing education.
3. External personal factors such as opportunity for other employment outside nursing, degree of family priority, and other family income influence withdrawal indirectly through commitment.

This research was developed in conjunction with the Alabama Nurse Study, 1983, an attitude survey of 20,723 nurses. The response rate was 26 percent (7,491) To insure generalizability a random sample of 1076 (with a response rate of 67 percent) was tested against the census using Chi-square tests and found to be comparable. Psychometric tests determined the average construct factor loading to be .77 and the average construct Cronbach's Alpha to be .76.

A series of regression equations, zero-order correlations, and path analytic techniques were used. Tests of the statistical assumptions underlying each of these techniques were conducted and found to be within acceptable ranges for research.

The results were as follows: Commitment was an important construct in understanding withdrawal and did intervene between the effects of job satisfaction and withdrawal. The primary effects of the personal external factors were related directly to withdrawal not indirectly through commitment. Personal external factors were the most important determinants of withdrawal. In order of path coefficient contribution, the significant variables contributing to withdrawal of RNs were other family income (.28), participation (.09), pay equity (-.07), commitment (-.06), and promotional opportunity (.06). Recommendations included suggestions for futher study and suggestions for improvements in the study.

Abstract Approved by: Committee Chairman _____

Program Director _____

Date 3/15/84 Dean of Graduate School _____

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CHAPTER I

INTRODUCTION AND MODEL

The Problem

This research sought to study the effects of career and organizational variables on female registered nurse (RN) career withdrawal. The study draws on the literature of organizational withdrawal and career participation literature to develop a path analytic model that would improve our understanding of the causes of RN career withdrawal. These results should throw light on the causes of the nursing shortage and on reasons for female participation in the professional labor force.

The Nursing Shortage

At the time of this study the nursing shortage was well reported in the literature (Johnson, 1980a; Weiss, Sobeich, & Sauer, 1980; Aiken, Blendon, & Rogers, 1981). Studies in New Jersey, California, Maryland, and Texas between 1978 and 1980 revealed nurse vacancy rates between 10 and 13 percent (Public Health Service, 1981). Donovan (1980) noted that 96 percent of hospitals in a nationwide survey reported a shortage of full-time RN staffing, and 34 percent report a shortage of part-time RN staffing.

The shortage generated such a high level of concern that task forces, conferences, and reports were sponsored by various groups and

associations on how to retain nurses (Southern Regional Education Board, 1982; Alabama Hospital Association's Task Force on the Nursing Shortage, Note 1; The Birmingham Regional Hospital Council, Note 2; National Commission on Nursing, 1982).

The reasons often given for the shortage included: 1) the population was growing faster than the nursing work force, 2) the supply of new nurses being graduated was insufficient, 3) changes in medical technology and increased numbers of chronic patients increased the need for RNs, and 4) working conditions for nurses were poor (Johnson, 1980a; Weiss et al., 1980; Aiken, Blendon, & Rogers, 1981; Schorr, 1981; Arnold, 1980).

The above reasons did not provide an adequate explanation for the shortage. Population growth and the educational sector are not the cause of the shortage, because the shortage persists even though the number of RN graduates, as well as the number of nurses in the United States, grew at a more rapid rate than the population between 1960-1980 (Bureau of Health Professions, 1982; Public Health Service, 1981; Lindeman, 1980; Johnson, 1980a; Johnson, 1980b). The effects of increased medical technology and the increasing number of complex systemic ailments on the shortage are thought to be small (Weiss et al., 1980). Working conditions are the primary reason given for the shortage by most health and nursing administration authors (Lindeman, 1980; Price & Mueller, 1981; Personett & Boyle, 1980).

An extensive review of the literature resulted in the conclusion that studies on RN working conditions provided information on job satisfaction, absenteeism, and organizational turnover but did not provide

clues as to why a nurse withdraws from nursing. Most research on career withdrawal was found in the sociological literature but withdrawal studies which appeared in this literature did not include working condition variables. This study hypothesized that both working conditions and variables outside of the work place influence RN career withdrawal. By combining working condition aspects with external personal factors in a comprehensive model, this study should contribute to understanding the causes of the nursing shortage.

Female Career Participation

In addition to aiding the understanding of the nursing shortage, this study should help understand general female professional career participation. Research on female careers is important because 95.8 percent of all nurses, and 41 percent of the total United States labor force are female (Rytina, 1982; Women's Bureau, U.S. Department of Labor, 1978). More females are working than ever before - only six percent live in the idealized family situation of working husband, non-working wife and two children (Nieva & Gutek, 1982). Understanding female nurse career participation will aid in understanding professional female participation in other predominantly female service occupations such as social work and teaching (Benham, 1971).

There is substantial variability in women's career patterns. Approximately 30 percent are homemakers, 30 percent are career oriented, and 40 percent have a combination lifestyle (Chenoweth & Maret, 1980). Nurse career participation (66.84%) is similar to social workers (68.33%) and secondary school teachers (66.9%). The main difference between nursing and other predominantly female professions is the

opportunity for the female RN to work part time. Estimates (depending on the area of the country) of the number of nurses working part time range from 40 percent (Donovan, 1980) and 38 percent (Price & Mueller, 1981) to 22 percent (Lindeman, 1980; Birmingham Regional Hospital Council, Note 2).

The solution to the nursing shortage is multidimensional and requires understanding more than the organizational aspects of the nursing job. This expanded understanding can be achieved by studying interrelationships between RN working conditions and the external personal factors which may affect career withdrawal.

The Interrelationship Between Personal and Job Factors

One of the most interesting aspects of this study was that the model incorporated both job-related factors and personal external attributes into a unified framework. Most previous nursing withdrawal research in health administration focused on the organizational aspects of nursing and its relationship to job turnover without including the personal external factors which influenced the nurse. One study, which included some personal factors, concluded that 75 percent of organizational withdrawal may be attributed to job rather than personal reasons (Seybolt, Pavett, & Walker, 1978). In addition, Johnson (1980b) stressed that external forces on the individual, such as family responsibilities, must be included as factors in understanding the causes of the nursing shortage. While health administration research focuses primarily on job-related factors in understanding withdrawal, the sociological and social-psychological literature is primarily concerned with the personal

external forces on career participation without including job related aspects.

Little research has interrelated external personal factors and working conditions to develop a comprehensive model of female career withdrawal (Nieva & Gutek, 1982; Watson & Garbin, 1981). Chusmir's (1982) review of the literature on female job commitment stressed the importance of interrelating organizational and personal factors. Weisman, Alexander, and Chase (1980), likewise, found that organizational and non-organizational personal factors influence job satisfaction. Since these variables do contribute significantly to job satisfaction and, in turn, life satisfaction, an understanding of their interdependence will provide insight into the nursing shortage (Nieva & Gutek, 1982; White, 1979).

Hypotheses

The purpose of this study was to develop a causal model of female RN career withdrawal. The model was based on the managerial literature of job satisfaction and organizational withdrawal and on the sociological and social-psychological literature of female career withdrawal. The hypotheses being tested were as follows:

Hypothesis One: Increased job satisfaction increases commitment to nursing and therefore decreases career withdrawal.

Hypothesis Two: Increased external personal factors decrease commitment to nursing and therefore increase career withdrawal.

Hypothesis Three: External personal factors have a greater effect on career withdrawal than organizational factors.

The causal model used to test these hypotheses and explain female nurse withdrawal is presented in Table 1 and Figure 1. Table 1 contains the propositions of the model, whereas, Figure 1 represents the propositions in diagrammatic form. The causal model, because it is a set of interrelated propositions, represents a multivariate system. The model was based on the author's interpretation of the literature; other causal arrangements of the variables are possible, and maybe even superior.

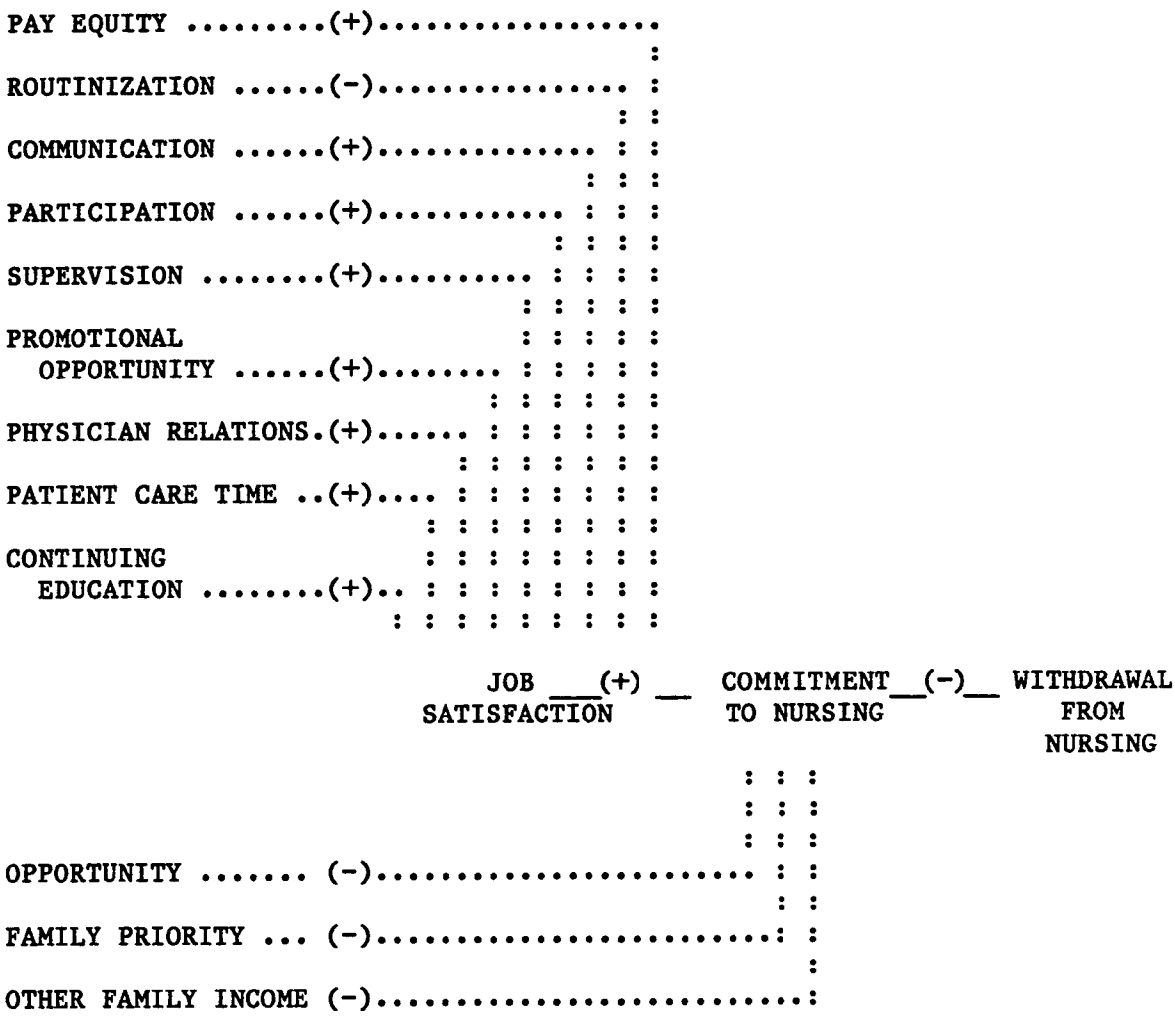
"A causal model is a set of interrelated propositions. For the model to be relevant, specification of the linkages between the independent and dependent variables should be made" (Price & Mueller, 1981, p. 9). The operational definition, discussion of the literature, and linkage into the model for each variable are provided in the following sections.

The Model

Determining the proper order for an RN career withdrawal causal model was difficult because no literature came to light that directly reviewed the effects of job satisfaction and external personal factors on career commitment or career withdrawal. The lack of specification of causal order became apparent when the author realized that the construct of job satisfaction has only been tested on organizational commitment and organizational withdrawal; career commitment has only recently appeared in the literature as a separate construct (Martin, 1982; Morrow, 1983); and organizational determinants of career withdrawal do not appear in the literature. Because of the lack of research

Table 1. Propositions

1.	Decreased commitment to a nursing career is expected to produce increased amounts of career withdrawal.
2.	Increased alternate job opportunities is expected to produce decreased commitment to nursing.
3.	Increased family priority is expected to produce decreased commitment to nursing.
4.	Increased other family income is expected to produce decreased commitment to nursing.
5.	Increased job satisfaction is expected to produce increased commitment to nursing.
6.	Increased pay equity is expected to produce increased job satisfaction.
7.	Increased job routinization is expected to produce decreased job satisfaction.
8.	Increased formal communication is expected to produce increased job satisfaction.
9.	Increased participation in management is expected to produce increased job satisfaction.
10.	Increased professional physician relations is expected to produce increased job satisfaction.
11.	Increased time for patient care is expected to produce increased job satisfaction.
12.	Increased satisfaction with supervision is expected to produce increased job satisfaction.
13.	Increased promotional opportunity is expected to produce increased job satisfaction.
14.	Increased opportunity for continuing education is expected to produce increased job satisfaction.



(+) = Positive Contribution

(-) = Negative Contribution

Figure 1. Path Analytic Model of Female Registered Nurse Career Withdrawal

on the effects of job satisfaction and commitment on career withdrawal, these constructs were placed in the model based on previous research into the similar constructs of organizational withdrawal and organizational commitment.

Withdrawal from Nursing

The concept of career withdrawal is similar to other forms of withdrawal such as turnover and industry movement (Price, 1977, p. 4). Career withdrawal is occupational, not organizational, in perspective. This study did not deal with interfirm or intraoccupational movement. For purposes of this research, the definition of female RN career withdrawal was the degree of voluntary individual movement across the membership boundary of the nursing profession. The focus was on why individuals withdraw from full participation as a nurse as measured by the number of hours worked.

The degree to which a nurse has withdrawn from nursing was measured operationally by the number of hours worked per week in nursing. Because nursing affords so many opportunities for part-time work, nursing withdrawal is not dichotomous as it appears in most turnover research Nurses may withdraw or return to nursing as part or full-time employees, with a registry, or through a hospital-based "call in" program.

Commitment to Nursing

There is no consensus on the definition of the commitment construct (Angle & Perry, 1981; Mowday, Porter, & Steers, 1982, p. 21; Morrow, 1983). Definitions include: the "willingness of social actors to give energy and loyalty to social systems" (Kanter, 1968, p. 499); "binding an individual to behavioral acts" (Salancik, 1981,

p. 62); "the nature of the relationship of the member to the system as a whole" (Grusky, 1966, p. 489); or "affective attachment to an organization from purely the instrumental worth of the relationship" (Buchanan, 1974, p. 554).

In addition to the lack of a consensus on the definition of commitment, the theoretical and empirical linkages between organizational and career commitment are not readily apparent, nor have they been the focus of comparative study (Morrow, 1983). Career commitment is obviously related to organizational commitment. According to Morrow, it is logical to presuppose that individuals might view work intrinsically but not feel special commitment to the employing organization. Wiener and Vardi (1980) support the differentiation of career and organizational commitment finding that differences do exist between organizational and career commitment.

The various definitions of commitment can be categorized as either attitudinal or behavioral. For example, "binding behavioral acts" is behavioral and "affective attachment" is attitudinal (Mowday et al., 1982, p. 26). Behavioral approaches view commitment as utilitarian, focusing on inducement/contribution transactions. Attitudinal approaches are psychological, exhibiting an orientation to the social system (Morris & Sherman, 1981). The attitudinal conceptualization of commitment is better than the behavioral since psychological factors are important influences on commitment (Morris & Sherman).

This study used an attitudinal definition for commitment which paraphrased Mowday et al.'s concept (1982), and extended organizational commitment to career commitment. The definition of career commitment

used in this study stressed the importance of one's career rather than one's current job. The definition of career commitment in this study was the relative strength of an individual's identification with the nursing profession as characterized by three factors: a) a strong belief in and acceptance of nursing goals and values, b) a willingness to exert considerable effort for nursing, and c) a strong desire to maintain identity as a nurse and to function in a nursing role.

The hypothesis that increased career commitment decreases career withdrawal was based on the results of organizational commitment/withdrawal studies. Because career commitment is similiar to organizational commitment, and the literature on organizational commitment provided concepts and ideas used in examining career commitment. Career commitment has not been tested for its relationship to career withdrawal and, therefore, the relationship between commitment and withdrawal was not directly determinable from the literature. One purpose of this study was to test the relationship between career commitment and career withdrawal.

Organizational commitment is a key variable in organizational studies of nursing turnover and absenteeism (Price & Mueller, 1981). Organizational commitment is especially important in studies of nursing and female organizational withdrawal (Altschul, 1979; Angle & Perry, 1981; Mowday, et al., 1982, p. 31). There is clearly an inverse relationship between organizational commitment and employee organizational withdrawal (Angle & Perry, 1981; Price & Mueller, 1981; Porter, Steers, Mowday, & Boulian, 1974; Weisman, Alexander & Chase, 1981; Mobley, Horner, & Hollingsworth, 1978; Mobley, Griffeth, Hand, & Meglino, 1979;

Holahan & Gilbert, 1979). Martin (1982) found a negative relationship between career commitment and organizational withdrawal. Based on the results of the organizational withdrawal and organizational commitment studies, the same inverse relationship between commitment and organizational withdrawal was expected to hold for career commitment and career withdrawal.

According to Morris and Sherman, 1981, no single widely accepted set of commitment antecedents has emerged. Antecedents of commitment can be separated into three categories: personal, role-related, and work experiences (Welsch & Levan, 1981; Mowday, et al., 1982, p. 29; Steers, 1977). These three categories are represented in this study's career commitment conceptualization through 1) alternate job opportunities, other family income, and family priority representing personal antecedents; and 2) job satisfaction variables representing work experiences. Studies have consistently confirmed the positive effect of job satisfaction on organizational commitment (Brief & Aldag, 1980; Welsch and LeVan, 1981; Weisman et al., 1981). The effects of the personal variables have not been tested as antecedents of organizational or career commitment. This study tested for the effects of job satisfaction, job satisfaction antecedents, and personal external factors on career commitment.

One of the major antecedents of commitment was expected to be job satisfaction. Job satisfaction is related to, yet distinguishable from, commitment. Commitment is more global in nature and requires more time than job satisfaction for employees to develop and change. Job satisfaction is specific, reflecting a particular job or aspects of

a job. Job satisfaction is more rapidly formed and more transitory in nature than commitment (Mowday, et al., 1982; Mowday, et al., 1979; Angle & Perry, 1981; Porter, Steers, Mowday, Boulian, 1974).

Job Satisfaction

Job satisfaction and its antecedents may be the most researched topics in management and psychology (Gruenberg, 1979). Job satisfaction is a central factor in determining withdrawal from an organization (Porter & Steers, 1973; Spencer & Steers, 1981). Price and Mueller (1981, p. 12) have noted that literature before 1972 supports the idea that job satisfaction directly affects organizational withdrawal. Recent research shows that job satisfaction is directly related to commitment (or intent to stay, a facet of commitment) and indirectly related to withdrawal (Brief & Aldag, 1980; Mobley, 1977; Mobley et al. 1979; Weisman et al., 1981). Studies with RNs have confirmed the direct positive effect of job satisfaction on organizational commitment and the indirect effect on organizational withdrawal (Price & Mueller, 1981; Bedeian & Armenakis, 1981; Nichols, 1971). Job satisfaction was expected to have a strong, positive, direct effect on career commitment, and an indirect and negative effect on career withdrawal.

Various researchers have defined job satisfaction as: ". . . the degree to which individuals like their work" (Price & Mueller, 1981, p. 12); ". . . individual emotional reactions to a particular job" (Gruenberg, 1979, p. 3) and " . . . the sum of the evaluations of discriminable elements of which the job is comprised" (Locke, 1969, p. 312). For purposes of this study, the definition of job satisfaction is the degree to which a RN perceives satisfaction with the general

concept of a job. This definition of job satisfaction was measured through a general scale rather than one which was facet based. According to Ferratt (1981), general job satisfaction scales are valid, reasonable methods of assessing job satisfaction and comparable to facet-based scales.

Placement of job satisfaction and commitment in this causal model, was based on interpretation of the literature. In this model job satisfaction was placed as an antecedent of commitment. As with Price and Mueller's study (1981, p. 61), it is difficult to test for a reciprocal effect between job satisfaction and career commitment because both constructs were measured at the same time. Price and Mueller were able to estimate the magnitude of the reciprocal effects through complex statistical techniques (Linear Structural Relations) and found proof that the path from job satisfaction to commitment was statistically significant, and the path from commitment to job satisfaction was statistically insignificant.

The traditional antecedents of job satisfaction were well identified in the managerial literature. Antecedents of job satisfaction that are particular to the nursing profession, also appeared in the nursing administration literature. This current study analyzed the direct, indirect, and total effects of job satisfaction antecedents on job satisfaction, career commitment, and withdrawal from nursing.

Antecedents of Job Satisfaction

The antecedents of job satisfaction used in this study were of two types. First were the traditional causes of job satisfaction found in the managerial literature, such as pay equity, routinization, communi-

cation, participation, supervision, and promotional opportunity. Second were causes of job satisfaction particular to nursing jobs found in the nursing administration literature. These included physician relations, patient care time, and opportunity for continuing education.

