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Women pharmacists: Work factors, organizational commitment, family factors, conflict, and employment status

Broedel-Zaugg, Kimberly Ann, Ph.D.

The Ohio State University, 1993
WOMEN PHARMACISTS: WORK FACTORS, ORGANIZATIONAL COMMITMENT, FAMILY FACTORS, CONFLICT, AND EMPLOYMENT STATUS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Kimberly Ann Broedel-Zaugg, B.S., M.B.A.

The Ohio State University

1993

Dissertation Committee:

Stephen Birdwell, Ph.D.
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Advisor
College of Pharmacy
DEDICATION

To my family
ACKNOWLEDGEMENTS

I would like to thank all the women pharmacists who responded to the questionnaire and provided data for this study. I would also like to thank the women pharmacists and nurses, who spent time pretesting the instrument, for their valuable comments.

I wish to extend my thanks to my dissertation committee, Dr. Suzan Kucukarslan and Dr. Stephen Strasser, for their time, support, assistance, and encouragement throughout this research project. In addition, I would like to express my sincere appreciation to my mentor and friend, Dr. Stephen Birdwell, who has provided knowledge, assistance, and consideration throughout this investigation.

Finally, I extend my deepest gratitude to my family. My husband, Thomas, my daughter, Stephanie, and my Dad gave me the support, encouragement, and unconditional love needed to complete this project.
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Second Field ........................ Hospital and Health Services Administration
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CHAPTER I
INTRODUCTION

INTRODUCTION

More women than ever before are studying and practicing pharmacy in America. The pharmacy profession will experience new challenges as the demographics of practitioners change. For example, Gloria Francke (1987) considers that, "few changes occurring in pharmacy in recent times will have as great an impact on practice as will the growing number of women entering the profession. This impact will bring about changes that pharmacy's leaders and practitioners cannot ignore. Our careers and the way we practice and provide pharmaceutical services will be affected. Women, along with men, are entering pharmacy with great expectations-a lifetime career and opportunities for involvement in the workplace and in our policy making bodies."

BACKGROUND INFORMATION

Rix (1987) states that "most American women have worked all their lives at jobs critical to the economy. In fact, during the last quarter century, 28 million women workers have been absorbed into the paid labor force." Zedeck and Mosier (1990) propose that the American work force, traditionally made up of white men, will continue to change as the turn of the century approaches. As the demographics of the work force
changes, the family also changes (Zedeck, 1992). For example, divorce rates doubled from the 1960s to the 1980s and there is a higher proportion of single workers (Zedeck, 1992). Furthermore, "the traditional nuclear family accounts for less than 20% of U.S. households." Thus, as the work force changes, family structure also changes and men and women must now balance employment and family responsibilities (Zedeck and Mosier, 1990).

The pharmacy profession, like the work force in general, has seen a growing number of women join its ranks. In the United States, female pharmacy students outnumbered males in pharmacy school enrollment beginning with the 1982-1983 academic year and in the 1990-1991 school year, 62.4% of all pharmacy students were female (Meyer and Sherman, 1991). The Tenth Annual Schering Report (1988) states that 28% of all pharmacists were women in 1988. However, for all pharmacists under the age of 30, 57% were women. Should this trend continue, women may comprise the majority of the pharmacist work force sometime in the future.

A growing number of women practicing pharmacy has given the perception of being related to a possible pharmacist shortage in the United States. Kirk (1982) contends that "one of the problems pharmacy faces today is that is has been promoted to women primarily on the basis of its being a good profession in which the women can work part-time while raising a family." The difficulty could be that "most women expect to work full-time during the early years of marriage, leave the work force to bear and raise children, then return part-time later" (Hornosty and Coulas, 1988). In a survey
done by Sauer and Koda-Kimble (1989), 17.1% of registered female pharmacists worked part-time and 1.4% were unemployed. Also, Schondelmeyer et al. (1989) reported that women accounted for 54.1% of part-time pharmacists, 57.1% of unemployed pharmacists, and only 74% of the women worked full-time while 91% of the men had full-time positions. As early as 1981, Mercadante et al., reported that 35% of the female respondents to their survey interrupted their career in order to bear and raise children or to further their education. Only 8.4% of the men completing the same survey had interrupted their career.

Clearly, issues involving family and work have become important to the pharmacy profession. Ivey (1990) states that "as a result of the manpower shortage, employers of women pharmacists have been concerned that part-time employment, maternity leaves, and the care of sick children would make women a liability to the organization." She also suggests that the pharmacist shortage has also resulted in "professional growth retardation." Therefore, it is important to resolve issues concerning women in pharmacy if women become the majority of practicing pharmacists.

PROBLEM STATEMENT-NEED FOR THE RESEARCH

As the proportion of women pharmacists in the work force increases, special incentives may be required to enhance their retention in the workplace. Job-related and family-related factors that influence the employment status of women pharmacists must be identified before such incentives are developed. This study provides important
information to managers and employers as to why women pharmacists work full-time, part-time, or not at all. This information contributes to the knowledge base of women pharmacists' employment status and gives employers information concerning recruitment and retention of women pharmacists. Also, ideas of what can be done to induce unemployed or part-time women pharmacists to work more hours were generated from this study. For instance, managers especially should be interested in these ideas as decreasing the number of part-time employees for one full-time equivalent position could reduce the manager's duties of scheduling, communicating, and evaluating employees. Thus, the knowledge gained from this study may help attract women pharmacists, encourage them to work more hours, and decrease turnover if organizations provide appropriate incentives for these women. This study used work factors, commitment, conflict, and family factors as independent variables in an attempt to predict the dependent variable, employment status.

This study is based on a modified model developed by Gaertner (1984) to predict the employment status of nurses. Kopelman, Greenhaus, and Connolly (1983) introduced the issues of conflict related to work and family issues. Therefore, the theoretical framework for this study incorporates work-family conflict in the Gaertner model. (see Figure #1)
ASSUMPTIONS

Use of the study model involves certain assumptions. Gaertner (1984), Presser (1986), and Gutek, Searle, and Klepa (1991) contended that child care and other household responsibilities were constraints on the employment status of women. Thus, it is assumed that women undertake the primary duties of child care and household chores. Moreover, Ivey (1990) stated that employers of women pharmacists have been concerned that part-time employment can lead to one full-time-equivalent being filled by several persons which increases duties of management. Therefore, it is assumed for the purposes of this study that managers view the average number of hours worked per week as a more important indicator of employment status when compared to number of career interruptions or number of job changes.

Assumptions for this study revolve around the process of survey research. It is assumed that prospective respondents have the knowledge to complete the survey and that
they will answer it in an honest manner. Also, it is assumed that the list of registered women pharmacists provided by the Ohio State Board of Pharmacy provides a comprehensive sampling frame.

**SCOPE**

The study was limited to registered women pharmacists in the state of Ohio. A systematic random sample was drawn from the current list of licensed women pharmacists, obtained from the Ohio State Board of Pharmacy. Results of the study are generalizable only to women pharmacists in Ohio.

**DEFINITION OF TERMS**

**Work Factors and Job Satisfaction**

Work factors are defined as the aspects of the job that could influence employment status. While various work factors have been defined in the literature, this study concentrated on job satisfaction as the work factor component of the model. Job satisfaction is defined by Heneman et al. (1989) as "an evaluation the employee makes of the job and the environment surrounding the job. This evaluation depends on two components: (1) what the employee actually experiences at work (what is) and (2) what values or desires for rewards the employee brings to the workplace (what should be)." Also, Heneman et al. (1989) states that job satisfaction influences employee behavior in areas such as attendance and length of service. Therefore, for this study, work factors
were measured by examining the following aspects of job satisfaction: ability utilization, achievement, activity, advancement, authority, company policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision (human relations), supervision (technical), variety, working conditions, and scheduling.

Satisfaction with work factors was operationally defined as the pharmacist's score on the Minnesota Satisfaction Questionnaire-Short Form (MSQ-SF) which measures extrinsic, intrinsic, and overall job satisfaction using all of the above mentioned facets of job satisfaction except satisfaction with scheduling (Heneman et al., 1989, Weiss et al., 1967). A semantic differential scale using such words as fair/unfair, bad/good, clear/hazy was developed for this study in order to measure satisfaction with scheduling.

**Commitment**

Gaertner (1984) states that "job commitment results from satisfaction and in turn encourages continued participation in the workplace." Barling and MacEwen (1988) define commitment in terms of role commitment which they define as "loyalty to one's role, a feeling of responsibility toward one's role, and a willingness to exert greater effort than that typically prescribed for role incumbents." Gaither and Mason (1992) define organizational commitment as an "attitude that has three major components: (1) a strong belief in and an acceptance of the organization's goals, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a desire to stay with the
The operational definition of commitment for this study was the pharmacist's score on Porter and Smith's Organizational Commitment Questionnaire (Mowday, Steers, and Porter, 1979) which Gaither and Mason (1992) used in their study. This instrument consists of 15 items with a seven-point Likert response format.

**Family Factors**

Family factors are defined as areas of family responsibility that could influence employment status. For this study, family factors included housekeeping tasks, child care, sick child care, and family support. These factors have been included in the pharmacy literature involving women pharmacists (Albrecht and Albrecht, 1987; Gilman and Gilman, 1987; Lawson and Gibson, 1987; Lindley and McAllister, 1987; Hak and Hak, 1987; Esposito and Esposito, 1987; Rumrill and Rumrill, 1987; Stanton and Berger, 1987; and Sauer and Koda-Kimble, 1989). Variables such as housekeeping tasks, child care, sick child care, and family support were operationally defined as the pharmacists' score on a semantic differential scale developed for this study. This scale measured the availability and importance of housekeeping services, daycare facilities, and sick child care options. Also, the instrument measured family support for the working female by evaluating whether or not other family members encourage the individual to work.
Conflict

Kopelman, Greenhaus, and Connolly (1983) offer definitions of work conflict, family conflict, and interrole conflict. Work conflict is defined as the "extent to which a person experiences incompatible role pressures within the work domain. The incompatibility may stem from multiple role senders, one role sender, or a lack of fit between the focal person and role requirements." Family conflict is defined as the "extent to which a person experiences incompatible role pressures within the family domain. The incompatibility may stem from multiple role senders, one role sender, or a lack of fit between the focal person and role requirements." Interrole conflict is defined as the "extent to which a person experiences pressures within one role that are incompatible with the pressures that arise within another role (Kopelman, Greenhaus, and Connolly, 1983)."

Work, family, and interrole conflict were operationally defined as the pharmacist's score on a five-point Likert response format developed by Kopelman, Greenhaus, and Connolly (1983). This 24 item instrument consists of three eight-item sections which correspond to the three types of conflict.