Pay Equity. Pay refers to money and its equivalents, such as fringe benefits (Price & Mueller, 1981, p. 16). Pay equity was defined in this study as the nurse's social-psychological response to money and benefits received. Most research measures pay as dollars directly received by the member (Price, 1977, p. 68), however, it is not the actual level but the relative level of pay which is related to job satisfaction (Gruenberg, 1979, p. 59). Measuring pay subjectively emphasizes differences in values and expectations of individuals. (Hackman & Lawler, 1971; Weisman et al., 1980).

Conclusions on the effects of pay on organizational withdrawal, job satisfaction, and commitment have consistently found pay to be a major determinant of job satisfaction, and low pay to be a cause of organizational withdrawal (Porter & Steers, 1973; Steers & Rhodes, 1978; Price & Mueller, 1981). While there has not been a specific study on the effects of pay on career withdrawal, Friss (1982) found satisfaction with pay to be closely associated with a willingness to stay in nursing and Personett and Boyle (1980) concluded that low pay may be a major reason for nurses leaving nursing (1980). Low pay has been found to be a primary reason for the nursing shortage, implying pay is a cause of nursing withdrawal (Nursing Shortage? Yes!, 1979; Aiken, et al., 1981). The Birmingham Regional Hospital Council (Note 2) and Hallas (1980) found between six and thirteen percent of nurses

studied stated low pay as a reason for withdrawal from the nursing profession. Only one study noted that career withdrawal may increase with higher pay after taxes is considered (Link & Settle, 1981). Based on this literature, this study hypothesized pay should influence withdrawal through job satisfaction; with increased pay increasing job satisfaction and decreasing withdrawal. The indirect influence of pay on withdrawal through job satisfaction was because pay has consistently been found to be an important direct determinant of nursing job satisfaction (Decker, Moore, & Sullivan, 1982; Friss, 1982; Slavitt, Stamps, Piedmont, & Hasse, 1978; Moore, Gatt, & Monsma, 1981; Hallas, 1980; Godfrey, 1978c).

There is disagreement in the literature over the intervening variables between pay and organizational withdrawal behavior. Price and Mueller (p. 54) found pay to be significantly related to intent to stay but not to job satisfaction. Martin (1981) found pay not to be directly related to job satisfaction. Welsh and LeVan (1981) concluded pay was not related to commitment but was significantly related to job satisfaction. Brief and Aldag (1980) found pay not to be related to commitment. This study tested for the effects of intervening variables (commitment and job satisfaction) between pay and career withdrawal.

Routinization. "Routinization is the degree to which the job is repetitive, with high routinization signifying a high degree of repetitiveness" (Price & Mueller, 1981, p. 14). The literature indicates that increased routinization increases organizational withdrawal behavior (Price & Mueller, 1981; Price, 1977; Lawler, 1973; Porter & Steers, 1973). Studies of nurses and female service employees showed that

routinization was directly related to job satisfaction (Price & Mueller; Martin, 1981). Slavitt et al. (1978) determined that job content and type of work, especially the type of tasks required in the job, had a significant effect on job satisfaction. Aiken et al. (1981) noted that nursing jobs are highly routinized and job dissatisfaction and frustration often result from the routine. Godfrey (1978c) suggested that 80 percent of a nurse's time is spent in routine physical care which at times is highly repetitive, resulting in job dissatisfaction.

Job satisfaction has been found to be an intervening variable on the effects of routinization on turnover (Price & Mueller; Porter & Steers, 1973). No empirical evidence was found to show that commitment was significantly related to routinization. Price and Mueller tested for this relationship and found it to be insignificant. In this study routinization was expected to have a negative direct effect on job satisfaction and to effect withdrawal indirectly through job satisfaction.

Communication. In this study communication was defined as "the degree to which information is transmitted among members of a social system" (Price, 1977, p. 73). The focus is on formal communication - that which is directly related to role performance (Price, p. 74). Price concluded that it was formal communication which has been measured in job satisfaction studies, and which affects job satisfaction and turnover (pp. 73-74).

The importance of communication on RN job satisfaction, organizational commitment, and withdrawal is clear. Several studies have found that communication affects job satisfaction and ultimately employment decisions (Martin, 1981; Godfrey, 1978a; Birmingham Regional Hospital Council, Note 2). Communication has a strong affect on job satisfaction (Price, p. 74; Price & Mueller, 1981, p. 6). Decker et al. (1982) found poor communication to be a major determinant of RN job dissatisfaction. Recent literature supports the negative impact of poor communication on turnover (Price & Mueller, 1981, p. 15; Muchinsky & Tuttle, 1979). Studies have shown that the impact of communication on turnover is through job satisfaction (Price & Mueller, 1981, p. 15; Weisman et al., 1981; Welsch & LeVan, 1981). In the current study increased communication should increase job satisfaction which should then increase commitment to nursing and therefore decrease career withdrawal.

Participation. "Participation is the degree of power an individual exercises concerning performance on the job" (Price & Mueller, p. 14)." Participation does not refer to power to influence major organizational decisions but is limited to power to influence the immediate job (Price & Mueller, p. 14).

Participation by nurses is a major issue in research on nurse satisfaction. Godfrey (1978b) found that 25 percent of nurses studied felt they had inadequate influence over their jobs, and this lack of influence led to job dissatisfaction. Decker et al. (1982) suggested that nurses need to feel like part of a "team," with this perception of participation increasing job satisfaction. Participation is highly valued by nurses. Because of the perceived lack of participation, it is often

demanded by RNs during collective bargaining (Bloom, Partlette, & O'Reilly, 1981; Bentivegna, 1979).

The literature indicated that higher participation resulted in lower turnover (Porter & Steers, 1973; Price, 1977, p. 76-77; Lawler, 1973 p. 152-153, 158-159, 163; Pettman; 1973; Muchinsky & Tuttle, 1979). Price and Mueller found that participation directly influenced job satisfaction but not intent to stay (1981, p. 53-54). Increased participation was expected to have a strong positive direct effect on job satisfaction and a strong indirect effect on commitment and withdrawal.

Supervision. The definition of supervision for this study was satisfaction with the RN's primary supervisor as measured by four facets: support, team building, goal emphasis, and work facilitation. (Hauser, Percorella, & Wissler, 1977, p. 24). Supervisory relations is a major concern of RNs. Hallas (1980) found that 33 percent of the nurses studied felt that poor supervision constituted a major reason for dissatisfaction. Godfrey (1978a) found that RN complaints about supervisors include rigidity in work scheduling, inexperience in the job, and unfair and authoritarian styles of leadership.

This construct is directly related to job satisfaction (Gruenberg, 1979; Steers & Rhodes, 1978) and was therefore placed in this model as a direct antecedent of job satisfaction. It has also been found to be an antecedent of organizational commitment (Brief & Aldag, 1980; Welsch & LeVan, 1981). Based on the causal relationship hypothesized between job satisfaction and commitment, in this model supervision was expected to affect commitment indirectly through job satisfaction. Finally, supervision is related to organizational withdrawal (Muchinsky & Tuttle;

Porter & Steers, 1973) with increased supervisory satisfaction resulting in decreased organizational turnover. In this study the effects of supervision on career withdrawal were not expected to be direct. Supervision should affect career withdrawal through a strong effect on job satisfaction and indirect effects on commitment and withdrawal.

Supervision was expected to be a major determinant of RN job satisfaction, commitment, and withdrawal. The strong effect of supervisory satisfaction was based on the premise that good supervision is important to nurses. Godfrey (1978a) found 35 percent of nurses surveyed did not trust or had little trust for their supervisor. Hallas found that 36.5 percent of nurses studied felt poor supervision was a major problem in nursing, and 10 percent listed supervision as the main reason for leaving an organization. Joiner (1978) found poor supervision to be a primary reason hospital employees unionize, a reflection of dissatisfaction.

Promotional Opportunity. Promotional opportunity is the degree of upward occupational mobility within an organization (Price, 1977, p. 88). It has been found to directly affect job satisfaction and indirectly affect organizational commitment and withdrawal. Most literature depicted a direct positive relationship between promotional opportunity and job satisfaction (Steer & Rhodes, 1978; Welsch & LeVan, 1981; Price & Mueller, 1981). Donovan (1980) found that it was a key variable affecting job satisfaction for 42 percent of the nurses surveyed, while only 16.8 percent of the same nurses were satisfied with their opportunity for advancement. Moore et al. (1981) noted that over 55 percent of RNs surveyed were dissatisfied with opportunities for promotion. Promotional

Promotional opportunity has been found to have a direct positive affect on organizational commitment (Brief & Aldag, 1980; Welsch & LeVan). Finally, the construct is negatively related to organizational withdrawal (Price & Mueller, p. 59; Price, p. 88; Porter & Steers, 1974). In this model, promotional opportunity was expected to directly influence job satisfaction directly with increased promotional opportunity increasing job satisfaction. Promotional opportunity should indirectly affect commitment, and subsequently withdrawal.

Physician Relations. The definition of physician relations is the amount and type of professional interaction between physicians and nurses (Slavitt et al., 1978). The type of professional interaction measured in this study was the RN's perception of respect by the physician for the nurse's professional knowledge through input into patient care decisions.

Nurse/physician relationships are perceived as a major problem affecting nurse job satisfaction, turnover, and withdrawal. A study by Schrader (1981) found nurse's perceptions of physicians as insensitive to the RN's needs as a major determinant of turnover. Wandelt, Pierce, and Widdowson (1981) found that lack of positive professional interaction between RNs and physicians was a major cause of nurse withdrawal. Personett and Boyle (1980) found nurse/physician relationships to be a major reason for the nursing shortage. Generally, RNs are dissatisfied with physicians' acceptance of nurses' knowledge which makes their professional relations with physicians unsatisfactory (Godfrey, 1978a; Personett & Boyle, 1980; Slavitt et al., 1978).

Only the effect of physician/nurse relationships on job satisfaction has been tested. This model depicts an indirect effect of physician/nurse relations on career commitment and career withdrawal through job satisfaction.

Patient Care Time. The definition of patient care time is the amount of time a nurse spends in direct care of the patient. Patient care time was expected to be important to nursing job satisfaction because it contributes to recognition through positive feedback from the patient, is the primary responsibility of the nurse, is what a nurse is trained to do, and is a primary reason a person becomes a nurse. Godfrey (1978c) found opportunity to provide direct patient care to be of major importance to RNs.

Nursing research depicts lack of patient care time to be a major dissatisfier of nurses (Culprit in Shortage, 1981; Moore, et al., 1981; Birmingham Regional Hospital Council, Note 2). Hallas (1980) noted that the lack of patient care time may be the most important determinant of nursing job dissatisfaction. Weisman et al. concluded that increasing patient care contacts for the nurse should increase RN job satisfaction and reduce RN turnover. In this model, patient care time was expected to have an indirect effect on career withdrawal through a direct effect on job satisfaction and indirectly through career commitment.

Continuing Education. Continuing education is defined as the opportunity for sufficient professional education provided by the organization, which is perceived by the nurse as meeting her post formal degree educational needs. Continuing education is not often included as an antecedent of RN job satisfaction, however, continuing education has

been found to be important to RNs. Godfrey found that 34 percent of nurses surveyed would like to have more continuing education (1978c). Donovan (1980) found that 63 percent of the nurses surveyed felt educational opportunities were important while only 26.7 percent were satisfied with their educational opportunities. Weisman et al. (1980) found that continuing education opportunities influenced job satisfaction through autonomy. Wandelt et al. (1980) noted that RN job dissatisfaction can be caused by limited continuing education opportunities. The effects of continuing education on commitment and withdrawal were not found in the literature. This study tested for the indirect effect of continuing education on career withdrawal through its direct effect on job satisfaction. Continuing education was expected to have a positive effect on job satisfaction and an indirect effect on withdrawal.

External Personal Factors

Personal factors outside the work situation, such as alternative employment opportunities, family priority, and other family income, have been identified as antecedents of commitment and withdrawal (Price & Mueller, 1981; Nieva & Gutek, 1982; Chusmir, 1982). Personal external factors are expected to have a greater affect on career withdrawal (through commitment) than the antecedents of job satisfaction (Seybolt, et al., 1978).

Opportunity. Opportunity is the availability of alternative jobs for the individual in the environment (Price, 1977, p. 81; Price & Mueller, p. 13). In this study opportunity was operationalized as the perceived ease of obtaining a job suitable to the individual.

Opportunity significantly affects turnover (Price & Mueller; Price, p. 82); commitment and intent to stay (Price & Mueller, p. 54, 59; Brief & Aldag, 1980); and job satisfaction (Price & Mueller). Price & Mueller found that, besides intent to stay, opportunity had the highest total affect on turnover.

Opportunity also affects career withdrawal. Bishop (1973) concluded that availability of alternative work is a major factor influencing whether married nurses worked as nurses. Krol and Kaye (1981) noted that expanded job opportunities for women are a major reason for nurses leaving nursing.

Opportunity is hypothesized to have a strong affect on withdrawal through commitment. It has been found to have a strong relationship to turnover; however, the strength of the relationship to career withdrawal has not been tested. This study tested for the direct effect of opportunity on career commitment and the indirect effect of opportunity on career withdrawal. Opportunity was expected to have a negative effect on commitment with increased opportunity causing decreased commitment.

Family Priority. Family priority is defined as the strength of priority placed on traditional family values versus a career as measured by a perceived ranking of being a good mother, having a successful career, being a good citizen, being a good spouse, and being a good member of a church or synagogue. Attitudes toward motherhood, family, and spouse influence the decision to remain in the work force (Feldbaum & Levitt, 1980; Nieva & Gutek, 1982).

Research on organizational commitment shows family responsibility (Brief & Aldag), and kinship responsibility (Price & Mueller) to be

significantly related to organizational commitment but not to job satisfaction. Family priority is also related to commitment with increased family priority resulting in decreased commitment (Chusmir, 1982; Farmer & Bohn, 1970).

Family priority seems to be a major reason for RN withdrawal. The American Nurse's Association found that married nurses had greater proclivity to withdraw from nursing than single RNs through part-time work (1981). The Birmingham Regional Hospital Council reported that 52 percent of the nurses who left nursing listed family obligations as a major reason (Note 2). Shift work, which is so common in the nursing profession, may be one reason for the importance of family priority. Shift work results in more family-related problems, less time with children or spouse, and poorer health (Finn, 1981).

Family priority was expected to have a direct negative effect on career commitment in this model, with increased family priority resulting in decreased commitment to nursing and subsequently an increase in withdrawal from nursing.

Other Family Income. Other family income is the total income of the family minus wages paid to the individual. Other family income is generally recognized as a significant positive determinant of female career withdrawal (Link & Settle, 1980; Heckman & Willis, 1977; Sobol, 1973).

Bognanno, Hixson, and Jeffers (1974) stressed that the spouse's earnings are the most important variable in the RN's decision to work. A study by Bishop (1973) reflected the importance of family income on withdrawal by finding that an increase of $1,000 (1973 dollars) in the

median family income resulted in a four percent decline in female employment. Sloan and Richupan (1975) found the labor force participation/spouse wage elasticity for married nurses to be -0.16. The regressions clearly established that the spouse's income has an impact on married nurse's work patterns. Chenoweth and Maret (1980), however, concluded that the negative effect of the spouse's income on participation is weakly supported.

The literature did not reveal the variables which could intervene in the other family income/career withdrawal relationship. The lack of variable identification was primarily because the majority of the studies on other family income are economic not psychological. Other family income was expected to have a strong negative direct effect on commitment, with an increase in other family income resulting in a decrease in commitment to nursing. Other family income was expected to affect career withdrawal indirectly through commitment.

General Notes About the Model

There are two remaining points which should be made about the model. These include the place of correlates in the model and the comprehensiveness of the model.

First, correlates (demographic variables) of job satisfaction, commitment, and withdrawal were not included in the model. Correlates were not included because they do not indicate the means whereby variations are produced (Price & Mueller, p. 21). Price and Mueller use the example of age to demonstrate the exclusion of correlates. The literature supports a negative relationship between age and turnover. However, using age as a variable does not indicate what it is about age that has a

negative impact on turnover. It is not age itself that produces variations in turnover but the variables commonly associated with age such as routine jobs, low pay, and low kinship responsibility (Price & Mueller, p. 21-22).

Second, peer group integration was identified in the organizational literature as a significant determinant of job satisfaction. Peer group integration was the only determinant identified in the literature which was not included in this model. It was not included because it was not found to be significant in Price and Mueller's comprehensive study of nurse turnover, and primarily because the instrument used only provided a surrogate measure for intraorganizational peer group integration and would not allow adequate measurement of the construct.

This model was tested with a survey of Alabama nurses. The survey of Alabama nurses provided an opportunity to construct an instrument which would meet the needs of this study and the survey sponsors. A discussion of the instrument, survey methods, and data analysis methodology follows.

CHAPTER II

DATA AND METHODS

Study Population

This study was conducted in conjunction with a larger project called the Alabama Nurse Study, 1983, (ANS), which was jointly sponsored by the Alabama Hospital Association, University of Alabama Hospitals, and the Graduate Program in Hospital and Health Administration at the University of Alabama in Birmingham. The researcher developed the ANS survey instrument for the purposes of this dissertation and those of the ANS sponsors.

In 1982 the ANS sponsors conducted a census of all registered nurses (20,723) retaining a nursing license in the state of Alabama. All female registered nurses responding except those who had involuntarily withdrawn from nursing were included in this analysis. Involuntary withdrawals are those which occurred because of illness or job retirement at the age of 65 or over.

Of the three traditional female professions (nursing, social work, and teaching) nursing is particularly suited for the study of female career withdrawal. First, hospitals are experiencing a shortage of nurses and understanding the causes of this shortage is important to hospital administrators and health planners. Second, nurses generally retain their license to practice after leaving nursing, providing a

readily available data set which included persons who were no longer practicing. In this study 8.5 percent of the respondents were voluntarily inactive. Third, nursing provides great opportunity for partial withdrawal through part-time employment. Approximately 20 percent (19.8) of the respondents included in this study work part time (205 working less than 15 hours per week, 609 working 15-24 hours per week, 471 working 25-34 hours per week). This is comparable to previous studies in other areas of the country and urban settings which have found that between 22 and 38 percent of active RNs work part time (Lindeman, 1980; Birmingham Regional Hospital Council, Note 2; Price & Mueller, 1981).

Data Collection

The Alabama Nurse Study sponsors elected to conduct a census of all RNs by mailing the questionnaires under a nonprofit permit rather than using first-class postage. Using a nonprofit permit for survey research can create problems with missing units of analysis because of the potential for a poor response rate. To insure that the respondents were representative of the nursing population in the state, this researcher identified a random sample of 1,076 nurses. This random sample received two first-class mailings of the questionnaire separated by a post card reminder.

The response rate for the survey was very good; 7,491 (36%) of the total population, including the random sample were received. The response rate for the random sample was 717, 67 percent. It was determined from a survey of nurses in selected Alabama hospitals and from responses to the random sample that approximately eight percent of the

questionnaires could not be delivered. Accounting for the undeliverable questionnaires would make the response rate of the bulk mailing 39 percent. Of the 7,491 resonding, 6,548 were included in this analysis after involuntary withdrawals were removed.

Selected variables of the random sample representing major attributes of the nursing population (hours worked, type of nursing degree, shift, age, years since licensure, and race) were tested against the bulk mailing using the chi-square goodness of fit test to insure the representativeness of the bulk mailing. The two mailings were similar on all of the 31 attributes tested, indicating that the bulk mailing was representative of the Alabama RN population. The results of the chi-square tests are included in Appendix C.

Measurement

Construction of the Instrument

The questionnaire was carefully developed, pretested, and tested for readability (Payne, 1951; Miller, 1977). The Random House Readability Analysis program for microcomputers was used to determine a Flesch Grade Level (the grade level at which the language should be clearly understood) of 7.5 grades. As suggested by Billings and Wroten (1978), to improve the validity and reliability of an instrument when using an instrument for path analysis, the format was carefully varied and the constructs were clearly separated. A copy of the instrument used in the ANS is provided in Appendix A. Many of the questions on the ANS instrument were not used for this study, therefore, Appendix B provides a listing of the questions used in this study.

In addition to varying the format and separating the constructs on the instrument, to enhance the validity and reliability of the questionnaire, items were taken or modified from existing instruments which had been carefully validated on nurses and other health workers. The only exception was the continuing education construct, which was developed specifically for this instrument. Limitations on space in the questionnaire required that only the items from the original instruments with the highest factor loadings (0.58 and above) were included in the survey questionnaire. Table 2, Original Instrument Construct/Item Identification, provides a listing of the original instruments used to develop the questionnaire and the construct/item from each instrument.

Scoring

Price and Mueller's (1981) and Nunnally's (1978) psychometric methodology were used extensively in this study. The measures and scoring methods from the questions used in this study from the ANS questionnaire are presented with the questions in Appendix B. The questionnaire included multiple items for each construct tested.

The variables used in the path analysis were averages of individual item scores in each construct except family priority and other family income. Family priority was an ordinal ranking of responses to selected combinations of three items. Other family income was developed by subtracting the midpoint of the respondent's income from the midpoint of the total household income.

Table 2. Original Instrument Construct/Item Identification

Instrument	Construct	Item
Mowday & Steers, 1979	Commitment	1 - 4
Price & Mueller, 1981	Promotion	9 - 10
	Job Satisfaction	26 - 28
	Participation	29 - 31
	Communication	32 - 35
	Opportunity	36 - 37
	Routinization	38 - 39
	Pay Equity	40 - 48
	Income	91 - 92
Hauser & Percorella, 1977 & Wissler	Supervisory Satisfaction	11 - 14
Kaiser-Permanente, 1978 (Note 4)	Physician Relations	23 - 24
Slavitt, Stamps, Piedmont & Hasse, 1978	Patient Care	15 - 16

Validity

Using Price and Mueller's methods, validity was assessed in two ways. First, the degree of intercorrelation among the indices was determined to assess "discriminant validity." Second, factor analysis was used to determine the construct validity (Nunnally).

Discriminant validity through correlation analysis is presented in Table 3, Construct Correlation Matrix. Table 3 shows that the different correlations are acceptable for use of the separate constructs in the regression and correlation analysis.

Table 3. Construct Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	-.10	1													
3	.21	-.11	1												
4	.21	-.23	.31	1											
5	.28	-.17	.34	.31	1										
6	.35	-.22	.15	.23	.39	1									
7	.24	-.15	.25	.33	.26	.19	1								
8	.15	-.09	.12	.11	.12	.12	.10	1							
9	.32	-.17	.22	.19	.34	.34	.15	.12	1						
10	.01	-.11	.03	.05	.03	.10	.05	.06	.08	1					
11	-.01	-.01	.01	-.02	.01	-.01	-.01	-.01	.01	.02	1				
12	-.06	-.01	.01	.01	.02	.04	-.01	.01	.02	.12	.49	1			
13	.25	-.34	.28	.30	.34	.34	.31	.11	.23	.09	.08	.07	1		
14	.36	-.20	.22	.26	.31	.32	.30	.07	.21	.04	.03	-.05	.53	1	
15	-.09	.05	-.01	-.11	-.04	.03	-.08	-.01	.01	.06	.21	.34	.01	-.08	1

Note: 1 = Pay Equity, 2 = Routinization, 3 = Communication,
4 = Participation 5 = Supervision, 6 = Promotional Opportunity
7 = Physician Relations, 8 = Patient Care Time,
9 = Continuing Education, 10 = Opportunity, 11 = Family Priority
12 = Other Family Income, 13 = Job Satisfaction, 14 = Commitment
15 = Withdrawal.

The items for 13 constructs were tested for construct validity using factor analysis (with varimax rotation) which tests for the emergence of a single factor for each construct as evidence of a single

construct dimension. Family priority and other family income were not used in the factor analysis because of their scoring techniques which combined multiple questions. The factor analysis displayed excellent construct validity. All constructs loaded cleanly into separate factors with the lowest average factor loading being .51 for job satisfaction. Table 4, Number of Items and Average Loading, indicates each construct, the number of items, and the average loadings for each construct. Appendix B reports the factor loadings for each item under the explanation of question scoring.

Reliability

Reliability was assessed using Cronbach's Alpha (Cronbach, 1951) to measure the internal consistency among the items composing each construct. Table 5, Cronbach's Alpha for Consistency, displays the Alpha's for each construct. Because the constructs family priority, other income, and career withdrawal were not obtained by averaging the items, Alpha's cannot be computed. The overall Alpha average is .76 which is an acceptable level of consistency.

Qualifications

The first qualification in interpreting the methodology in this study is the assumption of interval scaling. As in most behavioral science research, the scales produced in this study were ordinal. The assumption of interval scaling was critical and justifiable for the method of analysis being used. Nunnally (1978), Brown (1976), and Wolins (1978) affirm the acceptability and reliability of using parametric tests on ordinal data typical of behavioral science studies.

Table 4. Number of Items and Average Loading

Construct	Number of Items	Average Factor Loading
Commitment	4	.73
Job Satisfaction	4	.51
Pay Equity	9	.81
Routinization	2	.84
Communication	4	.84
Participation	3	.83
Physician Relations	4	.79
Patient Care Time	3	.77
Supervision	4	.72
Promotional Opportunity	2	.75
Continuing Education	4	.76
Opportunity	2	.88
Average		.77

Table 5. Cronbach's Alpha for Consistency

Construct	Alpha
Commitment	.79
Job Satisfaction	.64
Pay Equity	.84
Routinization	.68
Communication	.87
Participation	.85
Physician Relations	.84
Patient Care Time	.66
Supervisory Satisfaction	.78
Promotion	.63
Continuing Education	.80
Opportunity	.72
Average	.76

Price and Mueller (1981) reiterate that contemporary behavioral science and statistical literature stress that multiple regression techniques can and should be used with ordinal data.

A second qualification expressed in Price and Mueller and Wolins (1978) is that individual perceptions of constructs such as pay and routinization are situational conditions. There is a question whether subjective individual responses can adequately measure such constructs. Hackman and Lawler (1971) stress that subjective perceptions of job attributes are the relevant method of measurement. Subjective measurement emphasizes differences in values or expectations of individuals as determinants of satisfaction. Price and Mueller note that such subjective measurement is justifiable because organizational researchers typically measure characteristics by individual perceptions, proper psychometric methods help insure validity of the indices, and this model agrees with a wide base of literature on job satisfaction, organizational withdrawal, and female career withdrawal.

Method of Analysis

These data were analyzed in three stages. First, Pearson product moment correlation analysis (or simple linear correlation) was used to provide an initial interpretation of the relationships between the three successive dependent variables and the determinants. Second, multiple regression was used to develop models for job satisfaction, commitment, and withdrawal. Third, path analytic techniques were used to analyze direct and indirect effects of the variables. The Statistical Analysis System (SAS) and the Statistical Package for the Social Sciences (SPSS) were used to perform the statistical computations.

Multiple regression analysis was appropriate for this research because it allowed for an assessment of the net influence of each variable relative to the others, as well as for an indication of the total explanatory power of the model (Price & Mueller, 1981; Younger, 1919; Kleinbaum & Kupper, 1978; Kerlinger & Pedhazur, 1973). Interpretation of prior research has indicated that the variables included in this model are the most probable determinants of withdrawal. Because multiple regression provides standardized net coefficients, it is a particularly useful technique for interpreting whether a determinant's influence is nonspurious and which determinants are the most important. Because the model was designed to include all major determinants of career withdrawal, it was believed that the total explained variance would be relatively high. Multiple regression analysis was necessary for determining the amount of explained variance for withdrawal.

Two multiple regression techniques were used. First, stepwise regression was used to develop the initial regression models. Three stepwise models were developed, one for each dependent variable in the path model - job satisfaction, commitment, withdrawal. Each of these stepwise models included all variables which preceded it in the causal interpretation represented by the path diagram (Figure 1). Table 7, Chapter III, provides a listing of the variables included in each stepwise model. Second, General Linear Model was used to run the final path models. The models used in the final path calculations were determined by developing new models with only the significant variables from the stepwise equations. The results of the final path models are included

in Table 8 and Figure 2. Appendix E includes copies of each computer printout.

Path analysis was the primary technique used in this study because it allows for estimating direct, indirect, and total effects of variables in a carefully constructed model (Heise, 1975). Basic elements of path analysis include a causal model designating relationships among several variables, and a set of structural equations describing the model (Hernandez, 1981). Path diagrams were used to represent the causal model and were based on the results of the multiple regression analysis using variables standardized to a mean of zero and a standard deviation of one (Heise). Standardizing variables is the recommended procedure for cross sectional studies (Billings & Wroten, 1978; Heise). The square of the paths (the standardized partial regression coefficient) is the amount of variance in the dependent variable that is explained by the predictor (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975; Hernandez, 1981).

According to Billings and Wroten (1978) in any application of path analysis, specific and important assumptions should be met if the causal inferences are to be correct. Because path analysis uses ordinary least squares regression, the assumptions of regression as well as the assumptions of causal modeling should be met. The two assumptions of causal modeling which should be assessed are ordering of variables (Billings and Wroten), and causal closure (Nie et al.). The regression assumptions which should be assessed are: a linear relationship should exist between variables of the model (Nie et al.; Martin, 1981; Billings & Wroten); the model should be additive (Heise; Billings

& Wroten); and residuals of endogenous variables should not be correlated with one another (Nie et al.; Pedhazur, 1982; Billings & Wroten).

The two assumptions of causal modeling were met by developing a sound theoretical base, defending the ordering of the variables in building the model, and examining each variable order for plausible alternatives (Billings & Wroten). Placement of the variables in the causal model was based on interpretation of the literature presented in Chapter I. The placement of the job satisfaction antecedents is relatively non-controversial because of the large amount of previous research on the relationship between these antecedents and job satisfaction. The placement of job satisfaction as a determinant of commitment was based on Price and Mueller's study (1981). The interpretation of personal external factors influencing withdrawal indirectly through commitment was based on a general interpretation of the literature. This study provided empirical evidence as to whether career commitment intercedes in the effects of these personal external variables on withdrawal. Commitment was placed in the model as the only direct influence on withdrawal, interceding in the effects of all other variables. The placement of commitment as the only direct effect was based on interpretation of the literature and Price and Mueller's path analytic study of nurse turnover. This study provided further evidence (in a career versus organizational model) as to whether commitment is indeed the only direct effect on withdrawal.

The regression assumptions for the use of path analysis were met through testing for linearity, additivity, and correlated residuals. The results of these tests are provided in Appendix C.

First, linearity was assessed empirically using the SPSS subprogram breakdown (Nie et al., 1975). Interpretation of the linearity test results show that the model is suitable for regression and path analysis.

Second, additivity was tested by comparing paired correlation coefficients for two variables (one independent and one dependent) with a third, independent control variable. No significant difference in the correlations suggests that the variables are additive (Walker & Lev, 1953). Reviewing the results of the additivity tests showed that the assumption of additivity was not violated.

The third assumption, that the residuals of endogenous variables are not correlated with one another or with the predictor variables that precede it in the path model, was also met. According to Pedhazur (1982, p. 582), the implication of the residuals not being correlated among themselves or with the predictor variables that preceed it in the path model is that all relevant variables are included in the model that is being tested. Other variables are subsumed under residuals and are assumed not to be correlated with the relevant variables. Each endogenous variable is conceived of as linear combinations of exogenous and/or endogenous variables in the model and a residual. Exogenous variables are treated as "givens." Moreover, when exogenous variables are correlated among themselves, these correlations are treated as "givens" and remain unanalyzed. To test for residual correlation, predictor and residual variables from each full equation were merged into a single data set and correlated with one another. Examination of the results of this residual/predictor correlation show that the

assumption of residuals not being correlated with themselves and with predictor variables that precede them in the model was not violated.

In addition to the above three assumption tests, these models do not show a problem with multicollinearity or bimodal distribution of responses. Multicollinearity is generally considered to be a situation where the regression model has correlated independent variables. When multicollinearity is present, the net regression coefficients may be unreliable (Younger, 1979). There is, however, no consensus about the meaning of multicollinearity or what constitutes high correlation among independent variables (Pedhazur, 1982). Murdock (Note 5) notes that mulitcollinearity should be considered a problem when three conditions exist: 1) the simple linear correlation between predictors is high with high considered above $\pm$ .7; 2) the "t" values of the Betas are not significant, and 3) the R^2 is between .7 and 1.00. Analysis of the regression results against these criteria did not indicate a problem with multicollinearity in the model.

There was also no problem with the responses to questions on the instrument being bimodal. Appendix C contains the frequency response to questions used in the instrument. Analysis of these responses indicated that the questions were generally normally distributed or slightly skewed to the higher values.

Having adequately developed a causal model in Chapter One and tested for the usefulness of the path analytic technique in the analysis in this chapter, Chapter Three presents the analysis of these data.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

The results of this research are presented in two sections. First, zero-order (simple linear) correlations are examined to determine the relationships between the three successive dependent variables (job satisfaction, commitment, and withdrawal). Second, multivariate analysis is presented which includes analysis of standardized regression models for each dependent variable and development and analysis of a path diagram to determine the direct, indirect, and total effects of the variables on withdrawal. Following the presentation of results the interpretation of the results is given by each of the three hypotheses. In addition to the presentation and interpretation of the results of the correlation and multivariate analyses, the mean response to each construct is provided in Appendix D for clarification.

In interpreting these results one must consider that with a large sample size ($n \approx 6{,}500$), even substantively meaningless regression coefficients and correlations will appear significant (Pedhazur, 1982, p. 617; Kerlinger & Pedhazur, 1973, pp. 446-447; Younger, 1979, p. 246). Because of the effect of the large sample size on the significance tests, only the results with a significance level of .0001 were reported. Also in path analysis it is customary to report only "meaningful" Betas which usually are $\pm$ .05 or above (Pedhazur, p. 617). Therefore, in this study only those correlations and Betas of $\pm$ .05

or above with a significance level of at least .0001 were interpreted as meaningful. In this study the criteria of meaningful was used to determine the variables which were used in the discussion and interpretation of the results. Variables which do not meet the above criteria of meaningful were not considered sufficiently reliable and valid for interpretation.

Results of Zero-Order Correlation Analysis

Table 6, Zero-Order Correlation Coefficients, presents the Pearson product-moment correlation coefficients for the independent variables with each dependent variable. Table 6 is a restatement of Table 3, the correlation matrix presented in Chapter 2, reconstructed to improve readability. These preliminary correlational results are useful in testing the model; however, because the effects of the variables may be influenced by other determinants, the multivariate analysis provides a more sophisticated interpretation.

Job Satisfaction Correlations

The traditional antecedents of job satisfaction included in the model are pay equity, routinization, communication, participation, supervision, and promotional opportunity. Each of these traditional antecedents was found to be consistent with the model and with the literature. The magnitude of the correlations is similar to the correlations with job satisfaction in Price and Mueller's nursing study (1981) which used many of the same variables. Pay was not found to be significant by Price and Mueller; however, they measured pay directly, whereas this study measured perceptions of pay.

Table 6. Zero-Order Correlation Coefficients

Independent Variables	Dependent Variables		
	Job Sat.	Commitment	Withdrawal
Commitment			- .08a
Job Satisfaction		.53a	ns
Pay Equity	.25a	.36a	- .09a
Routinization	- .34a	- .20a	.05a
Communication	.28a	.22a	ns
Participation	.30a	.26a	- .11a
Supervision	.34a	.31a	ns
Promotional Opportunity	.34a	.32a	ns
Physician Relations	.31a	.30a	- .08a
Patient Care Time	.11a	.07a	ns
Continuing Education	.24a	.21a	ns
Opportunity	.09a	ns	.06a
Family Priority	.08a	ns	.21a
Other Family Income	ns	- .05a	.34a

n = 6548
a = $p < .0001$
ns = not significant

This model included three antecedents specific to nursing job satisfaction. These were physician relations, patient care time, and continuing education. The correlational effect on job satisfaction of these three variables was consistent with the hypothesized model and the literature. An increase in RN satisfaction with professional physician relations and continuing education was found to increase job satisfaction in comparable magnitude to the traditional antecedents of job satisfaction. Increased time for patient care was found to increase job satisfaction but not to the extent of the other job satisfaction antecedents.

The personal external factors (opportunity, family priority, and other family income) were not hypothesized to affect job satisfaction directly. The correlation coefficients, however, showed a slight relationship between two personal external factors (opportunity and family priority) and job satisfaction. Other family income was not related to job satisfaction as expected. The relationship of opportunity and family priority to job satisfaction is feasible; however, the coefficient signs of the two variables are opposite that which would be predicted; with job satisfaction increasing as opportunity for alternate employment and family priority increased. The relationship one would predict is that increased opportunity and family priority would result in decreased job satisfaction.

Commitment Correlations

Commitment was correlated with 11 variables: job satisfaction, pay equity, routinization, communication, participation, supervision, promotional opportunity, physician relations, patient care time, continuing education, and other family income.

The strongest correlation to commitment was job satisfaction (.53) which reflected the expected relationship. Job satisfaction's correlation to commitment was 47 percent stronger than the next highest variable, pay equity. Commitment was correlated with all antecedents of job satisfaction. The job satisfaction antecedent's correlations with commitment were slightly lower than the antecedent's correlation with job satisfaction which was as expected.

Personal external factors - opportunity, family priority, and other family income - were hypothesized to affect commitment directly

and indirectly affect withdrawal through commitment. The correlational analysis found only other family income to be related to commitment and it had a small (.05) coefficient. This lack of correlation between personal external factors and commitment was surprising and not in keeping with the model. Based on the review of the literature personal external factors were expected to have a strong relationship with commitment. The lack of correlation between the personal external factors and commitment suggested two possibilities. First, the commitment construct may be more job related than expected. Second, personal external variables may directly relate to withdrawal, not through commitment as hypothesized. Further clarification of this lack of correlation is provided in the Results of the Multivariate Analysis section which follows.

Withdrawal Correlations

Eight determinants were correlated with withdrawal. These include commitment, job satisfaction, pay equity, routinization, participation, physician relations, opportunity, family priority, and other family income.

Commitment was related to withdrawal as predicted; however, the strength of the correlation (-.08) was not as strong as expected. The commitment/withdrawal coefficient was expected to be one of the largest in the model, based on previous correlations of commitment to turnover and the interpretation of the literature.

Based on the results of these correlation analyses and the review of the literature, commitment seemed to act as an intervening variable for the effects of job related variables on withdrawal, demonstrating potential for causal ordering. This causal ordering can be inferred

because job satisfaction and many antecedents of job satisfaction were not correlated to withdrawal but were correlated with commitment. Also, job satisfaction was highly correlated to commitment.

Four job satisfaction antecedents - pay equity, routinization, participation, and physician relations - were correlated with withdrawal. These correlations were unexpected but plausible. The fact that they were correlated to withdrawal was understandable given their expected importance in the model. All four variables were correlated to all three dependent variables and therefore seemed to be important determinants of nursing job satisfaction, commitment, and withdrawal.

Personal external factors (particularly other family income and family priority) had the largest correlation coefficients with withdrawal. As hypothesized, personal external factors seemed to have a greater effect on withdrawal than job-related variables.

Zero-Order Correlation Summary

Generally the zero-order correlations provided support for the model and the hypotheses. There were three major exceptions: the lower than expected correlation of commitment to withdrawal; the lower than expected importance of opportunity; and the fact that personal external factors greatly influence withdrawal but were not correlated to commitment.

According to Price and Mueller (1981) variables which are unimportant in bivariate analysis are often important in multivariate analysis. The following multivariate analysis allows determination of the relative importance of each variable and whether the model operated as expected.

Results of the Multivariate Analysis

The multivariate analysis is presented in two sections. First, the results of the standardized stepwise regression analysis for each dependent variable are given. Although withdrawal is the primary dependent variable, it is customary in path analysis to analyze the intervening variables (job satisfaction and commitment) in successive equations (Price and Mueller, 1981). Therefore, each dependent variable was regressed against all variables previous to it in the model. Second, theory trimming was used to develop the path diagram. This entailed determining the coefficients which are not significant from the stepwise regressions and deleting these paths from the model (Pedhazur, 1982, p. 616; Heise, 1975). The trimmed standardized regression models were then recalculated to produce the path coefficients.

The stepwise regression results are presented in Table 7, Regression Results for Withdrawal, Commitment, and Job Satisfaction as Dependent Variables. The standardized partial regression coefficients are Betas which may be directly compared with each other (Pedhazur, p. 587; Heise).

Job Satisfaction as the Dependent Variable

The results of the job satisfaction regression were similar to the results of the zero-order correlation analysis and Price and Mueller's similar job satisfaction regression (1981). This gives added importance to Price and Mueller's conclusion that increasing job satisfaction may reduce institutional nurse turnover.

Table 7. Regression Results for Withdrawal, Commitment, and Job Satisfaction as Dependent Variables. Standardized Coefficients (Betas)

Independent Variables	Job Sat.	Commitment	Withdrawal
Pay Equity	.065a	.172a	- .067a
Routinization	- .234a	ns	.045b
Communication	.110a	ns	ns
Participation	.075a	.035b	- .091a
Supervision	.130a	.053a	ns
Promotional Opportunity	.102a	.102a	.065a
Physician Relations	.143a	.085a	- .043b
Patient Care Time	ns	- .026c	ns
Continuing Education	.031c	ns	ns
Opportunity	ns	ns	.033c
Family Priority	.066a	.044a	.071a
Other Family Income	.030c	- .092a	.27a
Job Satisfaction		.407a	.051b
Commitment			- .055a
R^2	.285	.362	.130

a = $p < .0001$
b = $p < .001$
c = $p < .01$
ns = not significant

The traditional antecedents of job satisfaction were in congruence with the model. As pay equity, communication about the job, participation in performance of the job, satisfaction with supervision, and promotional opportunity increase, so will RN job satisfaction. Special attention should be given to reducing routinization of the nursing job. Based on the importance of routinization in the correlation analysis, this regression, and Price and Mueller's study, routinization is the most important determinant of nursing job satisfaction.

With regression analysis the three nurse specific antecedents of job satisfaction - patient care time, continuing education, and physician

relations - were not found to be as consistent with the model as in the correlation analysis. Only physician relations remained an important determinant of job satisfaction. Neither patient care time nor continuing education remained as important determinants.

Personal external factors were not expected to affect job satisfaction directly. However, the correlation analysis resulted in slight relationships between job satisfaction and family priority and opportunity. The regression analysis was more in keeping with the model, with family priority being the only personal external factor related to job satisfaction but, as in the correlation analysis, the sign remained positive. Surprisingly, Price and Mueller also found the same inconsistent results with their measurement of kinship priority, a similar construct to family priority. Opportunity was not found to be a determinant of job satisfaction in the regression analysis; it was significant in Price and Mueller's study and in the correlation analysis, although it was not hypothesized. The finding of no relation between opportunity and job satisfaction was in keeping with the model and the literature. Other family income was not related to job satisfaction in both the correlation and the regression analysis.