Employment Status

Employment status indicates the number of hours a person works per week. The operational definition for this study consisted of the respondent indicating the average number of hours she works per week.
Demographics and Background Information

In order to ascertain information about each individual respondent, questions regarding age, marital status, percentage of income she contributes to the family, the number of adults and children living in the household, zip code to ascertain whether the respondent resides in a rural or urban area, number of years in pharmacy practice, number of years in current position, number of previous positions in pharmacy, number of career interruptions, practice setting, type of employer, membership in professional organizations, and job title were included in the survey instrument.

HYPOTHESES

There are multiple aspects of working women pharmacists that could be analyzed from the viewpoint of work and family factors. This study addressed only the following hypotheses:

(1) Satisfaction with work factors positively impacts the employment status of women pharmacists.

(2) Organizational commitment positively impacts the employment status of women pharmacists.

(3a) Work conflict negatively impacts the employment status of women pharmacists.

(3b) Interrole conflict negatively impacts the employment status of women pharmacists.

(3c) Family conflict negatively impacts the employment status of women pharmacists.

(4) Family factors impact the employment status of women pharmacists.
ORGANIZATION OF THE STUDY

This dissertation consists of five chapters, appendices, and a selected list of references. The organization of these chapters is described below.

Chapter I consists of background information concerning women in the pharmacy work force, need for research in this area, development of a model indicating the possible relationships between the independent variables with the dependent variable, assumptions, scope, definitions of terms, hypotheses, and an outline for the organization of the study.

Chapter II contains a review of relevant literature concerning work factors, organizational commitment, conflict between work and family, family factors, and employment status.

Chapter III describes the methods used in the design of the study. It includes the development of hypotheses, a description of questionnaire design, data collection, and data analysis techniques used for the hypotheses. Also included is a discussion of the questionnaire reliability and validity.

Chapter IV contains the results of the investigation. A description of the respondents and the results of the survey along with the analysis for the study hypotheses are included.

Chapter V summarizes the findings of the study. Major conclusions of the study are described along with their implications.
CHAPTER II
LITERATURE REVIEW

INTRODUCTION

This study considers the application of a model involving work factors, commitment to work, family factors, and conflict to predict employment status of women pharmacists. In order to understand these constructs, past research addressing each construct must be considered. First, a review of significant literature pertaining to work factors will be presented followed by important studies concerning job commitment. Next, relevant literature regarding family factors will be reviewed followed by germane studies involving conflict. Also, research concerning the practice patterns of male and female pharmacists will be considered. Lastly, pertinent literature involving development of the study model will be presented.

WORK FACTORS-JOB SATISFACTION

Work factors were defined as aspects of the job that could influence employment status. Work factors that have been studied include the following: job satisfaction (Barling and Rosenbaum, 1986; Rice et al., 1980; Staines et al., 1986); work as a central life interest (Near et al., 1980); specific job factors such as job comfort (hours), challenge, financial reward (London, Crandall, and Seals, 1977; Staines et al., 1986);
atypical work schedules and hours (Kanter, 1977; Mortimer et al., 1986; Presser, 1986; Staines and Pleck, 1984); work role conflict (Greenhaus and Beutell, 1985; Kopelman, Greenhaus, and Connolly, 1983); work pressures (Mortimer et al., 1986); work role expectations (Cooke and Rousseau, 1984); job involvement (Barling, 1986); career satisfaction (Osherson and Dill, 1983); occupational status (Piotrkowski, 1978); separation and travel as a result of job (Nieva, 1985); and work structure and social participation (Near et al., 1980). Studies of pharmacists and employment have generally measured job satisfaction (Stewart and Purohit, 1980; Curtiss, Hammel, and Johnson, 1978; Shoaf and Gagnon, 1980; and Smith Stewart, and Grussing, 1986).

Butler and Parsons (1989) conducted a study at a Salt Lake City hospital in order to identify long-term solutions to the problems that contribute to nurse attrition. The researchers administered a questionnaire to 152 hospital decision makers (medical staff, board of trustees, hospital administrators, and nursing administrators) and the nursing staff. Each respondent was asked to rank seven environmental factors (control, free expression, professional development, recognition, monetary compensation, physician consideration, and managerial support of nurses' decisions) from one to seven (one being the most influential, seven being the least influential) as to which would be the most influential in terms of nurse retention. Both the nursing staff and the decision makers named monetary compensation, control (scheduling, nurse to patient ratio, and individual professional management), and managerial support of nurses' decisions as the three most
important factors impacting nurse retention. These factors were considered environmental factors that impact job satisfaction. The authors did not provide statistical analysis of the survey nor did they identify a response rate. However, these environmental factors are part of job satisfaction and can be considered in the relationship between work factors and employment status of women pharmacists.

One of the important factors determining job satisfaction is scheduling. Many companies have attempted to improve scheduling by offering alternative scheduling but have failed to evaluate these programs. However, one study done by Terry Elliott (1989) evaluates the alternative scheduling offered at Presbyterian Aurora Hospital, Aurora, Colorado. She noted that "the National Commission on Nursing ranked inflexible scheduling second as a major factor in nurses' dissatisfaction with hospital management."

Thus, Presbyterian Aurora Hospital initiated alternative scheduling or flextime ("an alternative form of staffing which seeks to meet the needs of the individual while satisfying the requirements of the organization") within budgetary guidelines in order to decrease overtime. They offered the nursing staff either ten eight-hour shifts per pay period or eight ten-hour shifts per pay period. After approximately ten months, the hospital embarked on a study to evaluate the cost effectiveness of flextime by considering absenteeism, overtime, and turnover. Also, the system was evaluated through questionnaires and interviews.
Elliott found that mean sick hours decreased about 35% in the six units using flextime and overtime decreased 28% while there was no increase in full-time equivalents. Turnover could not be studied due to the short time period that flextime had been in place. Unfortunately, Elliott did not conduct statistical analysis to show whether or not the decrease in absenteeism and overtime was significant. In terms of the questionnaire and interviews, Elliott found that those using the new scheduling system felt that patient care improved through continuity of care and better coverage during peak times due to the overlap of the ten-hour shifts. Also, staff benefits included improved morale, better staff relations, enriched personal life, and improved job satisfaction. Elliott did not include the questionnaire in the article and did not provide a response rate or statistical analysis of the survey. However, this is an important attempt in studying the impact of flextime on job satisfaction through absenteeism and turnover.

In terms of pharmacists, Curtiss, Hammel, and Johnson (1978) conducted a survey which compared job satisfaction between hospital and community pharmacists. They used a 98-item questionnaire mailed to the 1971, 1973, and 1975 graduates of eight pharmacy schools and achieved a 70% response rate (n=741). The instrument contained the A-Trait scale of the State Trait Anxiety Inventory which measures anxiety, an adaptation of the Multiple Affect Adjective Checklist to measure depression, the Minnesota Satisfaction Questionnaire (MSQ) to measure job satisfaction, and the Quality of Employment Survey to measure life satisfaction. The mean values between practice
setting of hospital/clinic, community-independent, community-chain, and apothecary were similar for anxiety/depression measures, but differed in job satisfaction measures. The researchers found: (1) the facet-free measure of fulfillment of job expectations indicates pharmacists were not as satisfied as the general population with their jobs, (2) pharmacists were more likely to change jobs as a means of coping with dissatisfaction, (3) would not recommend their job to a friend (except apothecaries), (4) ability utilization and work challenge were the most satisfying aspects, (5) pharmacists had strong work ethics, (6) the opportunity for advancement was rated low across the board, and (7) organizational factors were sources of higher dissatisfaction among hospital pharmacists. Unfortunately, the authors did not compare male and female pharmacists in the article.

In a follow-up article, Curtiss (1980) compared male and female pharmacists using the data from his original study. Twenty percent of the 741 respondents were women. Curtiss found that women did not differ in job stress, life happiness, anxiety or depression, or job satisfaction. Women were more satisfied than men with the choice of pharmacy as a career and with compensation, but less satisfied with company aims and policies. Organizational conflict exists among more women than men. However, the results showed that women worked fewer hours per week.

In 1980, Stewart and Purohit investigated the specific job characteristics that were deemed most important by a sample of practicing pharmacists in a large midwestern
The researchers included twenty intrinsic (dealing with the content of a job) and extrinsic (dealing with the context of a job) job characteristics as a section of a more extensive questionnaire. Respondents were instructed to choose the five most important characteristics and rank them accordingly. Random selection resulted in a survey of 510 pharmacists in Illinois with a response rate of 50.5%. Pay, sense of accomplishment, working conditions, job security, and benefits were the most important characteristics with four of the five being extrinsic job characteristics. In terms of gender, 78% of the respondents were men. The male respondents were more concerned with job security while female respondents were more interested in the employer’s policies and practices and with relations with co-workers. Unfortunately, this study did not identify the literature from which the twenty extrinsic and intrinsic characteristics came nor did the authors provide an overall measure of job satisfaction. However, it is important to note that extrinsic job characteristics such as pay and working conditions (context oriented factors) rated higher in importance than intrinsic job satisfaction (content oriented factors such as work itself and responsibility).

The Minnesota Satisfaction Questionnaire (MSQ), available from Vocational Psychology Research, Minneapolis, Minnesota, measures facets of job satisfaction along with extrinsic job satisfaction, intrinsic job satisfaction, and overall job satisfaction. The long form consists of 100 items while the short form contains 20 items and measures only extrinsic, intrinsic, and overall job satisfaction. Reliability for the MSQ-LF for
measuring overall job satisfaction is 0.88 as calculated by Hoyt's analysis of variance while reliability for the MSQ-SF overall job satisfaction is 0.92 (Weiss, et al., 1967). For the study involving women pharmacists and employment status, the MSQ-SF was used to measure extrinsic, intrinsic, and overall job satisfaction. A semantic differential scale using such words as fair/unfair, bad/good was developed for this study in order to measure satisfaction with scheduling.

**COMMITMENT**

Definitions of commitment vary depending on the needs of the researcher and the purpose and objectives of studies measuring commitment. Gaertner (1984) states that "job commitment results from satisfaction and in turn encourages continued participation in the work place." Barling and MacEwen (1988) define commitment in terms of role commitment which they define as "loyalty to one's role, a feeling of responsibility toward one's role, and a willingness to exert greater effort than that typically prescribed for role incumbents."

Jon Lorence (1987) conducted a study involving gender differences in subjective job involvement (commitment). The purpose of the research was to determine if men and women differ in the levels of their job involvement and to ascertain if the processes affecting subjective involvement with a specific work role vary by gender. Cross-sectional analyses based on data from the 1973 and 1977 Quality of Employment Surveys
and longitudinal analyses based on data from the 1973-77 Quality of Employment Survey Panel were conducted. Respondents had to be over 16 and under 65 years of age and employed at least 20 hours per week to be included. The study used the following parts of the Quality of Employment Survey: three items measuring job involvement, three items measuring work autonomy, income before taxes and deductions, occupational status based on the 1970 three-digit U.S. Census occupational categories, and background variables such as gender, age, education, race, marital status, and number of children under six years of age living in the same household.