Commitment as the Dependent Variable

Commitment as the dependent variable resulted in job satisfaction, pay equity, supervision, promotional opportunity, physician relations, and other family income as meaningful.

As with the correlation analysis, the high Beta (.41) between job satisfaction and commitment reflected the expected relationship. Job satisfaction seems to be a primary determinant of a nurse's commitment

to working as a nurse. Four job satisfaction antecedents - pay equity, supervision, promotional opportunity, and physician relations - were directly related to commitment, which is not in congruence with the model. The relationship of these antecedents to commitment was also true in the correlation analysis reflecting their importance in understanding nursing commitment. In congruence with the model, the commitment regression resulted in three job satisfaction antecedents - routinization, communication, participation - not being directly related to commitment. The relationship of these variables to job satisfaction, their relationship to commitment in the correlation analysis, and the strong relation between job satisfaction and commitment, leads one to suspect a possible indirect relationship to commitment through job satisfaction as hypothesized in the model.

Careful interpretation of the literature resulted in development of a model which predicted personal external factors would be directly related to commitment. The commitment regression resulted in other family income being the only personal external factor directly related to commitment. This result is in keeping with the correlation analysis which also found other family income to be the only personal external factor related to commitment. Opportunity and family priority did not meet the criteria of being meaningfully related to commitment reflecting either a lack of importance in the model (as with opportunity) or a direct effect to withdrawal and not through commitment as hypothesized (as with family priority).

Withdrawal as the Dependent Variable

The model hypothesized that the only direct path to withdrawal was through commitment. The results indicate, however, that six variables were directly related to withdrawal - commitment, other family income, family priority, pay equity, participation, and promotional opportunity.

In regard to commitment, the regression analysis was in keeping with the model and the hypothesized effect of commitment as an intervening variable between overall job satisfaction and withdrawal. Commitment was directly related to withdrawal (-.055) and job satisfaction did not have a meaningful direct relationship to withdrawal. The strong relationship of job satisfaction to commitment and the relationship of commitment to withdrawal leads one to believe that the causal analysis will show that commitment intervenes in the effect of job satisfaction on withdrawal. This interpretation is similar to Price and Mueller's (1981) determination that intent to stay intervenes between job satisfaction and turnover.

Personal external factors - other family income and family priority - influenced withdrawal directly, not indirectly through commitment as expected; however, the strength of the relationship between other family income and family priority to withdrawal was strong, as predicted. Other family income's regression coefficient (.27) was over three times as strong as any other direct influence on withdrawal. Therefore, as a nurse's family priority and other family income increase, the more likely the nurse is to withdraw from nursing. Opportunity was the only external factor not directly related to withdrawal.

Opportunity was also found not to be related to job satisfaction or commitment.

Three job satisfaction antecedents - pay equity, participation, and promotional opportunity - were directly related to withdrawal. The direct effects between these three job satisfaction antecedents and withdrawal were not expected. The fact that as pay equity increases withdrawal decreases is understandable, given its importance in the literature and its relationship to commitment and job satisfaction. The direct effect of promotional opportunity to withdrawal was particularly surprising because of the positive direction of the relationship between promotional opportunity and withdrawal; as promotional opportunity increases so will withdrawal. The fact that participation was directly related to withdrawal is interesting because its coefficient to withdrawal (-.09) was stronger than its relation to job satisfaction tion (.075) or commitment (not significant).

Explained Variance

One disappointing aspect of this study is the explained variance for each dependent variable. It was expected that because of the comprehensiveness of the model the explained variance would be higher. The explained variances are 28.5 percent for job satisfaction, 36.2 percent for commitment, and 13.0 percent for withdrawal.

The explained variance for job satisfaction as the dependent variable was similar to Price and Mueller's study (explained variance = .26), which included a similar model for job satisfaction. The explained variance for commitment was the best of the three equations in this model. This higher explained variance for commitment probably

resulted from the large number of variables which influence commitment directly and the strong relationship between job satisfaction and commitment. The low explained variance for withdrawal is understandable. The model primarily includes job related variables in an effort to determine the effect on withdrawal of those variables most in control of management. However, personal external variables have the most influence on withdrawal. Expansion of the personal external variable component of the model would be expected to increase the explained variance of withdrawal.

Total Effects and Path Diagram

The primary results of the multivariate analysis are presented graphically in Figure 2, the Final Path Diagram. The path coefficients (which equal Betas) in the path diagram were determined by estimating the models after excluding all paths which were not significant in the regression analyses. Exclusion of these paths resulted in path coefficients which were slightly different from the Betas found in the regression analysis (Table 7). The endogenous variable's residuals (displayed across the top of Figure 2) were determined by the square root of the difference between one and R^2 (Pedhazur, 1982, p. 585).

The path model was tested for significance by calculating "Q", a statistic which allows determination of the degree of fit between the reduced model and the data. Pedhazur recommends use of "Q" for models with large samples. The "Q" statistic for this model is close to one, suggesting a good fit of the model to the data (Pedhazur, p. 617-623).[1]

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1 $Q = \dfrac{1 - R^2_m}{1 - M}$ $\quad R^2_m = 1 - (1 - R^2 1)(1 - R^2 n)$ - full model and $M = 1 - (1 - R^2 1)(1 - R^2 n)$ - restricted model.

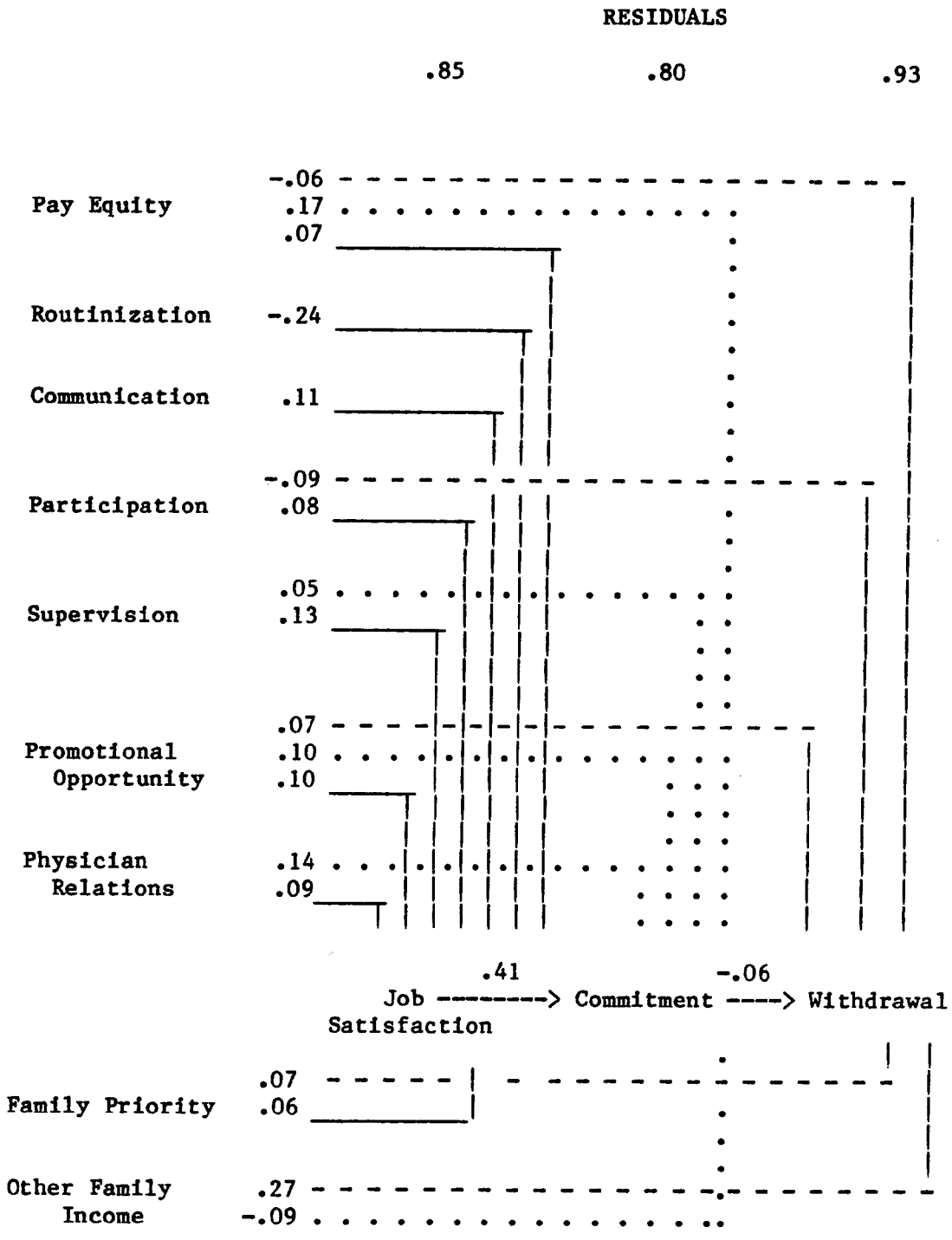

Figure 2. Final Path Diagram

Causal interpretation of the final path diagram allowed inferences of the relative importance of the determinants of withdrawal which were identified in the model. Because the model included two intervening variables, it was possible to determine the variables having only direct effects on withdrawal, those having both direct and indirect effects, and those having only indirect effects. Using path analytic techniques, the direct and indirect effects were summed to determine the total effect of each variable on withdrawal. The total effects allow determination of those variables most likely to explain the variance in nurse withdrawal. Table 8, Total Effects, displays the results of the causal analysis.

In order of contribution, the most important variables contributing to withdrawal of nurses were other family income (.28), participation (.09), pay equity (-.07), family priority (.07), commitment (-06), and promotional opportunity (.06). When interpreting this ordering of variables slight differences between determinants should not be seen as meaningful in the ranking. These effects were primarily direct, not indirect as hypothesized. Pay equity, promotional opportunity, physician relations, and other family income displayed indirect effects; however, these indirect effects were small. The strong direct effects reflect the the importance of these variables in understanding withdrawal. The low indirect effects were primarily a result of the low correlation between commitment and withdrawal.

Table 8. Total Effects

Variables	Direct Effects	Indirect Effects Via: Commitment	Indirect Effects Via: Job Sat. and Commitment	Total Effects
Commitment	-.06	-	-	-.06*
Job Satisfaction	ns	-.03	-	-.03
Pay Equity	-.06	-.01	ns	-.07*
Routinization	ns	ns	.01	.01
Communication	ns	ns	ns	ns
Participation	-.09	ns	ns	-.09*
Supervision	ns	ns	ns	ns
Promotional Opportunity	.07	-.01	ns	.06*
Physician Relations	ns	-.01	ns	-.01
Family Priority	.07	ns	ns	.07*
Other Family Income	.27	.01	ns	.28*

ns = not significant
* = meaningful > $\pm$ [.05]

Discussion of Findings

The purpose of this study was to provide an explanation of female RN career withdrawal through the testing of three hypotheses. The following is a discussion of each hypothesis based on the results of the correlation and multivariate analysis.

Hypothesis One

Hypothesis One is that increased job satisfaction increases commitment to nursing and therefore decreases career withdrawal. Analysis of this hypothesis includes discussion of the effects of overall job

satisfaction, the antecedents of job satisfaction on job satisfaction, the relationship between job satisfaction and commitment, and the relationship between commitment and withdrawal.

Overall Job Satisfaction The results of the analysis indicated that job satisfaction is related to the tested antecedents and that job satisfaction and its antecedents are major determinants of commitment to nursing. However, job satisfaction was not a major contributor to withdrawal and the three antecedents of job satisfaction which did affect withdrawal (pay equity, participation, and promotional opportunity) did so primarily through direct effects.

Antecedents of Job Satisfaction Analysis of Hypothesis One includes a determination of the effects of the traditional and nurse-specific antecedents of job satisfaction on job satisfaction. The zero-order correlation analyses' results were as predicted, with all proposed antecedents correlated to job satisfaction. The multivariate analysis resulted in all traditional antecedents being related to job satisfaction, but only physician relations was important among the nurse specific antecedents. The lack of importance of patient care time and continuing education was not expected based on the interpretation of the literature literature on their effects on job satisfaction.

Lack of patient care time may not be meaningful because of possible confusion concerning the interpretation of the patient care time construct by the respondents. The author's discussions with nursing service administrators, hospital administrators, and staff nurses on this unexpected result revealed that the questions used to measure patient care time may have been misinterpreted by the respondents as

referring to patient care duties usually associated with nonprofessional nursing personnel. Registered nurses may perceive the RN's primary functions as other than direct patient care, such as supervision of other nursing personnel.

This perception of the questions used as measuring patient care duties which are perceived as outside the scope of the RN provides one plausible explanation for the lack of significance of patient care time. The possible problem with the patient care time questions was not apparent until the results were analyzed. The questions used appeared to be well constructed. These questions were from an existing instrument (Slavitt et al., 1978), the factor loading for the questions was .77, and the reliability was .66. This unexpected result indicates the need for further refinement of the concept of patient care time in future research.

Continuing education does not seem to influence job satisfaction. One would expect a professional occupation such as nursing to place a high value on continuing education and to value it as a job benefit. The mean response (2.80 average for all participants) to the instrument shows RNs are dissatisfied with their continuing education, regardless of the degree of withdrawal. A possible reason for the lack of a relationship between continuing education and job satisfaction could be that RNs perceive continuing education as a construct related to their professional development but not influencing their job. Continuing education may be viewed as contributing to long-term improvement and updating of career skills rather than job-related functions.

In other words, continuing education may not be seen as an important job function but perceived as necessary to stay current in the profession.

Job Satisfaction and Commitment As hypothesized, overall job satisfaction and the antecedents of job satisfaction were related to commitment; however, some of the antecedents were directly related to commitment as well as indirectly related through job satisfaction. Overall job satisfaction resulted in a strong relationship to commitment in both the correlational and multivariate analyses. In looking at individual antecedents of job satisfaction, the multivariate and correlation analyses resulted in three job satisfaction antecedents - routinization, communication, and participation - in congruence with the model, not being directly related to commitment but related to job satisfaction. In the multivariate analysis, four job satisfaction antecedents - pay equity, supervision, promotional opportunity, and physician relations - were not in congruence with the model, being directly related to commitment as well as to job satisfaction.

These four antecedents were directly related to both job satisfaction and commitment, underscoring the importance of studying both job satisfaction and commitment when interpreting RN withdrawal models. As explained in the discussion of the model (Chapter One) job satisfaction and commitment represent similar but distinct constructs. Commitment is more global in nature than job satisfaction and requires greater time for nurses to develop and change (Mowday et. al, 1982; Angle & Perry, 1981).

The direct effect of these four constructs on both job satisfaction and commitment is a reflection of their importance in

understanding RN behavior. Their effects are so strong that they directly effect two of the most important factors in understanding RN withdrawal - job satisfaction and commitment.

Pay equity was found to be directly related to commitment and job satisfaction in the correlation analysis, the multivariate analysis, and in Price and Mueller's regression on intent to stay. Also, pay was depicted in the literature as an important variable in understanding nurse job satisfaction, turnover, and commitment. Therefore, the direct effect of pay on both job satisfaction and commitment is not surprising and depicts its importance in understanding RN job satisfaction and commitment.

In both the correlation and multivariate analyses, promotional opportunity was an extremely important variable. As the nurse's promotional opportunity increases so will job satisfaction and commitment. Promotional opportunity seems to be a major area of concern among the nurses tested.

The RN's perception of the nursing supervisor plays an important role in determining RN job satisfaction and commitment. The importance of satifaction with supervision is in keeping with the literature which repeatedly calls for improved training of RN supervisors.

Physician relations is the only nontraditional, nurse-specific antecedent tested in this study which is consistently important in determining nurse job satisfaction and commitment. The importance of physician relations is not reflected in nursing job satisfaction and commitment studies. Most nursing satisfaction studies do not include physician relations as a determinant of job satisfaction or commitment. The results of this analysis indicate that nursing job satisfaction

should not be assessed without including physician relations as a dimension.

Commitment and Withdrawal Hypothesis One implies that commitment will directly affect withdrawal and intervene in the effects of the job satisfaction antecedents on withdrawal. Commitment does directly effect withdrawal as expected and provides an intervening role in the model. The magnitude of the effect of commitment on withdrawal is lower than expected, which may be because of the job relatedness of the commitment construct.

The lower than expected magnitude of the commitment/withdrawal relationship may be because commitment seems to be a job-related construct, whereas, the primary effects on withdrawal appear to be personal external variables. Based on the results of this study, to decrease RN withdrawal administrators should concentrate on personal external variables. Improvements in commitment will help decrease withdrawal but slightly. Nurse withdrawal may also be improved by several job satisfaction antecedents - pay equity, participation, and promotional opportunity.

As stated throughout this study, RN perceptions of pay equity are important in understanding RN withdrawal, commitment, and job satisfaction. Increases in pay equity should help decrease withdrawal.

Participation in the daily activities of how the RN job is done is also important. Given the importance of participation in this study, the more it is increased the higher the nurse's job satisfaction and commitment should be and the lower the nurse's withdrawal.

The most surprising result in this study is the direct positive effect of promotional opportunity on withdrawal. Increases in promotional opportunity result in increases in job satisfaction and commitment as expected. However, the direct and overall total path effect of promotional opportunity on withdrawal is opposite that which was expected. Increases in promotional opportunity result in increases in withdrawal. The author is unable to explain this unexpected effect. The construct seems to have been adequately measured, the managerial and sociological literature does not provide a rationale for the finding, and the author's discussions with staff nurses and nursing and hospital administrators has only led to one possible explanation: most promotions in nursing require movement outside clinical nursing into administration or education. The RN may perceive promotions outside clinical nursing as undesirable, resulting in the positive effect of promotional opportunity on withdrawal. Further research on promotional opportunity is indicated from this unexpected finding.

Understanding the relationship between job aspects and RN withdrawal only provides a partial understanding of RN job satisfaction, commitment, and withdrawal. One must also understand the effects of personal factors outside the work situation. As stated above, personal factors are the most important determinants of RN withdrawal.

Hypothesis Two

Hypothesis Two is that increased external personal factors decrease commitment to nursing and therefore increase career withdrawal. External personal factors include family priority, other family income, and opportunity. Discussion of this hypothesis includes the effects of

external personal factors on job satisfaction, commitment, and withdrawal.

The hypothesis that external personal factors would directly relate to commitment and indirectly relate to withdrawal through commitment was not met. Of the three personal variables only other family income met the meaningful criteria of $\pm$ .05 as being directly related to commitment. Other family income and family priority are important determinants of withdrawal as expected; however, the effects are primarily direct to withdrawal not indirect through commitment. Opportunity for alternative employment was not a meaningful contributor to job satisfaction, commitment, or withdrawal.

In analyzing personal external factors, the zero-order correlations resulted in family priority and opportunity being directly and slightly correlated to job satisfaction. The multivariate analysis resulted in only family priority being directly related to job satisfaction. The direct relationship of family priority to job satisfaction was slight and unexpected. The slight impact that exists is plausible; however, the Beta coefficent sign for family priority is opposite that which would be expected. Price and Mueller (1981) found the same inconsistent results in the measurement of kinship priority, a similar variable to family priority. Family priority may be slightly related to job satisfaction in a positive fashion because female RNs feel they are working out of support and love for the family; therefore, an increase in this feeling of dedication and the need to work might increase job satisfaction. Decker et al. also found a similar close relationship between job satisfaction and family roles (1982).

The major thrust of Hypothesis Two is that commitment will intervene in the effects of personal factors on withdrawal. Two of the three personal external factors - family priority and other family income - had an impact on withdrawal; however, the effect was almost totally direct, not indirect as hypothesized. Other family income did have a small indirect effect on withdrawal through commitent. This lack of a direct relationship between personal external factors and commitment was surprising and not in keeping with the model. The literature was not extensive or clear on the antecedents of commitment. It was the author's interpretation of the literature (and one purpose of this study to test) that commitment would intervene between personal factors and withdrawal.

The results indicated that the commitment construct did not seem to provide a major intervening role for external personal variables and withdrawal. The commitment construct was primarily related to job factors, not external personal variables. The strong relationship between commitment and job satisfaction and the almost nonexistent relationship between personal external factors and commitment add further evidence to the interpretation that the commitment construct is both job and career influenced.

One surprising finding in this study was the lack of significance of opportunity for alternative employment. Price and Mueller (1981) found opportunity to be an important variable influencing job satisfaction, intent to stay, and turnover. Based on Price and Mueller's findings and the review of the literature a strong effect was expected for opportunity. The lack of significance for opportunity is plausible

given the state of the economy when this survey was conducted. At the time of the survey (1982) nursing was clearly a job where employment was secure. Unemployment in most other areas of the economy and most other traditionally female jobs was extremely high. The poor perception of opportunity is reflected in the low mean response (2.4 average for all degrees of withdrawal) of the respondents.

In contrast Price and Mueller's study was conducted in a stronger economy (1976) with lower unemployment which was reflected by a higher mean perception of opportunity. Because opportunity for other employment for the RN was in such contrast with the economy in 1982, the perception of the nursing job as a good job in relation to other jobs may have been enhanced. The relationship of the effects of opportunity and the economy is in keeping with Decker et al.'s model where business activity is expected to directly influence opportunity before opportunity's effects on dependent variables (1982).

In summary, personal external factors generally did not indirectly affect withdrawal through commitment. Also, the expected effects of opportunity may have been influenced by the state of the economy at the time of the survey. The personal external factors of family priority and other family income are not unimportant, however. The combined total effect of these two external personal factors on withdrawal is larger than that of the four meaningful job satisfaction variables.

Hypothesis Three

Hypothesis Three is that external personal factors have a greater effect on career withdrawal than organizational factors. This hypothesis

was supported because the combined total path effects of family priority and other family income is .35 with the effect of other family income (.28) being at least three times stronger than any other determinant. The combined effect of the two personal external variables on withdrawal was greater than that of the four meaningful antecedents of job satisfaction (.28).

These results indicated that the personal external factors of other family income and family priority must be influenced by management to help reduce RN withdrawal. Family priority can be influenced by managerial actions which increase the flexibility of the RN to combine a career with a family (Friss, 1982). The importance of creating scheduling arrangements which provide the RN with more flexibility to meet family needs should decrease the effect of family priority on withdrawal. Other family income cannot be controlled by managerial actions, which presents a problem considering the strength of its effect.

The results of this analysis provide the basis for recommendations for future study and recommendations on steps hospital and nursing administrators may take to increase RN job satisfaction and commitment and to reduce nursing withdrawal.

CHAPTER IV

SUMMARY AND RECOMMENDATIONS

This chapter presents the major findings of the study and recommendations for further research on female RN career withdrawal. The model included three successive dependent variables; job satisfaction, commitment, and withdrawal. Analysis of each of these three variables resulted in separate findings of interest to health service administrators. The results of the analysis for each dependent variable are discussed separately.

Summary of Major Findings

Job Satisfaction

The results of the job satisfaction regression analysis were generally as expected, in congruence with the model and the literature. The explained variance for the job satisfaction equation was much like Price and Mueller's (1981) similar job satisfaction model (.26 for Price and Mueller and .28 for this study). In this study the explained variance for job satisfaction (.28) was twice as large as that of withdrawal (.13), implying that this study provides clearer guidance on improving nursing job satisfaction than reducing nurse withdrawal.

The results imply that the traditional antecedents of job satisfaction are significantly related to RN job satisfaction. In order of importance the most significant traditional antecedents explaining RN job satisfaction were; routinization (-.23), supervision (.13),

communication (.11), promotional opportunity (.10), participation (.08), and pay equity (.07). Routinization is by far the most important traditional antecedent, reflecting the RN's dissatisfaction with the routine nature of the job.

Of the three nurse-specific antecedents to job satisfaction, only physician relations (.14) was significantly related to job satisfaction. Physician relations was second in importance only to routinization in influencing RN job satisfaction. Patient care time and continuing education were not found to be related to job satisfaction.

Family priority, a personal external factor, increased job satisfaction - an expected and plausible result. Individual perceptions of the importance of the nursing job to the family could increase job satisfaction. The positive effect of increased family priority on job satisfaction underscores the importance of the interrelationship between personal and job factors among female RNs.

The importance of traditional antecedents to RN job satisfaction reconfirms the job satisfaction component of Price and Mueller's organizational nurse turnover study (1981). As with the Price and Mueller study, job satisfaction was the major determinant of commitment. Improvement in nursing job satisfaction, therefore, should lessen nurse turnover, increase commitment, and ultimately decrease RN career withdrawal.

As expected, job satisfaction is not a major direct contributor to withdrawal. Job satisfaction is important to understanding RN withdrawal because three antecedents of job satisfaction (pay equity, participation, and promotional opportunity) effect withdrawal directly and

job satisfaction is a major contributor to commitment which does directly affect withdrawal.

These results indicate that health administrators should be best able to influence RN job satisfaction by improvement of the traditional antecedents and improving RN physician relations. Improvement in the measurement of patient care time should also result in a determination that it will be an important determinant of RN job satisfaction. Particular attention should be given to improving the boredom associated with the routine nature of the nursing job. Efforts now being made to include more primary care nursing should help improve RN job satisfaction through a reduction in routine and an increase in participation for the RN.

Commitment

Commitment is a relatively new and increasingly important construct in understanding employee withdrawal behavior. Commitment is related, yet distinguishable from, job satisfaction, being more global in nature and requiring greater time for employees to develop and change. This study and other recent studies consistently found commitment to act as an intervening variable between job satisfaction and employee withdrawal.

The commitment regression equation provided the highest explained variance in the model (.36). This higher explained variance is primarily the result of the strong influence of job satisfaction on commitment (.407). The results clearly indicate the primary method to increase commitment is through increasing job satisfaction.

Commitment is more closely related to antecedents of job satisfaction than external personal factors. The most important job satisfaction antecedents to increasing commitment are pay (.17), promotional opportunity (.10), physician relations (.09), and supervision (.05).

The model was developed with the interpretation that personal external factors would directly affect commitment and indirectly affect withdrawal through commitment. The results indicate, however, that personal external factors primarily affect withdrawal directly. Other family income is the only personal external factor which directly influenced commitment (-.09).

Based on these results health administrators can best influence RN commitment through increasing RN job satisfaction. Special attention should be given to improving the RN's perception of pay equity, opportunity for promotion, relationships with physicians, and satisfaction with supervision. However, a major variable out of the health administrator's control, other family income, is also important in determining how committed the RN is to nursing.

Withdrawal

This discussion of RN withdrawal is based on the causal analysis which included the direct and indirect effects of all variables in the model, including job satisfaction and commitment. The causal analysis for withdrawal resulted in a residual of .93 which indicates that many of the explanatory variables for understanding RN withdrawal have not been included in the model. This high residual was similar to Price and Mueller's (1981) residual of .91. It is disappointing considering the presumed comprehensive nature of the model. In addition, the primary

effects are direct to withdrawal and not indirect through job satisfaction and commitment as expected. Job satisfaction and commitment do act as intervening variables but not to the degree expected.

Commitment influences withdrawal directly but with lower importance than expected (.06). Also as expected, the personal external factors are most important in understanding RN withdrawal. Other family income (.28) and family priority (.07) are two of the major determinants of RN withdrawal. The importance of these personal external factors on withdrawal reflect a major problem for health administrators. These variables are the primary determinants of withdrawal; however, they are outside of the direct control of the manager.

Several antecedents of job satisfaction affected withdrawal directly. These were pay equity (-.07), participation (-.09), and promotional opportunity (.06). The direct effects of pay equity and participation underscored their importance in influencing RN withdrawal. These are two variables which health administrator can and should influence to reduce RN withdrawal as well as to increase RN job satisfaction and commitment. The effect of promotional opportunity was puzzling, because the sign of the coefficient was opposite that which was expected. From these data, the researcher was unable to explain adequately this unexpected effect of increased promotional opportunity resulting in increased withdrawal.

The Model

Based on these results, several conclusions can be made about the model itself. The model used in this study was a modification of one developed by Price and Mueller. The job satisfaction portion of

the model was a replication of their study with several nurse specific antecedents added. The results of this model's job satisfaction analysis and that of Price and Muellers were similar.

The commitment construct does not act as an intervening variable between personal external factors and withdrawal as expected. Personal external factors are important as expected but their effect is direct rather than indirect. As Morrow (1983) indicated more research needs to be conducted to clarify and understand the concept of commitment.

One disappointing aspect of the model was that the residuals were higher than expected. The model was based on all major factors identified in the literature and appeared to be comprehensive. The high residuals in this model and in Price and Mueller's organizational withdrawal study, and the low explained variances in many regression studies reviewed indicate that researchers are not doing very well in explaining job satisfaction, commitment, or withdrawal. Additional variables need to be identified and tested in multivariate studies similar to this one and Price and Mueller's.

Recommendations for Further Study

Further study should be conducted on the effects of patient care time, opportunity, promotional opportunity; further development of the career commitment construct is needed; the model should be reformulated based on this research; and male RNs should be analyzed in a similar study. In addition several methodological changes are recommended for future studies based on the results of this study.

1. Modifications should be made to the instrument. The results of patient care time were disappointing and one plausible reason is the

respondents' misinterpretation of the construct. Peer group interaction was not included because of inappropriate wording in the instrument. The promotional opportunity construct, as well as other scales in the instrument, should be expanded to at least seven questions which should improve the reliability.

2. The career commitment construct needs further refinement to clarify career from organizational aspects of commitment. The commitment scale used is a modification of Porter and Steers' (1973) organizational commitment scale. Further psychometric research is needed in development of a suitable career commitment scale. Paula Morrow's (1983) recent article provides guidance and suggestions on how to improve the use of the commitment construct in research.

3. The model should be expanded to include more external personal variables. Personal external variables are the primary determinant of RN career withdrawal. Increases in the number of personal external variables should improve the explanatory power of the model. Other personal external variables which could be included are attitudes of the spouse towards the working woman and commuting distance from work.

4. The model should be tested on male RNs and compared to the results of this study. Differences between males and females should result in many variables. Comparison of these differences will allow for further refinement of the model.

5. The model should be tested in a better economic climate. The effects of opportunity may have been minimized because of the depressed nature of the economy when the study was conducted. The

literature research gave every indication that opportunity should have been a major determinant in this study, but it was not.

6. More variables should be included when the model is reformulated. This model included all major variables identified in the literature. However, like all multivariate studies available, the model did a poor job of explaining job satisfaction, commitment, or withdrawal. Further variable and construct identification is necessary to develop a model which is comprehensive enough to explain these important aspects of employment.

Final Thoughts

This study was an attempt to develop and test a comprehensive model of female RN career withdrawal. The study interrelated job and personal factors for the first time in a study of female career withdrawal. The results of this study increased the understanding of RN job satisfaction, nursing commitment, and RN career withdrawal. Recommendations for the practitioner have been made which add empirical support to the remedies for the nursing shortage which have been advocated by the many task forces on the problem.

The path coefficients and explained variance were low, which was somewhat disappointing. However, implementation of the above recommendations for future study should help improve the model, providing optimism that the model as modified by the results of this initial study will provide a solid foundation for future research.

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APPENDICES

A. Copy of Instrument

B. Instrument Items and Measurement

C. Tests of Assumptions

D. Mean Responses

E. Copies of Regression Printouts

Appendix A: Copy of Instrument

(COL 1-5) _____

— REGISTERED NURSES' ATTITUDES ABOUT THEIR JOBS AND CAREERS —

It will take you only 15-20 minutes to help the Alabama Hospital Association and the Alabama Society for Nursing Service Administrators to understand how you feel about your job and why registered nurses decide to leave the nursing profession. The results of this study will be disseminated to hospital administrators and other interested parties throughout the state.

This questionnaire is to be completed by ANYONE WHO HAS EVER PRACTICED AS A REGISTERED NURSE. Please complete the questionnaire regardless of whether you work as a nurse, are retired, work in another profession, or are presently unemployed.

DO NOT SIGN YOUR NAME TO THE QUESTIONNAIRE. All responses to all questions are COMPLETELY CONFIDENTIAL. Completed questionnaires will be analyzed by Mr. Will Ferniany, at the University of Alabama in Birmingham, Doctoral Program Administration-Health Services. Findings resulting from the study will be reported in summary fashion so that the identity of individuals or small groups will not be revealed. NONE OF THE QUESTIONNAIRES WILL EVER BE SEEN BY ANYONE WHERE YOU WORK.

INSTRUCTIONS:

1. DO NOT SIGN YOUR NAME TO THE QUESTIONNAIRE.
2. Please answer the questions in order.
3. All of the questions can be answered by checking (✓) one of the answers. If you do not find the exact answer that fits your case, check the one that comes closest to it. PLEASE ANSWER ALL QUESTIONS.
4. Feel free to write in any explanations or comments you may have in the margins and on the back of the questionnaire.
5. Remember, the answers you give will be completely CONFIDENTIAL. It is important that you be truthful in answering this questionnaire.
6. Please return your completed questionnaire in the enclosed prepaid envelope.

ABOUT BEING A NURSE

Following is a series of statements that represent possible feelings you have about various aspects of your profession as a nurse. With respect to your own feelings about being a nurse, please indicate by checking how strongly you agree or disagree with EACH of the statements (Check one for each statement.)

SA = Strongly Agree, A = Agree, N = Neither Agree nor Disagree, D = Disagree, SD = Strongly Disagree

COMMITMENT TO NURSING PROFESSION	SA	A	N	D	SD	COL
1. I recommend being a nurse to my friends as a great profession in which to work.	☐5	☐4	☐3	☐2	☐1	6
2. I would accept almost any type of nursing job rather than give up nursing as a profession.	☐5	☐4	☐3	☐2	☐1	7
3. I am extremely glad that I chose to become a nurse over the other careers I considered prior to the time I started nursing school.	☐5	☐4	☐3	☐2	☐1	8
4. For me, being a nurse is not the best of all possible professions in which to work.	☐1	☐2	☐3	☐4	☐5	9
CAREER SATISFACTION	SA	A	N	D	SD	
5. I find (found) real enjoyment in nursing.	☐5	☐4	☐3	☐2	☐1	10
6. I consider (considered) nursing rather unpleasant.	☐1	☐2	☐3	☐4	☐5	11
7. I would like to leave (left) nursing for another career.	☐1	☐2	☐3	☐4	☐5	12
8. Most days I am (was) enthusiastic about working as a nurse.	☐5	☐4	☐3	☐2	☐1	13
PROMOTIONAL OPPORTUNITIES	SA	A	N	D	SD	
9. I feel (felt) that promotions are not regular in nursing.	☐1	☐2	☐3	☐4	☐5	14
10. For me there is (was) very good opportunity for advancement in nursing.	☐5	☐4	☐3	☐2	☐1	15

SUPERVISORY SATISFACTION	SA	A	N	D	SD	COL
11 My supervisors take (took) my suggestions into account when making decisions.	☐5	☐4	☐3	☐2	☐1	16
12. My supervisors do (did) not maintain high standards of performance.	☐1	☐2	☐3	☐4	☐5	17
13. My supervisors encourage (encouraged) people who work (worked) for them to exchange opinions.	☐5	☐4	☐3	☐2	☐1	18
14. My supervisors show (showed) you how to improve your performance.	☐5	☐4	☐3	☐2	☐1	19

PATIENT CARE TIME	SA	A	N	D	SD	
15. There is (was) too much clerical and "paperwork" required of me as a nurse.	☐1	☐2	☐3	☐4	☐5	20
16 I spend (spent) as much time as I'd like to taking care of patients directly.	☐5	☐4	☐3	☐2	☐1	21
17. As a nurse I am (was) required to spend too much time on committees and/or administrative matters rather than caring for patients.	☐1	☐2	☐3	☐4	☐5	22

CONTINUING EDUCATION	SA	A	N	D	SD	
18 My nursing employer provides (provided) sufficient continuing education programs within the organization.	☐5	☐4	☐3	☐2	☐1	23
19 My nursing employer provides (provided) sufficient financial support for updating my nursing skills in continuing education offered outside the organization.	☐5	☐4	☐3	☐2	☐1	24
20. The nursing continuing education offered me within the organization is (was) excellent for my needs.	☐5	☐4	☐3	☐2	☐1	25
21 The nursing continuing education I receive (received) outside of my organization is (was) excellent for my needs.	☐5	☐4	☐3	☐2	☐1	26

SATISFACTION WITH MEDICAL STAFF	SA	A	N	D	SD	
22 Physicians are (were) generally receptive to my suggestions in decisions concerning the level and/or type of care the patient receives (received).	☐5	☐4	☐3	☐2	☐1	27
23 Physicians usually consider (considered) my knowledge and judgment as a nurse when making patient care decisions.	☐5	☐4	☐3	☐2	☐1	28
24 Physicians generally do (did) not treat me with dignity and respect.	☐1	☐2	☐3	☐4	☐5	29
25. Physicians generally appreciate what I do (did) as a nurse	☐5	☐4	☐3	☐2	☐1	30

JOB SATISFACTION	SA	A	N	D	SD	
26. I definitely like (liked) my nursing job.	☐5	☐4	☐3	☐2	☐1	31
27 Each day on my job seems (seemed) like it will (would) never end.	☐1	☐2	☐3	☐4	☐5	32
28. I am (was) never bored with my nursing job.	☐5	☐4	☐3	☐2	☐1	33

PARTICIPATION

Following is a list of decisions which are made on the job. For each of the decisions, please indicate how much input you actually have (or had when you were working as a nurse) in making these decisions.

	None	Some	Moderate	Good Deal	Very Great	
29. The way you do (did) your job.	☐1	☐2	☐3	☐4	☐5	34
30. Sequence of your daily activities.	☐1	☐2	☐3	☐4	☐5	35
31. Pace at which you work (worked).	☐1	☐2	☐3	☐4	☐5	36

COMMUNICATION

COL

How well informed are you (or were you informed when you were working as a nurse) about the following aspects of your job as a nurse?

	Very Well	Quite Well	Fairly Well	Somewhat	Hardly At All	
32. What is (was) to be done.	☐5	☐4	☐3	☐2	☐1	37
33. Priority of work to be done.	☐5	☐4	☐3	☐2	☐1	38
34. Policies and procedures.	☐5	☐4	☐3	☐2	☐1	39
35. How you are (were) supposed to do your job.	☐5	☐4	☐3	☐2	☐1	40

THE JOB MARKET—Availability of Alternative Jobs

36. How easy do you believe it would be (or was it when you were leaving nursing) to find a job outside of nursing? 41
☐1 Very Hard ☐2 Hard ☐3 Fairly Easy ☐4 Quite Easy ☐5 Very Easy

37. What is your best estimate of the number of available non-nursing jobs (or the number when you left nursing) for a person with your qualifications? 42
☐5 Great Many ☐4 Quite a Few ☐3 Moderate Number ☐2 A Few ☐1 Very Few

HOW ROUTINE IS YOUR JOB

38. To what extent do you do (or did you do when you were last working as a nurse) the same tasks in the same way every day? 43
☐5 Almost Totally ☐4 Very Much ☐3 Moderately ☐2 Somewhat ☐1 Almost Totally Different

39. How much variety is there in the activities that make up (made up) your job as a nurse? 44
☐5 Very Little ☐4 Some ☐3 Moderate ☐2 Great ☐1 Very Great

PAY/BENEFIT EQUITY

40. Compared to the effort that you put into your job, how do you feel about the pay you receive (received) as a nurse? 45
☐1 Very Poor ☐2 Poor ☐3 About Right ☐4 Good ☐5 Very Good

41. Compared with other jobs you feel are of similar difficulty, how do you feel about the pay you receive (received) as a nurse? 46
☐5 Very Good ☐4 Good ☐3 About Right ☐2 Poor ☐1 Very Poor

FRINGE BENEFITS

How would you rate the fringe benefits offered by your current nursing employer (or last nursing job if you are not currently working as a nurse).

VG = Very Good. G = Good. AV = Average. P = Poor. VP = Very Poor. DK = Don't Know

	VG	G	AV	P	VP	DK	
42. Medical, surgical, or hospital insurance that covers any illness or injury that might occur to you while off the job.	☐5	☐4	☐3	☐2	☐1	☐0	47
43. Life insurance that would cover a death occurring for reasons not connected with your job	☐5	☐4	☐3	☐2	☐1	☐0	48
44. Retirement benefits (other than Social Security).	☐5	☐4	☐3	☐2	☐1	☐0	49
45. Time off with pay for vacations.	☐5	☐4	☐3	☐2	☐1	☐0	50
46. Time off with pay for sick leave.	☐5	☐4	☐3	☐2	☐1	☐0	51
47. Time off with pay for holidays.	☐5	☐4	☐3	☐2	☐1	☐0	52
48. Weekends off.	☐5	☐4	☐3	☐2	☐1	☐0	53

ABOUT YOURSELF COL

Nurses leaving the profession are often influenced by personal and family characteristics such as education, marital status, children, and so forth. Therefore some background information is needed about you.

49. What is your present marital status? 54
☐₁ Married ☐₂ Single

50. How many children do you have? 55
☐₀ None ☐₁ 1-2 ☐₂ 3-4 ☐₃ 5 or more

51. How many of your children are less than six years old? 56
☐₀ No Children ☐₁ None below age six ☐₂ 1-2 ☐₃ 3 or more

52. Ideally, if you could arrange your life, which goal would you choose to emphasize most, which second, which third, which fourth, and which least? Assign ranks from one to five with 1 signifying "most" and 5 signifying "least".