By using stepwise regression analysis in the cross-sectional analyses, Lorence found that work autonomy was the most important determinant of job involvement. Also, women were found to be more involved with their jobs than men after controlling for differences in work autonomy. In the panel analyses, earlier job involvement was a controlled variable. Again, the results showed that women were more involved with their work (other variables controlled) and work autonomy was the most influential variable. The weakness of this study involves the choice of variables and that the measurement of those variables changed slightly from the 1973 data collection to the 1977 collection. For example, it is possible that other facets of work such as overall job satisfaction impact job involvement and that the slight change of items from one survey period to another affected the results.
Gaertner and Nollen (1989) proposed that employees' career experiences within a company influence the employees' psychological commitment to the job. The purpose of this study was to examine the relationship between psychological commitment and career experiences which included employment security, job mobility, and training along with work context variables such as participation in decision making, communication, and supervisory relations. Commitment, in this study, referred to the employees' identification with company goals and values. In order to study this type of commitment, the following research questions were identified: "(1) do perceptions of employment practices have any relationship with psychological commitment? and (2) do actual employment experiences have any relationship with commitment?"

Gaertner and Nollen randomly sampled employees of one plant in a major manufacturing firm for the purpose of completing a questionnaire and getting permission to gather information from respondents' employment files. Questionnaire completion and release of records were completely voluntary. In terms of the questionnaire, psychological commitment was measured using the nine-item short form of the Organizational Commitment Questionnaire developed by Porter and Smith (Mowday, Steers, and Porter, 1979). Employment experiences included length of service taken from company records, promotion rate taken from job history records (number of promotions divided by years of service), and on-the-job training as indicated on the questionnaire. Perceptions of employment practices included internal promotion opportunity, company provided training, and company commitment to employment...
security. These constructs were measured on a Likert scale developed for the study. Work context included supervisory relations, participation in decision making, and instrumental communication. These were also measured on a Likert scale developed for the study. Control variables included gender, age, education, marital status, and factory or office worker. The researchers regressed psychological commitment on perceptions of employment practices and perceptions of the work context.

The researchers found that perception of internal job mobility, perception that the employer seeks to avoid layoffs, and belief that employees were well trained for future and current jobs were the three strongest correlates of commitment. In the second part of the analyses, perceptions of employment practices were removed for the regression equation. Length of service and promotion rate were significantly related to commitment. The weakness of the study involves using only one factory as a site for the study. The authors described this particular facility as an exemplary employer which could decrease the generalizability to other institutions.

Gaither and Mason (1992) studied job commitment in pharmacists. In a nationwide study, they considered the level of organizational commitment among pharmacists, pharmacists' intentions to leave their current job, and personal or background variables and experience-related factors that influence pharmacists' organizational commitment and intention to leave their current job. Their definition of organizational commitment consists of the following three components: (1) a strong belief
in and an acceptance of the organization’s goals, (2) a willingness to exert considerable
effort on behalf of the organization, and (3) a desire to stay with the organization.
Organizational commitment was measured using the Organizational Commitment
Questionnaire (OCQ) which was sent to a random sample of pharmacists nationwide.

The researchers found that pharmacists obtained a mean score of 76.8 (possible
range of 7 to 105) on the OCQ which was higher than a sample of registered nurses but
lower than a group of certified public accountants. Male pharmacists obtained a higher
commitment score than women. Hospital staff pharmacists had the lowest commitment
score of all respondents. However, the majority of pharmacists reported a low likelihood
of leaving their job. Of those who had recently left a job, most left for improved
working conditions. The weakness of this study consists of possible changes over time.
This study occurred at one point in time but pharmacists attitudes involving the intention
to leave and actually leaving could change with time.

The Occupational Commitment Questionnaire (OCQ) used in Gaertner and
Nollen’s (1989) and Gaither and Mason’s (1992) studies was also utilized in this study
involving women pharmacists and employment status. The OCQ consists of 15 items
with a seven-point Likert response format ranging from seven (strongly agree) to one
(strongly disagree) and has a good internal consistency rating with a Cronbach’s alpha
of 0.93 (Mowday, Steers, and Porter, 1979).
FAMILY FACTORS

Many scholars have studied the influence of the family on various aspects of work. Family factors assessed in these studies include: job-satisfaction and life-satisfaction relationship (Rice et al., 1980); global well being as it relates to working wives and working husbands (Pleck, 1985); family role sharing and bargaining (Cooke and Rouseau, 1984; Pleck, 1985); amount of time spent in carrying out family responsibilities (Staines and Pleck, 1983); wife abuse (Barling and Rosenbaum, 1986); children's behavioral problems (Barling, 1986); housekeeping and child care tasks (Kessler and McRae, 1982; Mannheim and Schiffrin, 1984; Staines and Pleck, 1983); and family size (Near et al., 1980). Empirical studies of pharmacists and the impact of the family on work have not appeared in the literature. Rather, case studies involving women pharmacists have mentioned such factors as housekeeping tasks, child care, sick child care, financial necessity, family size, rural versus urban setting, and family support (Albrecht and Albrecht, 1987; Gilman and Gilman, 1987; Lawson and Gibson, 1987; Lindley and McAllister, 1987; Hak and Hak, 1987; Esposito and Esposito, 1987; Rumrill and Rumrill, 1987; Stanton and Berger, 1987; and Sauer and Koda-Kimble, 1989).

Staines and Pleck (1984) investigated the impact of nonstandard work schedules on workers' family life. They defined four types of schedules: (1) pattern of days worked each week, (2) pattern of hours worked each day (shift), (3) number of hours worked each week, and (4) flexibility of work schedules with concentration of patterns
of days and hours that define major types of nonstandard work schedules. Family life was assessed in terms of: (1) amount of time spent in carrying out family responsibilities of child care and housework, (2) reports of interference between work and family life, and (3) level of family adjustment.

In order to study schedules and family life, the researchers utilized data from the 1977 Quality of Employment Survey and used a multi-stage-area probability design to select 2,850 households in the United States. Eligible respondents had to be more than 16 years of age, married or have a child living at home that was less than 18 years old, and employed more than 20 hours per week. The independent variables included: type of worker (sole breadwinning husbands, dual-earner husbands, sole breadwinning wives, dual-earner wives, female single parents with children less than 18 years of age), life cycle stage, education, and work schedule characteristics. The dependent variables included: amount of time spent in family roles, conflict between work and family life, and overall family adjustment. The researchers hypothesized that: (1) working a nonstandard pattern of days each week (weekend work, variable days) as opposed to a standard work pattern is associated with poorer quality of the workers' family life and (2) working a nonstandard pattern of hours each day (afternoon, night, or rotating shift, variable hours) as opposed to a standard pattern is associated with poorer quality of the workers' family life. Multiple regression was used to analyze the data.

The results showed that regular weekend work and variable days tend to be associated with less time in family roles, more interference between work and family life,
and lower family adjustment. In terms of hours, nonday shifts permit more time for housework and more conflict between work and family life. The number of hours worked had a negative association with housework and child care and a positive association with conflict.

The weakness of this study involves the difficulty of detecting significant relationships because the majority of the respondents worked standard days and hours. However, the authors did not adequately define the terms standard days and hours. Also, the analysis was performed from an existing data base. More detailed questions could possibly have improved the results.

In another study related to scheduling, Presser (1986) studied the prevalence of shift work among mothers 18-44 years of age with preschool age children and the type or availability of child care. She posed the following questions: (1) for both full-time and part-time employed mothers, does being married enhance or reduce the likelihood of working non-days? (2) for both full-time and part-time employed mothers, are different work shifts associated with different patterns of child care use and does this association vary by marital status? (3) for married women who work non-days, to what extent are the characteristics of the husband and the family determinants of father care of children and does this vary by whether mothers are employed full-time or part-time? (4) for married women who work part-time, is the extent to which they feel constrained from working more hours because of child care unavailability related to their shift work
status? If so, can this be attributed to differential child care use by shift work status? Is father care particularly problematic in this regard?

This author used data from the June 1982 Current Population Survey in regards to women aged 18 to 44 with children under the age of five and the time that their work began and ended along with child care practices for one reference week. The results showed that: (1) marriage was associated with a lower prevalence of non-day employment, (2) for all employed mothers (full-time and part-time) child care by relatives was more prevalent when mothers work non-day shifts (especially true in terms of father care if the mother worked part-time), (3) in the case of unmarried mothers, non-relative child care was more prevalent, and (4) 19.1% of part-time employed married mothers indicated that they would work more hours if child care were available for non-day workers. The weakness of this study revolves around the fathers. The study did not differentiate between natural fathers and step-fathers nor did the researcher indicate if fathers provided child care due to financial necessity or lack of available child care.

In his study concerning child care, Ribar (1992) analyzed family demands for market and non-market child care services and the impact of these demands on the work effort of married women. This researcher used data from the 1984-85 Survey of Income and Program Participation (SIPP) to estimate a cross-section model of child care and married mothers' labor supply. The data included the mothers' wages, household
income, ages of family members, education, race, household location, amount and type of day care, and the cost of day care. Through the use of joint log wage and labor force participation equations, hours of work tobit equation, and joint cost and care utilization equations, the author concluded that: (1) the mother’s experience and education had a positive impact on wages, (2) residence in a metropolitan area had a positive effect on wages, (3) increased wages increased participation in the work force, (4) the hourly day care costs had a negative effect on labor supply and paid care utilization, and (5) married women’s labor supply decreased as the cost of child care increased. Unfortunately, single mothers were not included in this study.

To explore dimensions of work and family interactions, Stoner and Hartman (1990) conducted a national survey of 1,500 members of Women in Management organization. A 42% response rate was obtained, however, only the responses of 444 married women were included in the analysis. They concluded that: (1) family factors that enhanced married women’s careers included positive spouse input and family support and (2) family factors that negatively impacted married women’s careers were lack of mobility, presence of children, and maternity leave.

CONFLICT

Kopelman, Greenhaus, and Connolly (1983) described the development and construct validation of a questionnaire used to measure three types of conflict. They
provided the following definitions: (1) work conflict is the extent to which a person experiences incompatible role pressures in the work domain, (2) family conflict is the extent to which a person experiences incompatible role pressures within the family domain, and (3) interrole conflict is the extent to which a person experiences pressures within one role that are incompatible with the pressures that arise within another role. After an initial study using a shorter questionnaire, the authors developed the final questionnaire which consisted of eight items for each type of conflict and had a five-point Likert response format ranging from strongly agree to strongly disagree. The researchers proposed a model linking these three types of conflict to job satisfaction, family satisfaction, and life satisfaction. The researchers hypothesized that: (1) work conflict was negatively related to job satisfaction, (2) work conflict was positively related to interrole conflict, (3) family conflict was negatively related to family satisfaction, (4) family conflict was positively related to interrole conflict, (5) interrole conflict was negatively related to job satisfaction, (6) interrole conflict was negatively related to family satisfaction, (7) job satisfaction was positively related to life satisfaction, and (8) family satisfaction was positively related to life satisfaction. In order to test the model, they conducted two separate studies.

In the first study, questionnaires were mailed to 494 male alumni (13 members of classes from 1941 to 1978) of an eastern technological college. Unemployed persons or persons not married were eliminated from the accepting sample leaving 181 men in the study. The initial conflict scale developed by the authors consisted of six items
measuring work conflict, four items for family conflict, and four items measuring interrole conflict. Job satisfaction was measured using a modification of the three item General Job Satisfaction scale that is part of the Job Diagnostic Survey and family satisfaction was measured using the same three item scale but the word "family" was substituted for the word "job". Life satisfaction was measured using two items from the Quality of Employment survey and two items developed specifically for the study. By conducting factor analysis, the researchers found three factors (work conflict, family conflict, and interrole conflict) with eigenvalues greater than one in the conflict scale. In terms of reliability, Cronbach’s alpha was 0.70 for work conflict, 0.65 for family conflict, and 0.70 for interrole conflict. Correlational and path analysis was conducted to examine hypothesized relationships. Seven of the eight relationships were significant with the weakest linkages between interrole conflict and domain (family and work) satisfaction. Limitations in this study involve sampling methods. Only married male college graduates who were employed full-time were studied. Other populations such as women, those with less education, single people, or those employed part-time should also be studied in order to compare results.

In the second study, questionnaires were distributed to undergraduate and graduate students at three eastern colleges. Only those married and employed full-time were asked to return the survey instrument which resulted in 91 usable responses. The questionnaire used in this study was nearly identical to the one used in the study involving alumni except that two items were added to the work conflict scale, four items were added to
the family conflict scale, and four items were added to the interrole conflict scale. This resulted in a 24 item scale to measure conflict. As in the alumni study, factor analysis showed three factors (work conflict, family conflict, and interrole conflict) with eigenvalues greater than one. In terms of reliability, Cronbach’s alpha for work conflict was 0.80, 0.87 for family conflict, and 0.89 for interrole conflict. Values could be higher in this study due to more items being added to the scale. Path and correlational analysis showed that seven of the eight hypothesized relationships were significant. Again, the weak links were between interrole conflict and domain satisfaction. Limitations with this study involved the sampling process. Those studied were members of a convenience sample who happened to receive a questionnaire. Other students on other parts of campus might have provided different data. Also, those working part-time or not at all and those not married could experience conflict but were excluded from the study.

Kopelman, Greenhaus, and Connolly’s model has been incorporated into this study involving women pharmacists as it provides a possible relationship between family factors and work factors. Also, the conflict scale was included in this study’s questionnaire due to its high reliability and validity.

Cooke and Rouseau (1984) investigated contradictory models of the effects of family roles decreasing strain and work role expectations leading to work overload, interrole conflict, and increased strain. Data was collected from 200 elementary and
secondary public school teachers from Michigan through an initial telephone interview, an extensive personal interview based on the 1977 Quality of Employment Survey, and a self-administered questionnaire.

The researchers found that work expectations led to work overload, job dissatisfaction, and interrole conflict with work overload leading to physical strain. Family roles were found to be related to strain in three ways. First, family roles interact with work-role expectations so that the relation between those expectations and work overload was progressively greater for single teachers, those who were married, and those who had children. Second, the roles were indirectly related to strain through their relation to interrole conflict. Last, they were directly and negatively associated with physical strain when their relation to interrole conflict was controlled. However, no single parents were included and gender was not used as an independent variable as there were so few male respondents.

Bacharach, Bamberger, and Conley (1991) compared an unmediated model of work-based role stress and its consequences on job satisfaction and burnout to two models in which the role stress-affective work outcome relationship was mediated (partially and completely) by work-home conflict across two samples of public sector professionals: engineers and nurses. A questionnaire was administered to a random sample of 215 nurses and 430 civil engineers in a large Northeastern state to measure role conflict, quantitative role overload, work-home conflict, burnout, and job
satisfaction.

In the analysis, correlation matrices were constructed using linear structural relationships (LISREL). Models of no spillover (interference or interaction) between work and home, total spillover, and partial spillover were evaluated by Chi square goodness of fit. The authors concluded that: (1) the partial mediation model had the best fit, (2) role overload and role conflict were strong predictors of work-home conflict for engineers, (3) only role conflict was significant for nurses, (4) work-home conflict had a strong effect on burnout for both professions and burnout had a negative impact on job satisfaction, and (5) role conflict had a negative impact on job satisfaction for both professions. The major weakness of this study was that gender was not included as an independent variable.

Gutek, Searle, and Klepa (1991) attempted to measure work interference with the family (WIF) and family interference with work (FIW). They considered the rational view that conflict is proportional to the number of hours spent in the work and family domains. They also considered the gender role framework that gender directly influences perceived work-family conflict and moderates the relationship between hours spent in paid and family work and perceived work-family conflict. In other words, gender role expectations may distort the rational view that conflict is related linearly to the total amount of time spent in paid and family work. The researchers performed two different studies, one involving a group of psychologists and the other involving a group of senior
managers. In each group, the respondent had to be a member of a family group (spouse, significant other, or children in the home) in order to be included in the study. They used a questionnaire consisting of WIF items from Kopelman, Greenhaus, and Connolly (1983) and FIW items developed by Burley (1989). They also measured hours spent on work and hours spent in family chores (household maintenance, child care, and shopping).

In the first study involving psychologists, both men and women reported significant scores for WIF with women reporting significantly higher WIF scores than men. In other words, women experienced more work interfering with family than men. Even though women spent more hours in family care, they did not report higher FIW scores. In the study involving senior managers, both men and women reported higher WIF than FIW. Also, women managers reported higher WIF than men. Problems with this study stem from human recall. It is perhaps easier to remember hours of paid work as opposed to time spent on family chores. Also, the study used professionals who may be able to purchase services to complete family services for them. Thus, time spent in various work settings may not be an appropriate indicator of conflict. Perception or attitude measurement could be a better method of measurement.

In 1992, Frone, Russell, and Cooper attempted to develop and test a comprehensive model of work-family interface. These authors selected a random sample of adults in Erie County, New York who worked greater than 20 hours per week, were
married or had children, and provided valid data. Twenty trained interviewers with some self administration of the questionnaire were used to collect data. The model was tested with structural equation modeling techniques with results tested across gender, race, and job type by within and between group analysis.

The results were invariant among race and gender, but differences occurred between white and blue collar workers. The researchers found that there was a positive reciprocal relationship between family-work and work-family conflict. Both types of work-family conflict were associated with unique antecedents and were positively related to a specific measure of within domain distress. Also, work and family conditions may spill over into another domain. Limitations of this study include a possible problem with self reports and a sampling problem due to the fact that part of the population (single people with significant others) was left out. Also, correlational data does not permit causal inferences to be made.

Frone, Russell, and Cooper's (1992) model was not used in the development of the present study's model as it does not provide a relationship involving employment status.

Rice, Frone, and McFarlin (1992) studied the overall quality of life by looking at both work and family. They felt that: (1) events and conditions in the family and other spheres of nonwork life may influence behavior enacted within the confines of work organizations and (2) experiences within work organizations may influence life
outside work. The authors evaluated the relationship between work-nonwork conflict and the perceived quality of workers' lives. They established the following hypotheses: (1) work-family conflict and work-leisure conflict are each negatively related to job satisfaction and to satisfaction within the corresponding non-work domain, (2) job satisfaction, family satisfaction, and leisure satisfaction are each positively related to global life satisfaction, and (3) neither work-family nor work-leisure conflict is directly related to global life satisfaction after controlling for the three measures of domain specified satisfaction (job, family, and leisure).

The researchers used a subsample of respondents to the 1977 Quality of Employment Survey. Respondents chosen were 18 years old or older, worked at least 35 hours per week, were married or parents of children under 18 years of age, and provided analyzable data on all 166 items used in the analysis. The data was analyzed using path analysis. The authors found that the positive effect of job satisfaction on global life satisfaction was stronger for women, the negative effect of work-family conflict on family satisfaction was stronger for respondents with higher education, and work-family conflict had an unpredicted significant impact on leisure satisfaction. Otherwise, results were as hypothesized.

The weakness in this study involved the exclusion of part-time workers, unmarried persons, or childless persons from the study. These people may also experience conflict between work and their personal lives.
The model from Rice, Frone, and McFarlin’s study was not incorporated into this study as it included leisure satisfaction and used global life satisfaction as the dependent variable. The present study will not address leisure time or overall life satisfaction.

EMPLOYMENT STATUS

Gaertner (1984) examined the employment status (employed versus unemployed) of nurses in the context of a role conflict-job satisfaction model. Her study considered factors that facilitated or inhibited work outside the home of the traditionally female dominated occupation of nursing. She hypothesized that: (1) satisfaction with work would have a positive impact on organizational commitment which would in turn have a positive impact on employment status and (2) family responsibilities would have a negative impact on employment status. Data for Gaertner’s study were originally collected to gather information as to why nurses leave hospital nursing and to discover ways of encouraging their return. All registered nurses in a metropolitan area were mailed questionnaires and 40 percent were returned. No second mailing was conducted. Gaertner conducted her secondary analysis on nurses currently working in hospitals or those who were unemployed.

She found that the most satisfying aspects of nursing involve working with other nurses and caring for patients. However, satisfaction with hours and scheduling negatively impacted employment status. In terms of family responsibility, presence of young children and marital status negatively impacted employment status. Also, there
was great dissatisfaction with the availability of child care. When life cycle stages were considered, those not married with children and those not married without children work due to financial need. Job satisfaction was not related to employment status. In other groups (those married with or without children), leaving the work force was feasible financially so hours and scheduling were strongly related to employment status. Gaertner concluded that hospitals that allowed nurses to manage patient care and scheduling, plus minimize nonnursing work facilitated employment. Nurses opted for the family when there was financial freedom to do so.

There were several weaknesses in Gaertner's study. First of all, the analysis was secondary to another study and all data necessary for this study were not collected. For example, spouse's income and other sources of income could impact employment status. Secondly, only hospital nurses were studied. It is possible that nurses employed for physicians or others are more satisfied with hours and scheduling. Thirdly, employment status was measured as a dichotomous variable. Had the information been available, the average number of hours worked per week would have been preferable as it would have provided interval data. Lastly, no information concerning commitment was available.