RANK	GOAL	
_____	To be a good mother or father.	57
_____	To have a successful career.	58
_____	To be a good citizen in the community.	59
_____	To be a good spouse.	60
_____	To be a good member of my church or synagogue.	61

53. Excluding your spouse and children, how many close relatives (such as parents, aunts, uncles, first cousins, and grandparents) do you have living in your same community? 62
☐₀ None ☐₁ Less than 3 ☐₂ 3-5 ☐₃ 6-10 ☐₄ Over 10

54. How many close friends do you have (or did you have when you last worked as a nurse) that are nurses? 63
☐₀ None ☐₁ 1 ☐₂ 2 ☐₃ 3 ☐₄ 4 ☐₅ 5 or more

55. How often do you (or did you when you last worked as a nurse) see your close friends that are nurses outside of working hours, such as dinner, picnics, parties, or other social events? 64
☐₆ Almost every day
☐₅ Roughly between two and six times a week
☐₄ About once a week
☐₃ About every other week
☐₂ Less than once a month
☐₁ No close friends that are nurses

56. What is the highest degree in nursing that you have obtained? 65
☐₁ Associate ☐₂ Diploma ☐₃ Baccalaureate ☐₄ Masters ☐₅ Doctorate

57. What is the highest non-nursing degree you have obtained? 66
☐₀ Have not received a degree outside of nursing
☐₁ Associate ☐₂ Diploma ☐₃ Baccalaureate ☐₄ Masters ☐₅ Doctorate

58. How many years has it been since you received your highest degree in nursing? 67
☐₁ Less than 1 year ☐₂ 1-3 ☐₃ 4-6 ☐₄ 7-9 ☐₅ More than 10 years

59. How much training or experience other than nursing have you had which would easily be transferable to a non-nursing job? 68
☐₅ Very Much ☐₄ Much ☐₃ Moderate Amount ☐₂ Not Much ☐₁ Very Little

60. How well has your training and experience as a nurse prepared you for non-nursing jobs? 69
☐₅ Very Well ☐₄ Well ☐₃ Moderately ☐₂ Not Well ☐₁ Not At All

61. How well did your nursing education prepare you for your first job as a nurse? 70
☐₁ Not At All ☐₂ Not Well ☐₃ Moderately ☐₄ Well ☐₅ Very Well

62. Generally, how well did the orientation offered you by your current (last) nursing employer prepare you to function in your assigned area? 71
☐₅ Very Well ☐₄ Well ☐₃ Moderately ☐₂ Not Well ☐₁ Not At All

63. Which of the following BEST describes your current career status? (Check One) 72
- ☐1 Primarily working as a nurse in some capacity
- ☐2 Primarily working in a field outside of nursing
- ☐3 Attending school in nursing
- ☐4 Attending school in field other than nursing
- ☐5 Not working because of personal illness
- ☐6 Not working—not retired or looking for employment
- ☐7 Not working—retired
- ☐8 Unemployed and looking for a job in nursing
- ☐9 Unemployed and looking for a job out of nursing

64. Which of the following BEST describes the field in which you work? (Check One) 73
- ☐1 Not working—retired, unemployed or in school
- ☐2 Primarily working as a nurse in some capacity
- ☐3 Working as a salaried manager or official
- ☐4 Working as an owner of a business
- ☐5 Working as a clerical or similar worker (white collar)
- ☐6 Working in sales
- ☐7 Working as a non-nurse professional/technical (teacher, doctor, engineer, etc.)
- ☐8 Working as a service worker (such as waiter or waitress)
- ☐9 Other (explain) _____

65. Your approximate hours of working in your primary job are (choose the one closest to your situation): 74
- ☐1 Not working
- ☐2 Working less than 15 hours per week
- ☐3 Working 15-24 hours per week
- ☐4 Working 25-34 hour per week
- ☐5 Working 35 or more hours per week

66. What shift BEST describes your hours currently worked as a nurse? (Check One) 75
☐1 Not working as a nurse ☐2 7-3 ☐3 3-11 ☐4 11-7 ☐5 8-5 ☐6 12 hour shifts ☐7 Rotating
☐8 Other (explain) _____

67. Are you satisfied with the shift you primarily work as a nurse (same shift checked in 66)? 76
☐0 Not working as a nurse
☐1 Not Satisfied ☐2 Somewhat Satisfied ☐3 Moderately Satisfied ☐4 Satisfied ☐5 Very Satisfied

68. On what days do you generally work? 77
- ☐1 Not working as a nurse
- ☐2 Monday through Friday only
- ☐3 Various days with every other weekend off
- ☐4 Various days with every third weekend off
- ☐5 Weekends only
- ☐6 Call-in basis only
- ☐7 Other (explain) _____

69. Are (were) you satisfied with your work schedule as a nurse? 78
☐5 Very Satisfied ☐4 Satisfied ☐3 Moderately Satisfied ☐2 Somewhat Satisfied ☐1 Not Satisfied

70. Generally, how do you feel about the amount of overtime you work (worked) as a nurse? 79
☐1 Too Little Overtime ☐2 Fair Amount of Overtime ☐3 Too Much Overtime

71. What is your age? 80
☐1 Under 25 years ☐2 25-29 ☐3 30-34 ☐4 35-39 ☐5 40-49 ☐6 50-59 ☐7 Over 60 years

CARD #2

72. How many years have passed since you received your license as a Registered Nurse? 1
☐1 Under 2 years ☐2 2-5 ☐3 6-10 ☐4 11-15 ☐5 16-20 ☐6 Over 20 years

73. How many times have you stopped working as a nurse (for any reason) and returned to a nursing job? (Check One—Do not include temporary leaves of absence of less than 6 months.) 2
- ☐1 Worked continuously as a nurse
- ☐2 1 time ☐3 2-3 ☐4 4-5 ☐5 Over 5 times
- ☐6 Left nursing and have not returned

COL

74. Did your last nursing employer conduct a formal exit interview with you? 3
☐0 Have not left a nursing job ☐2 Yes ☐3 No

75. For how many continuous years have you worked for your current employer as a nurse? (Check One—Do not include temporary leaves of absence of less than 6 months.) 4
☐0 Not working or not working as a nurse
☐1 Less than 1 year ☐2 1-2 ☐3 3-5 ☐4 6-10 ☐5 11-15 ☐6 Over 15 years

76. What is your race? 5
☐1 White ☐2 Black ☐3 Other (explain) _____

77. What is your sex? 6
☐1 Male ☐2 Female

78. Approximately how long does it take you to travel from where you live to where you work? 7
☐1 Not working ☐2 Under 10 min. ☐3 10-20 min. ☐4 21-30 min. ☐5 31-60 min. ☐6 Over 1 hr.

79. What is your HOME zip code? ☐☐☐☐☐ 8-12

80. While you were growing up, until about age 18, what size community did you live in for the most part? 13
☐1 Rural area or farm
☐2 Town or small city (under 5,000)
☐3 Medium-size city (50,000-250,000)
☐4 Suburban area near large city
☐5 Large city (over 250,000)
☐6 Moved frequently to different settings

81. How would you describe the size of the community in which you are currently working? 14
☐0 Not working
☐1 Rural area
☐2 Town or small city (under 5,000)
☐3 Medium-size city (50,000-250,000)
☐4 Suburban area near large city
☐5 Large city (over 250,000)

82. What BEST describes (described) your nursing work setting? 15-16
☐1 General Hospital
☐2 Health Department
☐3 Nursing Home
☐4 Industry
☐5 Rehabilitation Hospital
☐6 Home Health Agency
☐7 Registry
☐8 Private Doctor's office or clinic
☐9 Mental Health Clinic
☐10 Combination Hospital/Nursing Home
☐11 Mental Hospital
☐12 Mental Retardation Facility
☐13 Health Maintenance Organization
☐14 Other (explain) _____

83. The hospital and/or nursing home you work for can BEST be described as owned by: 17
☐0 Not working in hospital or nursing home
☐1 Religious organization
☐2 Private-for-profit
☐3 Federal Government
☐4 State Government
☐5 Local Government (City or County)
☐6 Not-for-profit (non-governmental, non-religious)
☐7 Don't know
☐8 Other (explain) _____

84. If you work in a hospital, nursing home, or combination nursing home/hospital, approximately how many beds are (were) there in the entire facility? 18
☐0 Not working in a hospital or nursing home
☐1 Under 50 ☐2 50-100 ☐3 101-200 ☐4 201-300 ☐5 301-400 ☐6 401-500 ☐7 Over 500

85. How many beds are in the unit or area in which you primarily work? 19-20
☐0 Not currently working in a hospital or nursing home
☐1 Under 10 ☐2 11-20 ☐3 21-30 ☐4 31-35 ☐5 36-40
☐6 41-45 ☐7 46-50 ☐8 51-55 ☐9 56-60 ☐10 Over 60

COL

86. If you work in a hospital, on what type of unit do you primarily work? 21-22

- ☐ 0 Not currently working in a hospital
- ☐ 1 Medical
- ☐ 2 Surgical
- ☐ 3 Medical/Surgical
- ☐ 4 OB/GYN
- ☐ 5 O.R.
- ☐ 6 E.R.
- ☐ 7 Oncology
- ☐ 8 Pediatrics
- ☐ 9 ICU
- ☐ 10 Neonatal
- ☐ 11 Cardiac ICU
- ☐ 12 Ambulatory Clinic
- ☐ 13 Psychiatric
- ☐ 14 Other (explain) _____

87. In your opinion, is (was) your INSTITUTION adequately staffed with nurses? 23

☐ 4 Overstaffed ☐ 3 Just right ☐ 2 Somewhat understaffed ☐ 1 Very understaffed ☐ 0 Don't know

88. In your opinion, is (was) the UNIT you primarily worked on adequately staffed? 24

☐ 4 Overstaffed ☐ 3 Just right ☐ 2 Somewhat understaffed ☐ 1 Very understaffed ☐ 0 Don't know

89. Your position as a nurse is (was) best titled as: 25-26

- ☐ 1 Staff R.N.
- ☐ 2 Head Nurse
- ☐ 3 Supervisor
- ☐ 4 Director
- ☐ 5 Clinic Nurse
- ☐ 6 Office Nurse
- ☐ 7 Educator
- ☐ 8 Registry Nurse
- ☐ 9 Nurse Practitioner
- ☐ 10 Home Health Nurse
- ☐ 11 Public Health Nurse
- ☐ 12 Industrial/Corporate Nurse
- ☐ 13 Other (explain) _____

90. Which of the following BEST describes why you left your last nursing job? (Check One) 27-28

- ☐ 1 Have not left a nursing job
- ☐ 2 Took what I consider to be a better nursing job in another organization
- ☐ 3 To seek a job outside of nursing
- ☐ 4 To attend school
- ☐ 5 Retired
- ☐ 6 Personal illness
- ☐ 7 To raise children
- ☐ 8 Obligations to family other than children
- ☐ 9 Moved to different location
- ☐ 10 Other (explain) _____

NOTE: The following questions on income are very important to make the analysis significant. Like all other information collected by this questionnaire, the information about income is completely confidential.

91. Roughly, what is YOUR total yearly income before taxes and other deductions are made? 29-30

- ☐ 1 Less than $3,000
- ☐ 2 $3,000-$5,999
- ☐ 3 $6,000-$8,999
- ☐ 4 $9,000-$11,999
- ☐ 5 $12,000-$14,999
- ☐ 6 $15,000-$17,999
- ☐ 7 $18,000-$20,999
- ☐ 8 $21,000-$23,999
- ☐ 9 $24,000-$26,999
- ☐ 10 $27,000 and over

92. Roughly, what is the yearly income before taxes and other deductions of your HOUSEHOLD—including your own income, the income of everyone else in the family who works, and income from any other source? 31-32

- ☐ 1 Less than $5,000
- ☐ 2 $5,000-$9,999
- ☐ 3 $10,000-$14,999
- ☐ 4 $15,000-$19,999
- ☐ 5 $20,000-$24,999
- ☐ 6 $25,000-$29,999
- ☐ 7 $30,000-$34,999
- ☐ 8 $35,000-$39,999
- ☐ 9 $40,000-$44,999
- ☐ 10 $45,000-$49,999
- ☐ 11 $50,000 and over

PLEASE CHECK TO MAKE SURE YOU HAVE NOT SKIPPED ANY QUESTIONS. Thank you for your cooperation in filling out this questionnaire. If you have any further ideas or comments you would like to make, please feel free to use the bottom and back of this page.

REMEMBER:

1. The answers you give are confidential.
2. Do not sign your name to the questionnaire.
3. Return the questionnaire in the enclosed prepaid envelope to:

Mr. Will Ferniany
Department of Health Services Administration
School of Community and Allied Health
University of Alabama in Birmingham
University Station
Birmingham, AL 35294

Appendix B: Instrument Items and Measurement.

Most of the responses of items used in this study use a Likert type scale from Strongly Agree to Strongly Disagree. The appreviations are as follows: SA = Strongly Agree, A = Agree, N = Neither agree or disagree, D = Disagree, SD=Strongly Disagree. Many of the questions are worded negatively to decrease the measurement error and reduce bias in responding.

The score for each construct was obtained by averaging the scores for the items unless otherwise noted.

CAREER WITHDRAWAL

63. Which of the following BEST describes your current career status? (CHECK ONE)

(1) Primarily working as a nurse in some capacity
(2) Primarily working in a field outside of nursing
(3) Attending school in nursing
(4) Attending school in field other than nursing
(5) Not working because of personal illness
(6) Not working - not retired or looking for employment
(7) Not working - retired
(8) Unemployed and looking for a job in nursing
(9) Unemployed and looking for a job out of nursing

65. Your approximate hours of working in your primary job are (choose the one closest to your situation):

(1) Not working
(2) Less than 15 hours per week
(3) 15-24 hours per week
(4) 25-34 hours per week
(5) 35 or more hours per week

Notes: Question 63 was used (along with age) to remove nonvoluntary withdrawal. Question 65 was used to determine the degree of

withdrawal from full-time nursing. Question 65's scoring was reversed to be consistent with the definition of withdrawal where the higher the score the greater the withdrawal.

COMMITMENT TO NURSING CAREER -

1. I recommend being a nurse to my friends as a great profession to work in.

2. I would accept almost any type of nursing job rather than give up nursing as a profession.

3. I am extremely glad that I chose to become a nurse over the other careers I considered prior at the time I started nursing school.

4. For me, being a nurse is not the best of all possible professions in which to work.

Notes: Scored SA to SD from 5 to 1, with question 4 scored in reverse.

Factor Loadings: 1 = .76, 2 = .68, 3 = .81, 4 = .69

JOB SATISFACTION

26. I definitely like (liked) my nursing job.

27. Each day on my job seems (seemed) like it will (would) never end.

28. I am (was) never boared with my nursing job.

Notes: Scored SA to SD from 5 to 1 with question 27 scored in reverse.

Factor Loadings: 26 = .46, 27 = .65, 28 = .41.

PAY EQUITY -

How do you perceive the pay and benefits you receive (received) for your experience, training, and performance.

40. Compared to the effort that you put into your job, how do you feel about the pay you receive (received) as a nurse.

(1) Very poor,
(2) Poor,
(3) About right
(4) Good,
(5) Very good.

41. Compared with other jobs you feel are of similar difficulty how do you feel about the pay you receive (received) as a nurse.

    (5) Very good,
    (4) Good,
    (3) About right
    (2) Poor,
    (1) Very poor.

How would you rate the fringe benefits offered by your current nursing employer (or last nursing job if you are not currently working as a nurse).

42. Medical, surgical, or hospital insurance that covers any illness or injury that might occur to you while off the job.

43. Life insurance that would cover a death occurring for reasons not connected with your job.

44. Retirement benefits (other than Social Security)

45. Time off with pay for vacations.

46. Time off with pay for sick leave.

47. Time off with pay for holidays.

48. Weekends Off.

Notes: Fringe Benefits questions (42-48) were labeled: VG = Very Good, G = Good, AV = Average, P = Poor, VP = Very Poor, DK = Don't Know. Pay Equity (40-41) was summed. For all questions VG was scored 5 and VP 1, Don't Know was scored 0. Pay Equity and Fringe Benefits were averaged to develop the Pay Equity scale.

Factor Loadings: 40 = .84, 41 = .86, 42 = .77, 43 = .84, 44 = .79, 45 = .84, 46 = .83, 47 = .86, 48 = .61.

ROUTINIZATION -

38. To what extent do you do (or did you do when you were last working as a nurse) the same tasks in the same way every day?

(5) Almost totally
(4) Very much the same,
(3) Moderately the same,
(2) Somewhat the same,
(1) Almost totally different

39. How much variety is there in the activities that make up (made up) your job as a nurse?

(5) Very little
(4) Some
(3) Moderate
(2) Great
(1) Very great

Notes: Factor Loadings: 38 = - .87, 39 = - .80.

COMMUNICATION -

How well informed are you (or were you informed when you were working as a nurse) about the following aspects of your job as a nurse?

32. What is (was) to be done.

33. Priority of work to be done.

34. Policies and procedures.

35. How you are (were) supposed to do your job.

Notes: All items were scored Very Well, Quite Well, Fairly Well, Somewhat, Hardly at All with Very Well being 5 and Hardly at all being 1. All items were positively worded.

Factor Loadings: 32 = .85, 33 = .87, 34 = .77, 35 = .87.

PARTICIPATION -

Following is a list of decisions which get made on the job. For each of the decisions please indicate how much say you actually have (or had when you were working as a nurse) in making these decisions.

29. The way you do (did) your job.

30. Sequence of your daily activities.

31. Pace at which you work (worked).

Notes: All responses labeled None, Some, Moderate, Good Deal, and Very Great with None valued at 1 and Very Great at 5.

Factor Loadings: 29 = .78, 30 = .87, 31 = .83.

PHYSICIAN RELATIONS

22. Physicians are (were) generally receptive to my suggestions in decisions concerning the level and/or type of care the patient receives (received).

23. Physicians usually consider (considered) my knowledge and judgment as a nurse when making patient care decisions.

24. Physicians generally do (did) not treat me with dignity and respect.

25. Physicians generally appreciate what I do (did) as a nurse.

Notes: Responses from SA to SD with SA scored 5 and SD scored 1.

Question 24 was scored in reverse.

Factor Loadings: 22 = .84, 23 = .86, 24 = .68, 25 = .77.

PATIENT CARE TIME -

15. There is (was) too much clerical and "paper work" required of me as a nurse.

16. I don't (didn't) spend as much time as I'd like to taking care of patients directly.

17. As a nurse I am (was) required to spend to much time on committees and/or administrative matters rather than caring of patients

Notes: All responses labeled SA to SD with SA scored 5 and SD scored 1.

Questions 15 and 17 were scored in reverse.

Factor Loadings: 15 = .78, 16 = .77, 17 = .74.

SUPERVISORY SATISFACTION -

11. My supervisors take (took) my suggestions into account when making decisions.

12. My supervisors do (did) not maintain (maintained) high standards of performance.

13. My supervisors encourage (encouraged) people who work (worked) for them to exchange opinions.

14. My supervisors show (showed) you how to improve your performance.

Notes: Responses labeled SA to SD with SA valued at 5 and SD valued at 1. Question 12 scored in reverse.

Factor Loadings: 11 = .72, 12 = .61, 13 = .77, 14 = .76.

PROMOTIONAL OPPORTUNITIES -

9. I feel (felt) that promotions are not regular in nursing.

10. For me there is (was) very good opportunity for advancement in nursing.

Notes: Responses labeled SA to SD with SA valued at 5 and SD valued at 1. Question 9 scored in reverse.

Factor Loadings: 9 = .76, 10 = .74.

CONTINUING EDUCATION -

18. My nursing employer provides (provided) sufficient continuing education programs within the organization.

19. My nursing employer provides (provided) sufficient financial support for updating my nursing skills in continuing education offered outside the organization.

20. The nursing continuing education offered me within the organization is (was) excellent for my needs.

21. The nursing continuing education I receive (received) outside of my organization is (was) excellent for my needs.

Notes: Responses labeled SA to SD with SA scored 5 and SD valued at 1. Question 21 from the Alabama Hospital Association instrument is not included in the measurment of the continuing education construct.

Factor Loadings: 18 = .81, 19 = .74, 20 = .83, 21 = .64.

OPPORTUNITY -

Availability of alternative jobs

36. How easy do you believe it would be (or was it when you were leaving nursing) to find a job outside of nursing?

(1) Very Hard, (2) Hard, (3) Fairly Easy,
(4) Quite Easy, (5) Very Easy

37. What is your best estimate of the number of available non-nursing jobs (or the number when you were left nursing) for a person with your qualifications?

(5) Great Many, (4) Quite a few, (3) Moderate Number,
(2) A Few, (1) Very few

Notes: Factor Loadings: 36 = .88, 37 = .87.

FAMILY PRIORITY -

49. What is your present marital status?

(1) Married, (2) Single

50. How many children do you have?

(0) None, (1) 1-2 , (2) 3-4, (3) 5 or more

52. Ideally, if you could arrange your life, which goal would you choose to emphasize most, which second most, which third, which fourth, and which least? Assign ranks from one to five with 1 signifying "most" and 5 signifying "least".

RANK	GOAL
.....	To be a good mother or father
.....	To have a successful career
.....	To be a good citizen in the community
.....	To be a good spouse
.....	To be a good member of my church or synagogue

Notes: Following Price and Mueller's methods scoring for questions 49, 50, 52 will be as follows:

2 - Not married, no children, and both good mother or father and good spouse ranked three or lower.

3 - Not married, no children, andeither good spouse or good mother and father ranked two or higher.

3 - Not married with children or married with no children and good spouse or good mother or father ranked three or lower.

4 - Not married, no children, and both good spouse and good mother or father ranked two or higher.

4 - Not married with children or married with no children and either good spouse or good mother or father ranked two or higher.

4 - Married with children and both good spouse and good mother or father ranked three or lower.

5 - Married with children and either good spouse or good mother or father ranked two or higher.

5 - Not married with children or married with no children and both good spouse and good mother or father ranked two or higher.

6 - Married with children and both good spouse and good mother or father ranked two or higher.

Factor analysis could not be developed for the family priority construct because of the method of calucation.

OTHER FAMILY INCOME -

The following questions on income are very important to make the analysis significant. Like all other information collected by this questionnaire, the information about income is completely confidential.

91. Roughly, what is YOUR total yearly income before taxes and other deductions are made?

(1) Less than $3,000
(2) $3,000 to $5,999
(3) $6,000 to $8,999
(4) $9,000 to $11,999
(5) $12,000 to $14,999
(6) $15,000 to $17,999
(7) $18,000 to $20,999
(8) $21,000 to $23,999
(9) $24,000 to $26,999
(10) $27 and over

92. Roughly, what is the yearly income before taxes and other deductions of your HOUSEHOLD - including your own income, the income of everyone else in the family who works, and income from any other source.

(1) Less that $5,000
(2) $5,000 to $9,999
(3) $10,000 to $14,999
(4) $15,000 to $19,999
(5) $20,000 to $24,999
(6) $25,000 to $29,999
(7) $30,000 to $34,999
(8) $35,000 to $39,999
(9) $40,000 to $44,999
(10) $45,000 to $49,999
(11) $50,000 and over

Notes: The midpoint of question 91 less the midpoint of the answer in question 92 will be used to determine other family income.

Factor Analysis could not be developed for other family income because of the method of scoring.

OTHER -

77. Your sex is? ( ) Male, ( )Female

APPENDIX C: Tests of Assumptions

Chi Square Tests
Bulk Mailing Compared to Random Sample

Critical Value 6.635, $p \leq .01$

Variable	Chi Square	Comparable
Hours Worked		
Not working	0.393	Yes
Less than 15 hours	1.210	Yes
15-24 hours	0.110	Yes
25-24 hours	0.160	Yes
35 or more hours	0.650	Yes
Nursing Degree		
Associate	4.540	Yes
Diploma	0.790	Yes
Baccalaureate	0.160	Yes
Masters	1.070	Yes
Doctoral	0.490	Yes
Shift		
Not working	0.920	Yes
7-3	1.300	Yes
3-11	1.890	Yes
11-7	0.287	Yes
8-5	0.810	Yes
12 hour	0.610	Yes
Rotating	0.150	Yes
Other	0.013	Yes
Age		
Under 25	0.470	Yes
25-29	0.740	Yes
30-34	0.130	Yes
35-39	0.130	Yes
40-49	1.400	Yes
50-59	0.050	Yes
Over 60	1.520	Yes

Chi Square Test Continued

Variable	Chi Square	Comparable
Years Since License		
Under 2	0.020	Yes
2-5	0.690	Yes
6-10	1.000	Yes
11-15	0.012	Yes
16-20	0.057	Yes
Over 20	2.040	Yes
Race		
White	0.286	Yes
Black	0.910	Yes
Other	0.980	Yes

Test of Linearity

Construct	Between Group Linearity	Sum of Squares Deviation From	Linearity Explained R Square	Total Eta Sq.
		Job Satisfaction		
Promotion	105.3	7.4	.080	.085
Supervision	238.6	85.3	.180	.250
Patient Care	53.8	159.6	.040	.160
Routine	44.8	231.1	.040	.210
Participation	214.6	79.0	.160	.220
Physician Sat.	219.9	85.2	.167	.231
Continuing Ed.	115.7	114.6	.087	.174
Communication	157.5	83.0	.119	.182
Pay Equity	50.5	107.6	.038	.120
Opportunity	28.2	78.1	.021	.081
Family Priority	2.0	6.1	.002	.006
Other Income	.2	77.9	.000	.059
		Commitment		
Promotion	180.2	18.0	.110	.120
Supervision	133.9	41.0	.080	.100
Patient Care	9.9	33.6	.006	.029
Routine	62.4	29.7	.030	.060
Participation	85.4	31.4	.052	.072
Physician Sat.	141.7	43.8	.087	.114
Continuing Ed.	79.9	27.6	.049	.066
Communication	45.1	21.9	.028	.041
Pay Equity	166.3	70.9	.100	.140
Opportunity	1.5	9.9	.001	.007
Family Priority	1.1	3.2	.006	.003
Other Income	27.7	117.8	.017	.089
Job Satisfaction	372.6	80.0	.228	.277

Test Of Linearity Continued

Construct	Between Group Linearity	Sum of Squares Deviation From	Linearity Explained R Square	Total Eta Sq.
		Withdrawal		
Promotion	6.3	17.0	.002	.008
Supervision	2.9	35.1	.001	.012
Patient Care	0.1	34.7	.000	.012
Routine	1.7	16.2	.001	.001
Participation	39.6	25.8	.013	.021
Physician Sat.	24.6	25.6	.008	.016
Continuing Ed.	0.0	64.4	.000	.021
Communication	0.2	39.2	.001	.013
Pay Equity	42.8	183.8	.014	.075
Opportunity	15.0	9.7	.005	.008
Family Priority	138.6	47.5	.046	.061
Other Income	955.4	716.9	.316	.552
Job Satisfaction	0.8	26.0	.000	.009
Commitment	40.4	12.6	.013	.018

Correlation Coefficient Comparison on Three Variables The Dependent Variable (Withdrawal) with all Pairs of Predictor Variables

Additivity was tested by comparing the paired correlation coefficients for two variables (one independent and one dependent) with a third, independent control variable. Significance was tested using the t - statistic as calculated by the following formula (Walker and Lev, 1953, pp. 235-257):

$$t = (r_{xz} - r_{yz}) \frac{(N - 3)(1 + r_{xy})}{2(1 - r^2_{xy} - r^2_{xz} - r^2_{zy}) + 2(r_{xy}\, r_{xz}\, r_{yz})}$$

The critical value of t is 5.841, $p \leq .01$, however, because of the large sample size (n = 6548), a critical value at the .0001 level would be more appropriate, however, the author was unable to find a statistical table at the more appropriate level of analysis. Even without the higher test of significance, the model sufficiently passes the test for additivity.

X	Y	r_{xy}	r_{xz}	r_{yz}	t
Commitment	Promotion	.322	-.078	.025	5.12
	Supervision	.310	-.078	-.032	-2.30
	Other Income	-.052	-.078	.342	-17.73
	Family Priority	.032	-.078	.205	-16.26
	Patient Care	.072	-.078	-.010	4.03
	Routine	-.200	-.078	.048	6.57
	Participation	.259	-.078	-.110	2.14
	Physician Sat.	.297	-.078	-.078	0
	Continuing Ed.	.212	-.078	.002	-5.16
	Job Satisfaction	.534	-.078	.007	-5.77
	Communication	.219	-.078	-.018	-3.88
	Opportunity	.037	-.078	.063	-8.22
	Pay Equity	.357	-.078	-.094	12.28

Additivity Test Continued

X	Y	r_{xy}	r_{xz}	r_{yz}	t
Job Satisfaction					
	Promotion	.303	.007	.025	-1.23
	Supervision	.342	.007	-.032	2.53
	Other Income	.070	.007	.342	-21.07
	Familiy Priority	.079	.007	.205	12.00
	Patient Care	.112	.007	-.010	1.03
	Routine	-.349	.007	.048	-2.00
	Participation	.295	.007	-.110	7.99
	Physician Sat.	.308	.007	-.078	5.84
	Continuing Ed.	.235	.007	.002	.32
	Communication	.278	.007	-.018	1.66
	Opportunity	.089	.007	.063	-3.35
	Pay Equity	.245	.007	-.094	6.66

Correlations Amoung the Residuals for Dependent Variables and Between Residuals and Predictor Variables

Variable	Residuals		
	Job Satisfaction	Commitment	Withdrawal
Job Satisfaction Residual		-0.00	-0.00
Commitment Residual	-0.00		-0.00
Withdrawal Residual	-0.00	-0.00	
Pay Equity	-0.00	-0.00	-0.00
Participation	-0.00	-0.00	0.00
Supervision	-0.00	-0.00	0.00
Promotion	-0.00	-0.00	-0.00
Physician Sat.	-0.00	-0.00	-0.00
Patient Care	-0.00	0.00	0.00
Family Priority	0.00	-0.00	0.00
Other Income	0.00	0.00	-0.00
Routine	0.00	-0.00	-0.00
Communication	-0.00	0.00	-0.00
Continuing Ed.	-0.00	0.00	-0.00
Opportunity	0.00	-0.00	0.00
Commitment			-0.00
Job Satisfaction		-0.00	-0.00

n = 6066

Bimodal Analysis By Question

Question Number	Frequency Responses 1	2	3	4	5
Commitment					
1	381	1033	1463	2573	1111
2	1649	2480	821	1154	458
3	307	845	940	2600	1878
4	779	2008	1027	1859	884
Promotion					
9	2257	2891	765	579	84
10	987	2195	1080	1813	496
Supervision					
11	513	1281	1220	3069	416
12	517	1725	1040	2336	871
13	527	1523	1145	2777	457
14	632	1816	1307	2381	311
Patient Care					
15	2793	2445	645	588	43
16	1629	2881	441	1315	227
17	701	1459	1847	2165	315
Continuing Education					
18	969	1953	640	2387	556
19	1538	2090	832	1702	339
20	1135	2231	1346	1500	276
21	535	1461	1966	2141	376
Physician Relations					
22	514	1145	979	3346	511
23	470	1197	954	3367	501
24	457	1305	946	2865	917
25	367	937	923	3541	715

Bimodal Analysis Continued

Question Number	Frequency Responses 1	2	3	4	5
Job Satisfaction					
26	161	632	888	331	1491
27	222	688	1414	3419	739
28	335	2088	1096	2247	726
Participation					
29	183	1090	1369	2632	1235
30	338	1070	1334	2506	1259
31	530	1050	1193	2431	1303
Communication					
32	148	423	1516	2274	2167
33	272	603	1367	2255	2026
34	333	822	1833	2130	1397
35	347	791	1614	2118	1645
Opportunity					
36	1202	2897	1636	407	352
37	1399	2316	1993	647	119
Routinization					
38	252	823	1777	2758	905
39	456	1166	2437	1507	945
Pay Equity					
40	1435	2915	1116	819	229
41	1804	3091	922	512	173
Hours Worked					
65	555	206	612	473	4679

APPENDIX D: Mean Responses

Question	Hours Worked				
	Not Working (554)	< 15 (205)	15-24 (606)	25-34 (471)	35+ (4636)
Commitment	2.94	3.12	3.13	3.08	3.20
Promotion	2.47	2.57	2.34	2.30	2.38
Supervision	3.04	3.21	3.14	3.13	3.17
Patient Care	2.33	2.38	2.46	2.42	2.39
Routine	3.43	3.44	3.39	3.53	3.31
Participation	3.22	3.39	3.39	3.36	3.57
Physician Sat.	3.20	3.30	3.35	3.30	2.43
Continuing Ed.	2.76	2.93	2.82	2.75	2.79
Job Satisfaction	3.52	3.53	3.54	3.48	3.51
Communcation	3.66	3.63	3.69	3.75	3.71
Opportunity	2.48	2.51	2.37	2.40	2.32

Note: Pay Equity, Family Priority, and Other Family income are not computed on a 1 to 5 scale.

STEPWISE WITHOUT MAAK FOR JOBSATISFACTION

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE JOBSAT

STEP 1 VARIABLE ROUTINE ENTERED R SQUARE = 0.11939040 C(P) = 1520.89530516

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	1	788.57357805	788.57357805	895.35	0.0001
ERROR	6604	5816.42642194	0.88074295		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.34552916	0.01154751	788.57357805	895.35	0.0001

STEP 2 VARIABLE SUPERV ENTERED R SQUARE = 0.19891571 C(P) = 789.34008555

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	2	1313.83625290	656.91912645	819.79	0.0001
ERROR	6603	5291.16174709	0.80132093		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.29626916	0.01118137	562.59036649	702.07	0.0001
SUPERV	0.28627235	0.01118137	525.24667485	655.49	0.0001

STEP 3 VARIABLE PHYSSAT ENTERED R SQUARE = 0.23666568 C(P) = 443.12784913

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	3	1563.17679246	521.05693082	682.30	0.0001
ERROR	6602	5041.82320753	0.76368119		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.27312888	0.01099044	471.64744533	617.60	0.0001
SUPERV	0.23922682	0.01122179	347.06250625	454.46	0.0001
PHYSSAT	0.20217165	0.01116875	249.33853956	326.50	0.0001

STEPWISE WITHOUT MAXR FOR JOBSATISFACTION

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE JOBSAT

STEP 4 VARIABLE COMMUN ENTERED R SQUARE = 0.2525212C C(P) = 298.87373476

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	4	1667.90254149	416.97563537	557.50	0.0001
ERROR	6601	4937.09745851	0.74793175		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.26916757	0.01088167	457.63206346	611.86	0.0001
COMMUN	0.13003527	0.01149624	104.72574903	140.02	0.0001
SUPERV	0.17961557	0.01159893	221.53000030	296.19	0.0001
PHYSSAT	0.17925143	0.01124092	190.18825250	254.29	0.0001

STEP 5 VARIABLE PREMO ENTERED R SQUARE = 0.26764597 C(P) = 181.36025499

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	5	1767.60163651	353.56032730	482.41	0.0001
ERROR	6600	4837.19836348	0.73290884		
TOTAL	6605	6604.59999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.24916661	0.01090721	382.47443355	521.86	0.0001
COMMUN	0.13595256	0.01138020	104.53840448	142.72	0.0001
SUPERV	0.15424328	0.01212183	118.66596390	161.91	0.0001
PREMO	0.13537065	0.01159495	99.89909503	136.30	0.0001
PHYSSAT	0.16855106	0.01116513	167.02635142	227.90	0.0001

STEP 6 VARIABLE FAMPRI ENTERED R SQUARE = 0.27365122 C(P) = 107.96675559

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	6	1807.46633751	301.24438958	414.36	0.0001
ERROR	6599	4797.53366249	0.72700919		
TOTAL	6605	6604.59999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.25020714	0.01086413	385.61069716	530.41	0.0001
COMMUN	0.13446657	0.01133609	102.29209759	140.70	0.0001
SUPERV	0.15388015	0.01207304	118.10591113	162.45	0.0001
PREMO	0.13557703	0.01154822	100.20334126	137.83	0.0001
PHYSSAT	0.16892811	0.01112022	167.77093433	230.77	0.0001
FAMPRI	0.07751465	0.01049426	39.66470099	54.56	0.0001

STEPWISE WITHOUT MAXR FOR JOBSATISFACTION

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE JOBSAT

STEP 7 VARIABLE PARTIC ENTERED R SQUARE = 0.27870060 C(P) = 63.39046066

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	7	1840.81744968	262.97392138	364.20	0.0001
ERROR	6598	4764.18255031	0.72206465		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
ROUTINE	-0.23905239	0.01095083	344.08726094	476.53	0.0001
COMMUN	0.11981773	0.01150125	78.36604153	108.53	0.0001
PARTIC	0.08032064	0.01181844	33.35111217	46.19	0.0001
SUPERV	0.14252308	0.01214741	99.39834144	137.66	0.0001
PROMO	0.12980378	0.01154019	91.35346008	126.52	0.0001
PHYSSAT	0.15194349	0.01136063	129.16213777	178.88	0.0001
FAMPRI	0.07946751	0.01046245	41.65700771	57.69	0.0001

STEP 8 VARIABLE PAY ENTERED R SQUARE = 0.28267552 C(P) = 29.64754338

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	8	1866.41128546	233.30141068	324.80	0.0001
ERROR	6597	4738.58871454	0.71829448		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	0.06836728	0.01145333	25.59383578	35.63	0.0001
ROUTINE	-0.23986114	0.01092304	346.36006138	482.21	0.0001
COMMUN	0.11392127	0.01151304	70.32129274	97.90	0.0001
PARTIC	0.07015133	0.01180822	29.87306629	41.59	0.0001
SUPERV	0.13601049	0.01216468	89.79371775	125.01	0.0001
PROMO	0.11225092	0.01187971	64.13139180	89.28	0.0001
PHYSSAT	0.14355674	0.01141771	113.55116290	158.08	0.0001
FAMPRI	0.07968383	0.01043517	41.88360235	58.31	0.0001

STEPWISE WITHOUT MAXR FOR JOBSATISFACTION

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE JOBSAT

STEP 9 VARIABLE NETINC ENTERED R SQUARE = 0.28353027 C(P) = 22.84073020

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	9	1872.71743356	208.07971484	290.03	0.0001
ERROR	6595	4732.28256643	0.71744733		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	0.07123355	0.01148733	27.58803578	38.45	0.0001
ROUTINE	-0.23947469	0.01091737	345.20165359	481.15	0.0001
COMMUN	0.11403044	0.01150691	70.45541402	98.20	0.0001
PARTIC	0.07640877	0.01180157	30.07438108	41.92	0.0001
PROMO	0.11007503	0.01215899	89.03019025	124.09	0.0001
PHYSSAT	0.14372917	0.01189937	61.43446104	85.63	0.0001
FAMPKI	0.06284464	0.01141112	113.82116061	158.65	0.0001
NETINC	0.03532923	0.01187547	20.09168339	28.00	0.0001
		0.01191645	6.30614811	8.79	0.0030

STEP 10 VARIABLE CONTED ENTERED R SQUARE = 0.28439274 C(P) = 16.88517411

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	10	1878.41403618	187.84140362	262.09	0.0001
ERROR	6595	4726.58596381	0.71669234		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	0.06530755	0.01167211	22.43680190	31.31	0.0001
ROUTINE	-0.23705538	0.01094532	336.18284073	469.08	0.0001
COMMUN	0.11135956	0.01153980	66.74072526	93.12	0.0001
PARTIC	0.07570287	0.01179802	29.50796672	41.17	0.0001
PROMO	0.12983207	0.01231473	79.66120994	111.15	0.0001
PHYSSAT	0.14361411	0.01206833	53.46241237	74.60	0.0001
CONTED	0.03298674	0.01140516	113.92493079	159.00	0.0001
FAMPKI	0.06382747	0.01170032	5.69660262	7.95	0.0048
NETINC	0.03403884	0.01187435	20.70753907	28.89	0.0001
		0.01191897	5.84526987	8.16	0.0043

STEPWISE WITHOUT MAXR FOR JOBSATISFACTION

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE JOBSAT

STEP 11 VARIABLE OPPTUN ENTERED R SQUARE = 0.28499932 C(P) = 13.26992461

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	11	1882.42053335	171.12913940	238.94	0.0001
ERROR	6594	4722.57946664	0.71619343		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	0.06614171	0.01167337	22.99262274	32.10	0.0001
ROUTINE	-0.23505570	0.01097412	328.57317739	458.78	0.0001
COMMUN	0.11124243	0.01153589	66.59917133	92.99	0.0001
PARTIC	0.07533250	0.01179492	29.21479685	40.79	0.0001
SUPERV	0.13058110	0.01231452	80.52972595	112.44	0.0001
PROMO	0.10225869	0.01209297	51.21114194	71.50	0.0001
PHYSSAT	0.14304085	0.01140587	112.64025725	157.28	0.0001
CONTED	0.03192289	0.01176489	5.32721002	7.44	0.0064
FAMPRI	0.06451987	0.01187382	21.14037985	29.53	0.0001
OPPTUN	0.02503167	0.01058334	4.00649717	5.59	0.0180
METINC	0.03123181	0.01197379	4.67201036	6.80	0.0091

STEP 12 VARIABLE PTCARE ENTERED R SQUARE = 0.28524758 C(P) = 13.00000000

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	12	1884.06024154	157.00502013	219.26	0.0001
ERROR	6593	4720.93975845	0.71605335		
TOTAL	6605	6604.99999999			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	0.06465138	0.01171371	21.81284420	30.46	0.0001
ROUTINE	-0.23439035	0.01098186	328.19158290	458.54	0.0001
COMMUN	0.11023356	0.01155402	65.17892598	91.03	0.0001
PARTIC	0.07484469	0.01179820	28.81613423	40.24	0.0001
SUPERV	0.13027163	0.01231501	80.12638242	111.90	0.0001
PROMO	0.10167272	0.01209799	50.57405250	70.63	0.0001
PHYSSAT	0.14261061	0.01140820	111.90540077	156.28	0.0001
CONTED	0.03134260	0.01171003	5.12979084	7.16	0.0075
PTCARE	0.01616090	0.01068489	1.83970619	2.29	0.1303
FAMPRI	0.06601739	0.01191383	21.98664631	30.71	0.0001
OPPTUN	0.02445858	0.01058906	3.82024304	5.34	0.0209
METINC	0.03037197	0.01198609	4.59765337	6.42	0.0113

NO OTHER VARIABLES MET THE 0.1500 SIGNIFICANCE LEVEL FOR ENTRY INTO THE MODEL.