Gaertner's model was incorporated into this study as it provided a schematic of the possible relationship between work factors (job satisfaction), family factors (family responsibilities), and employment status.
Schondelmeyer et al. (1989) undertook a study entitled, "The National Survey of Pharmacists' Compensation", which was commissioned by the American Pharmaceutical Association (APhA). While the objective of the study was to determine pharmacists' levels of base salaries and compensation over time, other valuable information such as employment status, practice site, moonlighting, and job changes were also included. A random sample of 3,000 registered pharmacists was selected from the National Boards of Pharmacy mailing list.

The researchers found that of all licensed pharmacist respondents, only 70.1% were working full-time in pharmacy, 11.2% worked part-time, 11.1% were retired, 3% were not working, and 4.6% were involved in another line of work. Women accounted for 28% of all licensed pharmacists. However, women accounted for 54.1% of those who worked part-time, 57.1% of unemployed pharmacists, and 24.7% of pharmacists who worked full-time were women. The largest proportion of men worked in independent stores and chains while the largest proportion of women worked in hospitals and chains. The weakness of this study is that the authors did not provide a definition for full-time and part-time work.

Knapp et al. (1992) conducted a study in order compile reasons for and estimate the rates of full-time work, part-time work, changing occupations, and separation from pharmacy upon graduation. Also, the study attempted to investigate changes in work patterns over time. Knapp et al. surveyed 3,300 living graduates of a school of
pharmacy in the western United States. A 34.7% response rate was achieved. These 1959 to 1989 graduates were asked about their work history after graduation from pharmacy school. The authors found that: (1) approximately 95% of the women in the U.S. pharmacy work force are less than 53 years of age, (2) 2.7% of pharmacists failed to enter the pharmacy work force after graduation, (3) of the men who separated from the pharmacy work force, 16.2% did so in order to change occupations, (4) of the women who separated from the pharmacy work force, 22.6% reported doing so due to children, (5) women had lower full-time rates of work participation in all age groups greater than 23, and (6) 36.4% of responding women worked less than full-time. Limitations of this study involve the sampling method. One school of pharmacy is not generalizable to the rest of the United States. Perhaps something from the admissions process or the curriculum contributed to these employment patterns. Also, the authors did not provide definitions of part-time and full-time work.

SUMMARY

The literature indicates that the individual constructs of work factors, organizational commitment, family factors, conflict between work and family, and employment status have been studied as single entities. However, little has been done to study the influences between these constructs as they relate to each other. The
relationships between the independent variables (work factors, commitment, family factors, and conflict) and the dependent variable (employment status) as indicated in the study model are supported by the literature.
CHAPTER III
RESEARCH DESIGN AND PROCEDURES

INTRODUCTION

The research design and procedures used in this investigation are separated into the following six categories: (1) sampling procedures, (2) data collection, (3) definition and measurement of variables, (4) research questions and hypotheses, (5) reliability, validity, and sources of error, and (6) data analysis.

SAMPLING PROCEDURE

Target Population

The target population for this study was licensed women pharmacists in the state of Ohio. The Ohio State Board of Pharmacy supplied the current list of all registered pharmacists in Ohio as of January 1993. This list provided complete addresses for all the pharmacists listed.
Sample Size Determination

The size of the sample was determined using the method described by Pathak, Meinhold, and Fisher (1980), from the equation:

\[ n = \left(\frac{Z \sigma}{e}\right)^2 \]  

(1)

where:

\begin{align*}
  n &= \text{sample size} \\
  Z &= \text{standard normal distribution value} \\
  \sigma &= \text{population standard variation} \\
  e &= \text{acceptable level of error.}
\end{align*}

The population means of interest in this study are: (1) the summated scale measurements of intrinsic, extrinsic, and overall job satisfaction which appears in section I of the questionnaire along with the summated scale measurement for scheduling in section III, (2) the summated scale measurement for organizational commitment which appears in section II of the questionnaire, (3) the summated scale measurements for daycare services, sick child care services, housekeeping services, and family support which appear in section III of the questionnaire, (4) the summated scale measurements for work conflict, family conflict, and interrole conflict in section IV, and (5) the measurement for number of children living in the household, percent of income earned, rural or urban area, and the average number of hours worked per week which appear in section V.
The standard deviation of these measures in the population were not known. Therefore, the estimated population standard deviations were determined using the range for single items (based on a Likert response scale of five used in the Minnesota Satisfaction Questionnaire-Short Form and Kopelman’s Conflict Scale) divided by six as described by Pathak, Meinhold, and Fisher (1980) which resulted in an estimated $\sigma$ of 0.67.

The desired confidence level for this study was chosen to be 95% and a level of error of ± 0.1 was considered to be acceptable. Using Equation 1, the appropriate sample size was calculated as follows:

$$n = \left(\frac{1.96 \times 0.67}{0.1}\right)^2 = 173.$$  

A response rate of 40 percent was estimated for this study. In order to achieve the appropriate number of responses, the sample size was calculated as 433 and rounded up to 450.

$$n = \frac{173}{0.4} = 433$$

**Sample Selection**

According to the Ohio State Board of Pharmacy records there were 2,690 registered women pharmacists in Ohio in January, 1993. However, the list of 11,949 total pharmacists registered in Ohio did not differentiate pharmacists in terms of gender. Therefore, all names that could possibly be that of a man (Chris, Terry, Tracy, Bobby, Jan, Jean, Kim, initials, or foreign names that were not gender specific) were eliminated
from the sampling frame. Thus, every fifth \((2,690/450 = 5.98)\) woman’s name was selected from the list which resulted in the selection of 559 names. Of the 559 names, every fifth name was eliminated until only 450 names remained.

**DATA COLLECTION**

**Type of Instrument**

Due to the large, widespread target population, a self-administered, mailed questionnaire was used to obtain information. The final form of this questionnaire appears in Appendix B. Personal or telephone interviews were eliminated as methods of data collection due to cost and time constraints. Also, women pharmacists who work various shifts would be difficult to reach by telephone or in person.

**Pretest**

The original questionnaire, which appears in Appendix A, was pretested to: (1) determine problems in the design of the instrument such as length, format, and wording and (2) evaluate the individual items in the questionnaire. A convenience sample of ten women health professionals (four pharmacists not currently registered in Ohio and six registered nurses) was chosen to complete the pretest. Ten pretest questionnaires were distributed and all were returned with usable responses and comments. Revisions were made based on these comments.
The major concern consisted of confusion with the directions in Section III, the semantic differential scale. Respondents did not know whether to complete this section in regards to work, community, or family. Most considered employment throughout this section, by answering as if the employer offered daycare and sick child care services and whether or not they liked the employer's housekeeping services. Thus, the directions were changed along with the sub-headings to avoid confusion.

Respondents estimated the time to complete the questionnaire between 15 to 20 minutes. Other comments were made in regards to Section II, the commitment section, as having too many choices available (a Likert scale of seven). This section remained unchanged as it consisted of a widely used questionnaire developed by Porter and Smith (Mowday, Steers, and Porter, 1979). Two respondents commented that the directions were too small. In order to keep each section to one or two pages, the directions remained in small print.

Item Sequence and Physical Characteristics

The cover page (see Appendix B) of the final questionnaire consisted of the title of the study, the official seal of the college of pharmacy at The Ohio State University, directions, a word of thanks, the personal signature of the major researcher along with title, and the stamped signature of the researcher's major advisor along with title. The final questionnaire consisted of the following five sections: (1) the Minnesota Satisfaction Questionnaire-Short Form (Weiss et al., 1967) and questions related to satisfaction with
scheduling, (2) Porter and Smith’s Organizational Commitment Questionnaire (Mowday, Steers, and Porter, 1979), (3) questions related to family factors, (4) Kopelman, Greenhaus, and Connolly’s (1983) conflict scale and questions requesting demographic information of the respondents. The placement of the sections was determined by the study model.

The final form of the questionnaire consisted of the directions for each section being reduced to 70 percent of the original size so that each section would fit conveniently on one or two pages. The questionnaire was reproduced in booklet form on 11" by 17" white paper.

**Questionnaire Administration**

Questionnaire packets were mailed via first class United States mail to women pharmacists chosen to be included in the sample. This mailing took place on April 1, 1993. Included in the packet was a tea bag, a copy of the questionnaire, a self-addressed postage-paid return envelope, and a cover letter which appears in Appendix C. The cover letter requested that the respondents return the survey within two weeks.

**Follow-up**

On April 29, 1993, four weeks after the initial mailing, a reminder post card was mailed to all non-respondents asking them to return the survey. A copy of the post card appears in Appendix D. A follow-up survey packet was mailed on May 13, six weeks
after the original mailing. This packet contained a copy of the questionnaire, a tea bag, a self-addressed postage-paid return envelope, and a second cover letter which is provided in Appendix E.

DEFINITION AND MEASUREMENT OF VARIABLES

Introduction

The purpose of this study was to determine factors that influence the employment status of women pharmacists. Four factors were chosen as input variables (work factors, organizational commitment, family factors, and conflict). Also, the relationships between these factors were also of interest.

Work Factors-Job Satisfaction

Work factors were defined as the aspects of the job that could influence employment status. This investigation concentrated on job satisfaction as the work factor component of the model. Job satisfaction as defined by Heneman et al. (1989) is discussed in Chapter I. For this research, job satisfaction is considered an important outcome of employment because employees agree to work for an organization as long as their needs are being satisfied. Therefore, for this study, work factors were measured by examining the following aspects of job satisfaction: ability utilization, achievement, activity, advancement, authority, company policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security,
social service, social status, supervision (human relations), supervision (technical),
variety, working conditions, and scheduling. If these needs are not being satisfied by the
employer, it is likely that the worker will not be performing to his/her maximum
capability, may consider employment elsewhere, or change the number of hours worked.

Satisfaction with work factors was operationally defined as the pharmacist's score
on the Minnesota Satisfaction Questionnaire-Short Form (MSQ-SF) which measures
intrinsic, extrinsic, and overall job satisfaction using twenty facets of job satisfaction
(Section I of the questionnaire). The MSQ-SF uses a five point Likert scale ranging
from very dissatisfied (1) to very satisfied (5). The overall summated score of all 20
items of the MSQ-SF ranges from 20 (very low) to 100 (very high) while the score for
the 12 items that measure intrinsic satisfaction ranges from 12 (very low) to 60 (very
high) and the score for the six items that measure extrinsic satisfaction ranges from 6
(very low) to 30 (very high) (Weiss, et al., 1967).

Intrinsic job satisfaction involves job content ideas that the employee brings to the
workplace with him/her that the employee has some control over. Items in the MSQ-SF
that involve intrinsic job satisfaction include: activity (item 1), independence (item 2),
variety (item 3), social status (item 4), moral values (item 7), security (item 8), social
service (item 9), authority (item 10), ability utilization (item 11), responsibility (item 15),
creativity (item 16), and achievement (item 20). Extrinsic or job context factors come
from sources outside the employee and are usually controlled by the management of the
company. Extrinsic satisfaction items in the MSQ-SF include: supervision (human
relations-item 5), supervision (technical-item 6), company policies and practices (item 12), compensation (item 13), advancement (item 14), and recognition (item 19). Overall job satisfaction, includes working conditions (item 17), the way co-workers get along (item 18), and all of the twenty items of the MSQ-SF (Weiss, et al., 1967). The MSQ-SF does not include satisfaction with scheduling. A pharmacist’s satisfaction with scheduling was operationally defined as the pharmacist’s summated score on a semantic differential scale ranging from 6 (low) to 42 (high). Pairs of adjectives used were: (1) unfair (1) and fair (7), (2) dishonest (1) and honest (7), (3) inflexible (1) and flexible (7), terrible (1) and wonderful (7), (5) worthless (1) and valuable (7), and (6) disagreeable (1) and agreeable (7). This scale was developed specifically for this study and appears in Section III of the questionnaire.

Commitment

Definitions of commitment were discussed in Chapter I. This investigation used the definition of organizational commitment provided by Gaither and Mason (1992) which states that organizational commitment is an "attitude that has three major components: (1) a strong belief in and an acceptance of the organization’s goals, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a desire to stay with the organization."

The operational definition for this study was the pharmacist’s score on Porter and Smith’s Organizational Commitment Questionnaire (Mowday, Steers, and Porter, 1979)
which Gaither and Mason (1992) used in their study. This instrument consists of fifteen items with a seven point Likert scale response format anchored from strongly disagree (1) to strongly agree (7). This instrument was Section II of the questionnaire. Summated scores range from 15 (low commitment) to 105 (strong commitment). Six items are negatively phrased and scored in reverse to avoid acquiescence response.

**Family Factors**

Family factors were defined as areas of family responsibility that could influence employment status. Variables such as housekeeping tasks (6 items), child care (6 items), sick child care (6 items), and family support (6 items) were operationally defined as the pharmacist's score on a semantic differential scale developed for this study. It appeared in Section III of the questionnaire. This seven point scale measured the availability of, and satisfaction with, daycare facilities, and sick child care options with the following anchors: (1) unavailable and available, (2) awful and nice, (3) disreputable and reputable, (4) unhelpful and helpful, (5) worthless and valuable, and (6) unpleasant and pleasant. The seven point scale measuring availability and satisfaction with housekeeping services used the following anchors: (1) unavailable and available, (2) awful and nice, (3) disreputable and reputable, (4) unhelpful and helpful, (5) worthless and valuable, and (6) unpleasant and pleasant. Also, the instrument measured family support for the working female by evaluating whether or not other family members provided support for the individual to work by using the following pairs of adjectives on a seven point scale: (1)
inflexible and flexible, (2) awful and nice, (3) unpleasant and pleasant, (4) cruel and kind, (5) disagreeable and agreeable, and (6) unsupportive and supportive. Each factor had a summated range of six (low) to 42 (high).

Conflict

Kopelman, Greenhaus, and Connolly (1983) offer definitions of work conflict, family conflict, and interrole conflict. Work conflict is defined as the "extent to which a person experiences incompatible role pressures within the work domain. The incompatibility may stem from multiple role senders, one role sender, or a lack of fit between the focal person and role requirements." Family conflict is defined as the "extent to which a person experiences incompatible role pressures within the family domain. The incompatibility may stem from multiple role senders, one role sender, or a lack of fit between the focal person and role requirements." Interrole conflict is defined as the "extent to which a person experiences pressures within one role that are incompatible with the pressures that arises within another role (Kopelman, Greenhaus, and Connolly, 1983)."

Work, family, and interrole conflict were operationally defined as the pharmacist’s score on a conflict scale developed by Kopelman, Greenhaus, and Connolly (1983). This twenty-four item instrument consisted of three eight-item sections which correspond to the three types of conflict. The first eight items made up the work conflict section of the instrument. These involved the worker not being able to be herself and
working without sufficient resources. Also, incompatible requests from more than one person and incompatible policies and procedures are included. The second set of eight items involved family conflict. The items included differences between spouses concerning friends, spending time with relatives, entertainment, spending time alone, and goals. Also included were items involving family responsibility and having too little time to pursue personal interests. The last eight items dealt with interrole conflict between family and work. These items involved work taking up family time, work causing irritability, tiredness, or preoccupation, and work interfering with being the kind of family member that a person desires to be. Each item consisted of a five point Likert response format (1 = strongly disagree to 5 = strongly agree). Thus, the range for each eight item section was eight (low) to 40 (high).

**Employment Status**

Employment status indicated the number of hours a person worked per week. The operational definition for this study consisted of the respondent indicating the average number of hours she worked per week. This open ended question appeared in Section V of the questionnaire.
Demographics and Background Information

In order to ascertain information about each individual respondent, demographic questions were included in section V of the questionnaire. Financial necessity, family size, and rural versus urban setting were operationally defined with open ended questions. These questions asked the respondent to identify the percentage of income she contributes to the family, the number of adults and children living in the household including the ages of the children, and her zip code so that the researcher could ascertain whether the respondent resides in a rural or urban area. Other demographic questions included age by asking in what year the respondent was born, marital status (married, separated, single-no partner, single with partner, widowed, or divorced), number of years in pharmacy practice, number of previous positions in pharmacy, actual number of career interruptions greater than one month, type of employer (chain pharmacy, independent pharmacy, hospital pharmacy, clinic pharmacy, mental health facility, mail service, government, educational, health maintenance organization, nursing home/long term care facility, industry, or other with specification requested), membership in professional organizations (NARD, Ohio Pharmaceutical Association, American Pharmaceutical Association, Ohio Society of Hospital Pharmacists, American Society of Hospital Pharmacists, local association with specification requested, and other with specification requested), and job title (pharmacy owner/partner, manager/director, assistant/associate manager/director, general staff/employee, clinical staff/employee, educator, government agency, pharmaceutical industry, health facility consultant, self-employed (not pharmacy
owner), or other with specification requested).

RESEARCH QUESTIONS AND STUDY HYPOTHESES

Research Question 1

Are work factors related to the organizational commitment of women pharmacists?

Gaertner (1984) stated that "satisfaction with various aspects of work leads to commitment." She supported this statement by suggesting that job satisfaction contributes to job commitment through the following five job characteristics: (1) the variety of skills required by the job, (2) the extent to which the work is perceived as important, (3) whether feedback is available from the work itself, (4) the extent to which work is seen as a whole rather than a fragment, and (5) the amount of autonomy in determining the way in which work is done. While these factors are not directly measured in this study, they can be differentiated as intrinsic or extrinsic job satisfaction factors which are measured in the Minnesota Satisfaction Questionnaire-Short Form (MSQ-SF). Variety, importance of work, and autonomy are intrinsic job factors while feedback and viewing work as a whole would be extrinsic job satisfaction factors. Thus, overall, intrinsic, and extrinsic job satisfaction may lead to organizational commitment.
Satisfaction with scheduling, which is a type of job satisfaction not included in the Minnesota Satisfaction Questionnaire-Short Form, may positively impact organizational commitment. For instance, Butler and Parsons (1989) found that control of scheduling directly influenced job satisfaction as well as retention of hospital nurses. Furthermore, Elliott (1989) concluded that flexible scheduling improved job satisfaction of nurses in one Colorado hospital. Therefore, satisfaction with scheduling, when considered as a part of job satisfaction, positively influences organizational commitment.

Hypothesis 1.1

H 1.1: As overall job satisfaction increases, the organizational commitment of women pharmacists increases.

Hypothesis 1.2

H 1.2: As extrinsic job satisfaction increases, the organizational commitment of women pharmacists increases.

Hypothesis 1.3

H 1.3: As intrinsic job satisfaction increases, the organizational commitment of women pharmacists increases.
Hypothesis 1.4

H 1.4: As satisfaction with scheduling increases, the organizational commitment of women pharmacists increases.

Research Question 2

Are work factors related to the employment status of women pharmacists?

In her study of employment status among registered nurses, Gaertner (1984) concluded that hospitals that permitted nurses to manage patient care, minimize nonnursing work, and plan the work schedule, facilitated employment. Butler and Parsons (1989) identified monetary compensation, control (scheduling, nurse to patient ratio, and individual professional management) as the three most important factors impacting nurse retention. These factors were considered environmental factors that impact job satisfaction. Studies involving pharmacists found that ability utilization and work challenge were the most satisfying aspects of work (Curtiss, Hammel, and Johnson, 1978) and pay, sense of accomplishment, working conditions, job security, and benefits were the most important characteristics of work (Stewart and Purohit, 1980). Again, these factors were not directly measured in this study but can be differentiated as components of intrinsic or extrinsic job satisfaction. Managing patient care, minimizing nonnursing care, planning the work schedule, control over nurse to patient ratio, control
over individual professional management, ability utilization, work challenge, and job security all relate to intrinsic job satisfaction. On the other hand, monetary compensation, managerial support, and benefits involve extrinsic job satisfaction while working conditions relates to overall job satisfaction according to Weiss, et al. (1967). Thus, one would expect that as a person’s job satisfaction increases, employment status will increase as well.

Hypothesis 2.1

H 2.1: As overall job satisfaction increases, the employment status of women pharmacists increases.

Hypothesis 2.2

H 2.2: As extrinsic job satisfaction increases, the employment status of women pharmacists increases.

Hypothesis 2.3

H 2.3: As intrinsic job satisfaction increases, the employment status of women pharmacists increases.
Hypothesis 2.4

H 2.4: As satisfaction with scheduling increases, the employment status of women pharmacists increases.

Research Question 3

Are work factors related to role conflict of women pharmacists?

Kopelman, Greenhaus, and Connolly (1983) suggested that job satisfaction and work conflict are negatively related. They also stated that job satisfaction and interrole conflict are negatively related. In other words, as job satisfaction decreases, conflict increases. In this instance, work must occur before conflict involving work can occur. Thus, there is a temporal sequence such that work factors occur before work or interrole conflict can take place. While this study did not attempt to show causation between work factors and conflict, the study did explore correlational relationships between work factors and role conflict.

Hypothesis 3.1

H 3.1: There is a negative relationship between overall job satisfaction and work conflict.
Hypothesis 3.2

H 3.2: There is a negative relationship between extrinsic job satisfaction and work conflict.

Hypothesis 3.3

H 3.3: There is a negative relationship between intrinsic job satisfaction and work conflict.

Hypothesis 3.4

H 3.4: There is a negative relationship between satisfaction with scheduling and work conflict.

Hypothesis 3.5

H 3.5: There is a negative relationship between overall job satisfaction and interrole conflict.

Hypothesis 3.6

H 3.6: There is a negative relationship between extrinsic job satisfaction and interrole conflict.
Hypothesis 3.7

H 3.7: There is a negative relationship between intrinsic job satisfaction and interrole conflict.