STEPWISE OF COMMIT WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE COMMIT

STEP 1 VARIABLE JOBSAT ENTERED R SQUARE = 0.27819247 C(P) = 853.52943787

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	1	1837.46123731	1837.46123731	2545.25	0.0001
ERROR	6604	4767.53876268	0.72191653		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
JOBSAT	0.52743954	0.01045459	1837.46123731	2545.25	0.0001

STEP 2 VARIABLE PAY ENTERED R SQUARE = 0.33015953 C(P) = 318.70306557

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	2	2180.70372703	1090.35186352	1627.29	0.0001
ERROR	6603	4424.29627297	0.67004335		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.23486142	0.01037678	343.24248972	512.27	0.0001
JOBSAT	0.47093451	0.01037678	1380.06233632	2059.66	0.0001

STEP 3 VARIABLE PROMO ENTERED R SQUARE = 0.34168047 C(P) = 199.69790055

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	3	2258.12047816	752.70682605	1143.20	0.0001
ERROR	6602	4346.87952184	0.65841859		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.20118898	0.01074468	230.83785304	350.59	0.0001
PROMO	0.11852287	0.01093316	77.41675113	117.58	0.0001
JOBSAT	0.44345976	0.01059384	1153.72880594	1752.27	0.0001

STEPWISE OF COMMIT WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE COMMIT

STEP 4 VARIABLE PHYSSAT ENTERED R SQUARE = 0.35062213 C(P) = 111.40553466

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	4	2315.85914823	578.96478706	891.03	0.0001
ERROR	6601	4289.14085177	0.64977138		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.18584301	0.01079752	192.48851865	296.24	0.0001
PROMO	0.11262184	0.01087934	69.63074451	107.16	0.0001
PHYSSAT	0.09985093	0.01059251	57.73867006	88.86	0.0001
JOBSAT	0.41850206	0.01085197	966.35931876	1487.23	0.0001

STEP 5 VARIABLE NETINC ENTERED R SQUARE = 0.35579471 C(P) = 59.97800418

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	5	2350.02406417	470.00481283	729.04	0.0001
ERROR	6600	4254.97593583	0.64469332		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.17930336	0.01079270	177.93847055	276.00	0.0001
PROMO	0.11618005	0.01084776	73.94967376	114.71	0.0001
PHYSSAT	0.09815212	0.01055362	55.70344336	86.50	0.0001
NETINC	-0.07239413	0.00994466	34.10491594	52.99	0.0001
JOBSAT	0.42441712	0.01083998	988.28494786	1532.95	0.0001

STEP 6 VARIABLE SUPERV ENTERED R SQUARE = 0.35836009 C(P) = 35.48035297

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	6	2366.96838265	394.49473044	614.26	0.0001
ERROR	6599	4238.03161735	0.64222331		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.17324136	0.01083646	164.13994240	255.58	0.0001
SUPERV	0.05753871	0.01120189	16.94431849	26.38	0.0001
PROMO	0.10100077	0.01122301	52.01354643	80.99	0.0001
PHYSSAT	0.09132421	0.01061693	47.51820872	73.99	0.0001
NETINC	-0.07251324	0.00992561	34.27724916	53.37	0.0001
JOBSAT	0.41311442	0.01104069	899.15382104	1400.06	0.0001

STEPWISE OF COMMIT WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE COMMIT

STEP 7 VARIABLE FAMPRI ENTERED R SQUARE = 0.35494962 C(P) = 21.06215360

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	7	2377.46722148	339.63817450	530.08	0.0001
ERROR	6598	4227.53277852	0.64072943		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.17181261	0.01082960	161.27222332	251.70	0.0001
SUPERV	0.05804338	0.01118954	17.24071685	26.91	0.0001
PROMO	0.10290518	0.01121982	53.89856984	84.12	0.0001
PHYSSAT	0.09181022	0.01060525	48.01916371	74.94	0.0001
FAMPRI	0.04548264	0.01123602	10.49863882	16.39	0.0001
NETINC	-0.09418877	0.01126772	44.77137759	69.88	0.0001
JOBSAT	0.41051143	0.01104658	884.64992753	1381.00	0.0001

STEP 8 VARIABLE PARTIC ENTERED R SQUARE = 0.36086815 C(P) = 13.57468017

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	8	2383.53411421	297.94176428	465.60	0.0001
ERROR	6597	4221.46588579	0.63990691		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.16973241	0.01084372	156.77979752	245.00	0.0001
PARTIC	0.03367878	0.01093784	6.06889273	9.48	0.0021
SUPERV	0.05239077	0.01133205	13.67758614	21.37	0.0001
PROMO	0.10104742	0.01122884	51.82062755	80.98	0.0001
PHYSSAT	0.08452056	0.01085965	38.76236395	60.58	0.0001
FAMPRI	0.04642913	0.01123301	10.93215342	17.08	0.0001
NETINC	-0.09378993	0.01126124	44.36713858	69.36	0.0001
JOBSAT	0.40572806	0.01114825	847.56522581	1324.51	0.0001

STEPWISE OF COMMIT WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE COMMIT

STEP 9 VARIABLE PTCARE ENTERED R SQUARE = 0.36151905 C(P) = 8.85157143

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	9	2387.83329668	265.31481074	414.97	0.0001
ERROR	6596	4217.16670331	0.63935214		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	-0.00000000				
PAY	0.17232546	0.01088504	160.24284656	250.63	0.0001
PARTIC	0.03486471	0.01094266	6.49032628	10.15	0.0014
SUPERV	0.05330995	0.01133268	14.14788166	22.13	0.0001
PROMO	0.10220668	0.01123287	52.93205008	82.79	0.0001
PHYSSAT	0.08530433	0.01085914	39.45400348	61.71	0.0001
PTCARE	-0.02609330	0.01006250	4.29918248	6.72	0.0095
FAMPRI	0.04390850	0.01127014	9.70463311	15.18	0.0001
NETINC	-0.09229298	0.01127115	42.86877995	67.05	0.0001
JOBSAT	0.40665180	0.01115184	850.97973670	1331.00	0.0001

NO OTHER VARIABLES MET THE 0.1500 SIGNIFICANCE LEVEL FOR ENTRY INTO THE MODEL.

STEPWISE OF WITHDRAWAL WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE HOURSWRK

STEP 1 VARIABLE NETINC ENTERED R SQUARE = 0.10279770 C(P) = 196.74060103

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	1	678.97881448	678.97881448	756.66	0.0001
ERROR	6604	5926.02118552	0.89733816		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
NETINC	0.32062081	0.01165579	678.97881448	756.66	0.0001

STEP 2 VARIABLE PARTIC ENTERED R SQUARE = 0.11347561 C(P) = 117.82645753

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	2	749.50642492	374.75321246	422.59	0.0001
ERROR	6603	5855.49357508	0.88679291		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PARTIC	-0.10334796	0.01158867	70.52761044	79.53	0.0001
NETINC	0.31892096	0.01158867	671.61664251	757.35	0.0001

STEP 3 VARIABLE FAMPRI ENTERED R SQUARE = 0.11675516 C(P) = 94.97457792

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	3	771.16784772	257.05594924	290.90	0.0001
ERROR	6602	5833.83215228	0.88364619		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PARTIC	-0.10240681	0.01156964	69.23300580	78.35	0.0001
FAMPRI	0.06516058	0.01316083	21.66142280	24.51	0.0001
NETINC	0.28786356	0.01315935	422.84657847	478.52	0.0001

STEPWISE OF WITHDRAWAL WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE HOURSWRK

STEP 4 VARIABLE PAY ENTERED R SQUARE = 0.11963732 C(P) = 75.13463526

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	4	790.20448343	197.55112086	224.26	0.0001
ERROR	6601	5814.79551657	0.88089615		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	-0.05504805	0.01184157	19.03663571	21.61	0.0001
PARTIC	-0.09079230	0.01181681	51.98462556	59.01	0.0001
FAMPRI	0.06719289	0.01314760	23.00756699	26.12	0.0001
NETINC	0.28381214	0.01316773	409.22744136	464.56	0.0001

STEP 5 VARIABLE PROMO ENTERED R SQUARE = 0.12290396 C(P) = 52.38114820

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	5	811.78066681	162.35613336	184.97	0.0001
ERROR	6600	5793.21933319	0.87776051		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	-0.07425061	0.01243883	31.27640169	35.63	0.0001
PARTIC	-0.10051619	0.01195967	62.00253066	70.64	0.0001
PROMO	0.06176361	0.01245757	21.57618338	24.58	0.0001
FAMPRI	0.06920391	0.01313083	24.42338749	27.82	0.0001
NETINC	0.27913888	0.01317803	393.83640823	448.68	0.0001

STEP 6 VARIABLE PHYSSAT ENTERED R SQUARE = 0.12432304 C(P) = 43.62778647

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	6	821.15367298	136.85894550	156.15	0.0001
ERROR	6599	5783.84632702	0.87647315		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	-0.06816516	0.01256824	25.78189921	29.42	0.0001
PARTIC	-0.08918155	0.01244338	45.02068172	51.37	0.0001
PROMO	0.06475869	0.01248208	23.59178440	26.92	0.0001
PHYSSAT	-0.04062314	0.01242234	9.37300617	10.69	0.0011
FAMPRI	0.06953690	0.01312146	24.61528363	28.08	0.0001
NETINC	0.27901358	0.01316642	393.47957634	448.94	0.0001

STEPWISE OF WITHDRAWAL WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE HOURSWRK

STEP 7 VARIABLE OPPTUN ENTERED R SQUARE = 0.12535599 C(P) = 37.80036433

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	7	827.97633087	118.28233298	135.09	0.0001
ERROR	6598	5777.02366912	0.87557194		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	-0.06726131	0.01256599	25.08003871	28.65	0.0001
PARTIC	-0.09008269	0.01244117	45.90417322	52.43	0.0001
PROMO	0.06169213	0.01252393	21.24564218	24.26	0.0001
PHYSSAT	-0.04176127	0.01242264	9.89489408	11.30	0.0008
FAMPRI	0.07051346	0.01311938	25.29322411	28.89	0.0001
NETINC	0.27528576	0.01322522	379.13229352	433.01	0.0001
OPPTUN	0.03253131	0.01165389	6.82265790	7.79	0.0053

STEP 8 VARIABLE ROUTINE ENTERED R SQUARE = 0.12649915 C(P) = 31.13783462

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	8	835.52689613	104.44086202	119.42	0.0001
ERROR	6597	5769.47310386	0.87456012		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
PAY	-0.06740430	0.01255678	25.19243931	28.81	0.0001
PARTIC	-0.08403744	0.01260304	38.88520880	44.46	0.0001
PROMO	0.06740069	0.01266658	24.76280268	28.31	0.0001
PHYSSAT	-0.03943269	0.01244073	8.78639314	10.05	0.0015
FAMPRI	0.07008813	0.01311259	24.98626329	28.57	0.0001
NETINC	0.27546407	0.01322171	379.61561743	434.06	0.0001
ROUTINE	0.03549066	0.01207867	7.55056526	8.63	0.0033
OPPTUN	0.03525891	0.01168408	7.96412700	9.11	0.0026

STEPWISE OF WITHDRAWAL WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE HOURSWRK

STEP 9 VARIABLE COMMIT ENTERED R SQUARE = 0.12730578 C(P) = 27.02547441

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	9	840.85464405	93.42829378	106.91	0.0001
ERROR	6596	5764.14535595	0.87386498		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
COMMIT	-0.03232669	0.01309232	5.32774792	6.10	0.0136
PAY	-0.06043710	0.01286714	19.27958737	22.06	0.0001
PARTIC	-0.08691935	0.01266131	35.69452758	40.85	0.0001
PROMO	0.07317429	0.01287579	28.22431129	32.30	0.0001
PHYSSAT	-0.03419657	0.01261544	6.42117239	7.35	0.0067
FAMPRI	0.07245832	0.01314264	26.56231237	30.40	0.0001
NETINC	0.27295812	0.01325552	370.55564852	424.03	0.0001
ROUTINE	0.03257098	0.01213177	6.29893857	7.21	0.0073
OPPTUN	0.03523181	0.01167956	7.95188148	9.10	0.0026

STEP 10 VARIABLE JOBSAT ENTERED R SQUARE = 0.12921475 C(P) = 14.55977703

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	10	853.46345415	85.34634542	97.86	0.0001
ERROR	6595	5751.53654584	0.87210562		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
COMMIT	-0.05480397	0.01435286	12.71499929	14.58	0.0001
PAY	-0.06111475	0.01285527	19.71056342	22.60	0.0001
PARTIC	-0.08575544	0.01271220	39.68724478	45.51	0.0001
PROMO	0.06893871	0.01291082	24.86495184	28.51	0.0001
PHYSSAT	-0.04019286	0.01270088	8.73372767	10.01	0.0016
FAMPRI	0.07039830	0.01314042	25.03080601	28.70	0.0001
NETINC	0.26928997	0.01327711	358.75850394	411.37	0.0001
JOBSAT	0.05546729	0.01458762	12.60881010	14.46	0.0001
ROUTINE	0.04411875	0.01249415	10.87432696	12.47	0.0004
OPPTUN	0.03387013	0.01167318	7.34217291	8.42	0.0037

STEPWISE OF WITHDRAWAL WITHOUT MAXR

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE HOURSWRK

STEP 11 VARIABLE COMMUN ENTERED R SQUARE = 0.12967480 C(P) = 13.07365710

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	11	856.50207877	77.86382534	89.32	0.0001
ERROR	6594	5748.49792122	0.87177706		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
COMMIT	-0.05526873	0.01435250	12.93669257	14.84	0.0001
PAY	-0.06325546	0.01290389	20.94885366	24.03	0.0001
PARTIC	-0.09058948	0.01297687	42.52290508	48.78	0.0001
PROMO	0.06883851	0.01290850	24.79229539	28.44	0.0001
PHYSSAT	-0.04268065	0.01276821	9.74109176	11.17	0.0008
FAMPRI	0.07013223	0.01313872	24.83902889	28.49	0.0001
NETINC	0.26937745	0.01327469	358.98714702	411.79	0.0001
JOBSAT	0.05178970	0.01471729	10.79534190	12.38	0.0004
ROUTINE	0.04347183	0.01249866	10.54964494	12.10	0.0005
COMMUN	0.02332831	0.01249533	3.03862462	3.49	0.0620
OPPTUN	0.03369260	0.01167098	7.35191065	8.43	0.0037

STEP 12 VARIABLE CONTED ENTERED R SQUARE = 0.13000551 C(P) = 12.56765755

	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB>F
REGRESSION	12	858.68639602	71.55719967	82.10	0.0001
ERROR	6593	5746.31360397	0.87157798		
TOTAL	6605	6605.00000000			

	B VALUE	STD ERROR	TYPE II SS	F	PROB>F
INTERCEPT	0.00000000				
COMMIT	-0.05529775	0.01435087	12.94091181	14.85	0.0001
PAY	-0.06706721	0.01312865	22.76539093	26.12	0.0001
PARTIC	-0.09134272	0.01297811	43.17488155	49.54	0.0001
PROMO	0.06456732	0.01318600	20.89604619	23.98	0.0001
PHYSSAT	-0.04270758	0.01276676	9.75336961	11.19	0.0008
FAMPRI	0.07079197	0.01314383	25.28311104	29.01	0.0001
NETINC	0.26804759	0.01326119	356.61347164	409.16	0.0001
JOBSAT	0.05062654	0.01473413	10.28751665	11.80	0.0006
ROUTINE	0.04475391	0.01252139	11.13430857	12.77	0.0004
COMMUN	0.02111304	0.01257198	2.45824710	2.82	0.0931
OPPTUN	0.03327793	0.01167611	7.07982587	8.12	0.0044
CONTED	0.02020007	0.01275993	2.18431725	2.51	0.1134

NO OTHER VARIABLES MET THE 0.1500 SIGNIFICANCE LEVEL FOR ENTRY INTO THE MODEL.

PATH MODEL FOR JOB SATISFACTION GLM WITH RESID

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: JOBSAT

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	1872.56876631	208.06319626	290.00	0.0001	0.283508	99999.999
ERROR	6596	4732.43123368	0.71746987		STD DEV		JOBSAT MEA
CORRECTED TOTAL	6605	6604.99999999			0.84703593		0.0000000

SOURCE	DF	TYPE I SS	F VALUE	PR > F	DF	TYPE IV SS	F VALUE	PR >
PAY	1	382.31704717	532.87	0.0001	1	20.59616324	28.71	0.000
ROUTINE	1	687.14976528	957.74	0.0001	1	336.66748330	469.70	0.000
COMMUN	1	276.79496013	385.79	0.0001	1	66.49320756	92.68	0.000
PARTIC	1	117.18527292	163.33	0.0001	1	29.29582835	40.83	0.000
SUPERV	1	177.64486363	247.60	0.0001	1	80.06505001	111.59	0.000
PROMO	1	69.61071848	97.02	0.0001	1	55.55869054	77.43	0.000
PHYSSAT	1	113.82499549	158.65	0.0001	1	113.70026310	158.47	0.000
CONTED	1	5.76084183	8.03	0.0046	1	6.15748085	8.58	0.003
FAMPRI	1	42.28024137	58.93	0.0001	1	42.28024137	58.93	0.000

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	2.77[illegible]E-13	0.00	1.0000	0.01042[illegible]
PAY	0.06231953	5.36	0.0001	0.01163142
ROUTINE	-0.2[illegible]733306	-21.67	0.0001	0.01095082
COMMUN	0.11115064	9.63	0.0001	0.01154563
PARTIC	0.07542774	6.39	0.0001	0.01180402
SUPERV	0.13015529	10.56	0.0001	0.01232089
PROMO	0.10009937	8.83	0.0001	0.01203717
PHYSSAT	0.14365153	12.59	0.0001	0.01141120
CONTED	0.03426087	2.93	0.0034	0.01169803
FAMPRI	0.08330682	7.68	0.0001	0.01042999

PATH MODEL OF COMMITMENT WITH ALL VAR. GLM AND RESID

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: COMMIT

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	2387.83329668	265.31481074	414.97	0.0001	0.361519	99999.9999
ERROR	6596	4217.16670331	0.63935214		STD DEV		COMMIT MEAN
CORRECTED TOTAL	6605	6605.00000000			0.79959498		0.00000006

SOURCE	DF	TYPE I SS	F VALUE	PR > F	DF	TYPE IV SS	F VALUE	PR > F
PAY	1	800.64138871	1252.27	0.0001	1	160.24284856	250.64	0.0001
PARTIC	1	248.04847943	388.69	0.0001	1	6.49034528	10.15	0.0014
SUPERV	1	201.76315562	315.57	0.0001	1	14.14788166	22.13	0.0001
PRESJ	1	133.05493662	208.11	0.0001	1	52.93205008	82.79	0.0001
PHYSSAT	1	133.72033375	209.15	0.0001	1	39.45400348	61.71	0.0001
PTCARE	1	4.00525359	6.14	0.0766	1	4.29918248	6.72	0.0095
FAMPRI	1	7.24070584	11.33	0.0008	1	9.70463311	15.18	0.0001
NETINC	1	30.37915646	47.52	0.0001	1	42.86877495	67.05	0.0001
JOBSAT	1	850.97973670	1331.00	0.0001	1	850.97973670	1331.00	0.0001

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-1.17943436-13	-0.00	1.0000	0.00963786
PAY	0.17232540	15.83	0.0001	0.01088504
PARTIC	0.03468471	3.19	0.0014	0.01094266
SUPERV	0.05330995	4.70	0.0001	0.01133268
PRESJ	0.10220683	9.10	0.0001	0.01123287
PHYSSAT	0.08530433	7.86	0.0001	0.01085914
PTCARE	-0.02605330	-2.59	0.0095	0.01006250
FAMPRI	0.04390850	3.90	0.0001	0.01127014
NETINC	-0.09229296	-8.19	0.0001	0.01127115
JOBSAT	0.40685180	36.48	0.0001	0.01115184

PATH MODEL OF WITHDRAWAL WITH RESIDUALS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HOURSWRK

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	10	853.46345415	85.34634542	97.86	0.0001	0.129215	99999.9999
ERROR	6595	5751.53654584	0.87210562		STD DEV		HOURSWRK MEAN
CORRECTED TOTAL	6605	6605.00000000			0.93386595		0.00000001

SOURCE	DF	TYPE I SS	F VALUE	PR > F	DF	TYPE IV SS	F VALUE	PR > F
PAY	1	55.07387249	63.13	0.0001	1	19.71056342	22.60	0.0001
ROUTINE	1	9.70330136	11.13	0.0009	1	10.87432656	12.47	0.0004
PARTIC	1	47.53009557	54.04	0.0001	1	39.66724478	45.51	0.0001
PROMO	1	41.90477440	48.05	0.0001	1	24.80495184	28.51	0.0001
PHYSSAT	1	8.18096842	9.38	0.0022	1	8.73372787	10.01	0.0016
OPPTUN	1	27.21803867	31.21	0.0001	1	7.34217251	8.42	0.0037
FAMPRI	1	265.99940710	305.01	0.0001	1	25.03080601	28.70	0.0001
METINC	1	379.61561743	435.29	0.0001	1	358.75850344	411.37	0.0001
JOBSAT	1	5.22155073	5.99	0.0144	1	12.66881610	14.46	0.0001
COMMIT	1	12.71499629	14.58	0.0001	1	12.71499629	14.58	0.0001

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	2.89557546-16	0.00	1.0000	0.01148987
PAY	-0.05511479	-4.75	0.0001	0.01159527
ROUTINE	0.04111075	3.53	0.0004	0.01249415
PARTIC	-0.08579344	-6.75	0.0001	0.01271220
PROMO	0.06693071	5.34	0.0001	0.01291082
PHYSSAT	-0.04016226	-3.16	0.0016	0.01270068
OPPTUN	0.03387013	2.90	0.0037	0.01167318
FAMPRI	0.07039591	5.36	0.0001	0.01314642
METINC	0.26924977	20.28	0.0001	0.01327711
JOBSAT	0.05546729	3.80	0.0001	0.01458762
COMMIT	-0.05460397	-3.82	0.0001	0.01435266

GRADUATE SCHOOL
UNIVERSITY OF ALABAMA IN BIRMINGHAM
DISSERTATION APPROVAL FORM

Name of Candidate Isaac William Ferniany

Major Subject Administration/Health Services

Title of Dissertation A Path Analytic Study of Female Nurse Career Withdrawal

Dissertation Committee:

_____, Chairman

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Director of Graduate Program _____

Dean, UAB Graduate School _____

Date January 12, 1984

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