Hypothesis 3.8

H 3.8: There is a negative relationship between satisfaction with scheduling and interrole conflict.

Research Question 4

Is organizational commitment related to employment status of women pharmacists?

Gaertner (1984) suggested that "job commitment results from job satisfaction and in turn encourages continued participation in the work place." In other words, an employee who is satisfied with her job will be committed to her employer and will continue working for that employer. In a study involving pharmacists, Gaither and Mason (1992) found that most pharmacists who had recently left a job did so because of working conditions. Also, male pharmacists were more committed to their jobs than women. From this information, it is possible that as organizational commitment increases, the number of hours worked for the organization will also increase.
Hypothesis 4

H 4: As organizational commitment increases, the employment status of women pharmacists increases.

Research Question 5

Are family factors related to the employment status of women pharmacists?

Research has shown that: (1) the number of hours worked has a negative association with housework and child care (Staines and Pleck, 1984), (2) 19.1% of part-time employed mothers would work more if child care were available (Presser, 1986), (3) family factors that positively impact a woman’s career are spouse input and family support (Stoner and Hartman, 1990), (4) presence of children and maternity leave hurt a woman’s career (Stoner and Hartman, 1990), and (5) financial necessity impacts employment (Gaertner, 1984). Therefore, it was expected that family factors will also affect the employment status of women pharmacists.

Hypothesis 5.1

H 5.1: As availability and satisfaction with child care increases, the employment status of women pharmacists increases.
Hypothesis 5.2

H 5.2: As availability and satisfaction with sick child care increases, the employment of women pharmacists increases.

Hypothesis 5.3

H 5.3: As availability and satisfaction with housekeeping services within the community increases, the employment status of women pharmacists increases.

Hypothesis 5.4

H 5.4: As family support of employment increases, the employment status of women pharmacists increases.

Research Question 6

Are family factors related to role conflict of women pharmacists?

Staines and Pleck (1984) found that as the number of hours worked increased, problems with housework and child care increased which resulted in conflict between family and work (interrole conflict). On the other hand, it is possible that as child care services become more available, conflict decreases, and employment status increases.
Also, Kopelman, Greenhaus, and Connolly (1983) stated that family conflict was negatively related to family satisfaction. However, for family conflict or interrole conflict to occur, family factors must be present first. Thus, there is a temporal sequence between family factors and family conflict as well as family factors and interrole conflict. For example, if no children are present in the household, conflict concerning child care does not occur. While this study did not attempt to prove causation between family factors and conflict, it did explore the correlations between them. It was expected that as satisfaction with family decreases, family conflict and interrole conflict increase.

Hypothesis 6.1

H 6.1: There is a negative relationship between satisfaction with child care and family conflict.

Hypothesis 6.2

H 6.2: There is a negative relationship between satisfaction with sick child care and family conflict.

Hypothesis 6.3

H 6.3: There is a negative relationship between satisfaction with housekeeping services and family conflict.
Hypothesis 6.4

H 6.4: There is a negative relationship between family support and family conflict.

Hypothesis 6.5

H 6.5: There is a negative relationship between satisfaction with child care and interrole conflict.

Hypothesis 6.6

H 6.6: There is a negative relationship between satisfaction with sick child care and interrole conflict.

Hypothesis 6.7

H 6.7: There is a negative relationship between satisfaction with housekeeping services and interrole conflict.

Hypothesis 6.8

H 6.8: There is a negative relationship between family support and interrole conflict.
Research Question 7

Are work conflict, family conflict, or interrole conflict related to employment status?

Work conflict involves incompatible roles within the workplace. It is possible that as these incompatibilities increase, employment status will decrease as a means to escape these incompatibilities. Likewise, family conflict deals with incompatible roles within the family domain. Should employment interfere with family incompatibilities, it is possible that employment status will decrease. Interrole conflict involves incompatibilities occurring between the domains of work and family. Should these incompatibilities be unresolvable, employment status could decrease.

Hypothesis 7.1

H 7.1: As work conflict increases, the employment status of women pharmacists decreases.

Hypothesis 7.2

H 7.2: As family conflict increases, the employment status of women pharmacists decreases.
Hypothesis 7.3

H 7.3 As interrole conflict increases, the employment status of women pharmacists decreases.

RELIABILITY

A measurement instrument is reliable if its measurements are consistent and accurate, rather than random. There are four procedures commonly used to calculate the reliability of a measurement instrument. These techniques are: (1) test-retest, (2) alternate forms, (3) split-half, and (4) internal consistency. The first three methods utilize a correlation statistic while internal consistency uses the Kuder-Richardson formula 20 (KR-20) or Cronbach’s alpha. The KR-20 formula is used for dichotomously scored items (yes or no, right or wrong) while Cronbach’s alpha is used for data measured along a continuum (a Likert scale or Semantic Differential scale). Values range from totally unrelated or zero to perfectly related or one (Mueller, 1986).

For variables with interval scale measurements, the internal consistency method was used. Mueller (1986) states that "the key to internal consistency is the intercorrelation of test items. When test items are substantially intercorrelated (i.e., are working together in effecting similar discrimination among respondents), \( \sigma_i^2 \) will be considerably larger than when test items are not intercorrelated. When the items are not intercorrelated, the discrimination caused by each item is independent of the discrimination caused by all other items. The summed item variance (\( \Sigma \sigma_i^2 \)), by
comparison, will not be affected by the intercorrelation of items. Thus, the reliability will be best when the test items are intercorrelated." The most commonly used measure of internal consistency is Cronbach’s coefficient alpha (see equation 2).

$$\alpha = \frac{k}{k - 1} \left(1 - \frac{\sum_{i=1}^{k} \sigma_i^2}{\sigma_T^2}\right)$$  \hspace{1cm} (2)

where:

$$k = \text{number of related items}$$

$$\sigma_i^2 = \text{variance of item } i \text{ among respondents}$$

$$\sigma_T^2 = \text{total variance of the scale among respondents}$$

Nunnally (1978) suggests that Cronbach’s alpha should be calculated first because it is conservative and provides a good estimate of reliability in most situations. He further recommends that the standards of reliability are as follows: (1) 0.5 or higher for exploratory research, (2) 0.7 or higher for basic research, and (3) 0.8 or higher for applied research.

Previous use of the Minnesota Satisfaction Questionnaire Short Form (MSQ-SF) as reported by Weiss et al. (1967) showed Hoyt reliability coefficients (similar to Cronbach’s alpha) as being fairly high. For the intrinsic satisfaction scale, the
coefficients ranged from 0.84 for two assembler groups to 0.91 for engineers. For the extrinsic satisfaction scale, the coefficients varied from 0.77 for electronics assemblers to 0.82 for engineers and machinists. On the overall or general satisfaction scale, the coefficients varied from 0.87 for assemblers to 0.92 for engineers. Median reliability coefficients were 0.86 for intrinsic satisfaction and 0.90 for general satisfaction. The values for each of these variables for this study are provided in Table 1. These values are high (0.80, 0.85, and 0.89), indicating good reliability of this section of the instrument.

Past use of the Organizational Commitment Questionnaire (OCQ) also provides information regarding the reliability of the instrument. In a meta-analysis study of articles discussing gender and attitudinal commitment to organizations, Aven, Parker, and McEvoy (1993) reported that 13 such studies had used the OCQ with reliability coefficients ranging from 0.81 to 0.92 with a median of 0.89. Gaither and Mason (1992) reported a Cronbach’s alpha of 0.93 for the OCQ when used in measuring the commitment of pharmacists. Mowday, Steers, and Porter (1979) reported coefficient alphas ranging from 0.82 to 0.93 with a median of 0.90 when used in groups of psychiatric technicians. The Cronbach’s alpha value of 0.92 for this study indicates good reliability of this section of the instrument (see Table 1).

The Semantic Differential scales which measured satisfaction with scheduling, availability and satisfaction with child care, sick child care, and housekeeping services as well as family support had no previous use as they were developed specifically for this
study. Cronbach's alpha values for these scales appear in Table 1. These values indicate good reliability of this section of the instrument.

Past use of Kopelman, Greenhaus, and Connolly's (1983) Conflict scale resulted in Cronbach’s alpha values of 0.70 for work conflict, 0.65 for family conflict, and 0.70 for interrole conflict in a study involving male college alumni. In a second study using college students, the scale was lengthened and Cronbach’s alpha values increased to 0.80 for work conflict, 0.87 for family conflict, and 0.89 for interrole conflict. Cronbach’s alpha values for this study can be found in Table 1. Again, values for Cronbach’s alpha for this section of the instrument indicate good reliability.
### TABLE 1
COEFFICIENT ALPHA VALUES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>COEFFICIENT ALPHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic job satisfaction</td>
<td>0.80</td>
</tr>
<tr>
<td>Intrinsic job satisfaction</td>
<td>0.85</td>
</tr>
<tr>
<td>Overall job satisfaction</td>
<td>0.89</td>
</tr>
<tr>
<td>Organizational commitment questionnaire</td>
<td>0.92</td>
</tr>
<tr>
<td>Scheduling satisfaction</td>
<td>0.89</td>
</tr>
<tr>
<td>Availability/satisfaction with child care</td>
<td>0.90</td>
</tr>
<tr>
<td>Availability/satisfaction with sick child care</td>
<td>0.88</td>
</tr>
<tr>
<td>Availability/satisfaction with housekeeping services</td>
<td>0.93</td>
</tr>
<tr>
<td>Family support</td>
<td>0.96</td>
</tr>
<tr>
<td>Work conflict</td>
<td>0.81</td>
</tr>
<tr>
<td>Family conflict</td>
<td>0.83</td>
</tr>
<tr>
<td>Interrole conflict</td>
<td>0.89</td>
</tr>
</tbody>
</table>

### VALIDITY

Nunnally (1978) states that "a measuring instrument is valid if it does what it is intended to do." In other words, does the instrument measure the construct that it is supposed to measure? Generally, instruments attempt to find a correlation between items
or predict from one another, represent some construct, or try to measure traits. In turn, there are three types of validity: (1) criterion or predictive, (2) construct, and (3) content (Nunnally, 1978).

The measure of predictive (criterion) validity actually occurs after the fact. Predictive validity is of concern if an instrument is being used to estimate some important form of behavior external to the instrument itself. For example, an examination is given to high school students to predict college performance based on grade point average. The predictive value of the exam cannot be assessed until the students who took the exam graduate from college (Nunnally, 1978). The instrument in this study measured each of the variables directly. No variables were predicted from others. Thus, the assessment of criterion validity was not appropriate.

In order to grasp the idea of construct validity, understanding a construct is necessary. Nunnally (1978) describes a construct as the extent that a "variable is abstract rather than concrete." It is something that researchers build into one idea that may contain a variety of ideas or behaviors. Constructs are not simple observable variables, but may contain many variables. Each of the variables in this study measured actual perceptions or behaviors of the respondents through previously established instruments when possible. Factor analysis can further support the construct validity of these instruments by interpreting which items measure which factors of constructs. This is accomplished by examining the factor matrix as generated from the varimax orthogonal rotation method (Hair, Anderson, and Tatham, 1987).
For the Minnesota Satisfaction Questionnaire-Short Form (MSQ-SF), the 20 items divided into two factors, the constructs intrinsic and extrinsic job satisfaction, nearly perfectly. Item 10 loaded with items associated with extrinsic job satisfaction. However, the value loading this item onto the extrinsic job satisfaction factor was only slightly higher than its value for intrinsic job satisfaction (0.353 versus 0.221). The additional two items used for the overall satisfaction scale loaded onto the extrinsic job satisfaction factor. Weiss et al. (1967) state that because the MSQ-SF is a subset of the Minnesota Satisfaction Questionnaire-Long Form (MSQ-LF), validity for the short-form may in part be inferred from validity for the long-form. These authors provide factor analysis data for 14 different studies that used the MSQ-LF. Of the 14 studies, 11 studies grouped items into two factors, while three studies grouped the items into three factors.

Factor analysis was also completed for the conflict scale. The items grouped into three separate factors of work conflict, family conflict, and interrole conflict. Kopelman, Greenhaus, and Connolly (1983) provided similar factor analysis results.

Other scales in the questionnaire were not examined using factor analysis as each scale measured only one construct.

The final form of validity, content validity, assures that the instrument adequately measures what it is supposed to measure. Nunnally (1978) suggests that content validity must be ensured by a representative collection of items and a sensible method of test construction. There is no statistical test for content validity. Usually, several experts who are knowledgeable concerning what is being measured serve as a panel of judges to
check for content validity (Fraenkel and Wallen, 1990).

Regarding a representative collection of items, the instrument was developed based on a review of theoretical literature and previous empirical research in the areas of job satisfaction, organizational commitment, family factors, conflict, and hours worked including scheduling. When possible, instruments developed and tested by other researchers were utilized. Items included in the family factors and scheduling satisfaction sections of the questionnaire were based on a review of literature involving women pharmacists.

The second standard, a sensible method of test construction was previously discussed in the "Questionnaire Development" section of this chapter. Once a representative collection of items was constructed, pretesting the instrument assured: (1) appropriate wording, length, and format and (2) the completeness of each variable in terms of identifying all aspects of that variable.

SOURCES OF ERROR

Sources of error and bias must be considered before the results of the study can be reported. The various types of error and bias may involve the instrument, respondents, or the researcher. The most common sources include: (1) processing errors, (2) instrument design, (3) subject consistency, (4) social desirability, and (5) nonrespondent bias.
Processing Errors

Processing errors are errors associated with coding and transcribing responses from the questionnaire. To minimize these errors, all coding and transcribing of data was completed by the researcher. The reversed coded items in the Organizational Commitment Questionnaire were circled in red on each returned questionnaire to prevent error in computer entry. Also, all data were rechecked by the researcher for any coding errors.

Instrument Design

Poorly worded or ambiguous questions and unclear instructions may affect the responses given by the participants. The questionnaire used in this study utilized three established instruments with high reliability and validity. Also, the questionnaire was pretested to identify problems with ambiguity and clarity of questions and instructions.

Subject Consistency

The mood, motivation, and attitude of the respondent may change during the course of completing the questionnaire. Also, situational problems, such as interruptions while completing the survey, and the environment in which the survey is being completed may affect responses. These errors are difficult to estimate, although the test-retest method for reliability could decrease this type of error. This method was not used in this study.
Social Desirability

This source of bias occurs when the respondent gives the most socially desirable response, which may not accurately indicate the true response. For example, a respondent may feel that her family does not give her enough support. However, rather than report the truth, she responds with answers that indicate that her family supports her employment. In other words, she answers with what she perceives as the socially acceptable response. If many respondents provide socially desirable responses, the resulting data can be skewed (does not result in a normal distribution). For example, the data for the family support section of the questionnaire is negatively skewed. Perhaps the data is true and the respondents do receive a great deal of family support or perhaps the respondents provided what they considered as a socially desirable answer.

Nonrespondent Bias

Even though the overall response rate of this study was quite good (67%), bias may still be introduced into the results because the nonrespondents may be different from the respondents. For this study, nonrespondents were not sampled again due to time constraints, cost of yet another mailing or telephoning, and the large amount of information requested from the questionnaire. However, an analysis was performed to determine any differences in responses from the first 10% and final 10% of the questionnaires returned. The mean responses of first 10% and the final 10% of the respondents were very similar on all questionnaire items including demographic
variables. Thus, from the assumption that the last of the respondents are similar to nonrespondents and the finding that the last of the respondents are similar to the first respondents, nonrespondents of this questionnaire are similar to the respondents. Therefore, the results can be inferred to the study's intended population, the women pharmacists registered in Ohio.

**DATA ANALYSIS**

This section discusses the data analysis for this investigation in two parts. The first part involves participants' responses to the questionnaire while the second part describes analytical techniques used to examine the research questions described earlier in this chapter as well as the study model.

**Questionnaire Response**

By July 1, 1993, a total of 324 questionnaires had been returned from the sample of 450. Of the 324 returned questionnaires, 22 were undeliverable and 11 were returned unanswered with four indicating they were homemakers, three were retired, two were working in non-pharmacy professions, and two had no time to complete the questionnaire. Two additional questionnaires were returned after July 1, 1993. Thus, 291 usable questionnaires were returned which resulted in a 65% response rate. Usable questionnaires were statistically analyzed with the SAS and EQS software systems. The SAS software system uses only the data provided to calculate values (Helwig, 1985)
while the EQS software system requires that missing data points have some imputed value (Bentler and Wu, 1993). For the purposes of this study, missing data was replaced with the group mean when EQS was used to evaluate the study model. All other statistical analysis was done with SAS.

Respondent Characteristics

Tables 2 through 7 provide information regarding demographic characteristics of the respondents. Most of the women in this study were currently married (75%) but 145 (50%) of them currently had no children living at home. Also, 214 (74%) of the women pharmacists were under 40 years of age. In terms of hours worked per week, 76 (26%) of the respondents worked 40 hours per week, 117 (40%) worked more than 40 hours per week, and 97 (33%) worked less than 40 hours per week.
TABLE 2
RESPONDENT CHARACTERISTICS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>n</th>
<th>percent</th>
<th>mean</th>
<th>standard deviation</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>percent of family income</td>
<td>289</td>
<td>99</td>
<td>59.05</td>
<td>23.23</td>
<td>0-100</td>
</tr>
<tr>
<td>adults in household</td>
<td>291</td>
<td>100</td>
<td>1.83</td>
<td>.49</td>
<td>1-5</td>
</tr>
<tr>
<td>children in household</td>
<td>291</td>
<td>100</td>
<td>.98</td>
<td>1.16</td>
<td>0-5</td>
</tr>
<tr>
<td>hours per week</td>
<td>290</td>
<td>99</td>
<td>37.06</td>
<td>13.11</td>
<td>0-70</td>
</tr>
<tr>
<td>age</td>
<td>290</td>
<td>99</td>
<td>36.81</td>
<td>9.36</td>
<td>25-73</td>
</tr>
<tr>
<td>years in practice</td>
<td>277</td>
<td>95</td>
<td>12.35</td>
<td>9.18</td>
<td>2-50</td>
</tr>
<tr>
<td>years in current position</td>
<td>289</td>
<td>99</td>
<td>6.09</td>
<td>5.86</td>
<td>1-44</td>
</tr>
<tr>
<td>number of previous positions</td>
<td>289</td>
<td>99</td>
<td>2.49</td>
<td>3.06</td>
<td>0-27</td>
</tr>
<tr>
<td>career interruptions</td>
<td>289</td>
<td>99</td>
<td>1.12</td>
<td>1.42</td>
<td>0-6</td>
</tr>
</tbody>
</table>
### TABLE 3
**RESPONDENTS' MARITAL STATUS and NUMBER OF CHILDREN**

<table>
<thead>
<tr>
<th>MARITAL STATUS</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>married</td>
<td>218</td>
<td>75</td>
</tr>
<tr>
<td>single (no partner)</td>
<td>34</td>
<td>12</td>
</tr>
<tr>
<td>single (partner)</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>widowed</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>divorced</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>291</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NUMBER OF CHILDREN</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>no children</td>
<td>145</td>
<td>50</td>
</tr>
<tr>
<td>one child</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>two children</td>
<td>66</td>
<td>23</td>
</tr>
<tr>
<td>three children</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>four children</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>five children</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>291</td>
<td>100</td>
</tr>
</tbody>
</table>
### TABLE 4
RESPONDENTS’ PRACTICE SITE

<table>
<thead>
<tr>
<th>PRACTICE SITE</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>chain drug store</td>
<td>93</td>
<td>32</td>
</tr>
<tr>
<td>independent drug store</td>
<td>42</td>
<td>14</td>
</tr>
<tr>
<td>hospital pharmacy</td>
<td>102</td>
<td>35</td>
</tr>
<tr>
<td>clinic pharmacy</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>mental health facility</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>mail service</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>government</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>education</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>long term care facility</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>industry</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>other</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>291</td>
<td>100</td>
</tr>
<tr>
<td>JOB TITLE</td>
<td>n</td>
<td>percent</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----</td>
<td>---------</td>
</tr>
<tr>
<td>owner/partner</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>staff/employee</td>
<td>148</td>
<td>51</td>
</tr>
<tr>
<td>government agency</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>self employed</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>manager/director</td>
<td>49</td>
<td>17</td>
</tr>
<tr>
<td>clinical staff</td>
<td>31</td>
<td>11</td>
</tr>
<tr>
<td>industry</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>assistant/associate</td>
<td>22</td>
<td>8</td>
</tr>
<tr>
<td>manager/director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>educator</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>health facility consultant</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>other</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>291</td>
<td>100</td>
</tr>
</tbody>
</table>
### TABLE 6
**RESPONDENTS' RESIDENCE**

<table>
<thead>
<tr>
<th>GEOGRAPHIC LOCATION</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>rural</td>
<td>47</td>
<td>16</td>
</tr>
<tr>
<td>urban</td>
<td>191</td>
<td>66</td>
</tr>
<tr>
<td>out of state (Ohio)</td>
<td>53</td>
<td>18</td>
</tr>
<tr>
<td>TOTAL</td>
<td>291</td>
<td>100</td>
</tr>
</tbody>
</table>

### TABLE 7
**RESPONDENTS' PROFESSIONAL MEMBERSHIPS**

<table>
<thead>
<tr>
<th>ASSOCIATION MEMBERSHIP</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NARD</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Ohio Pharmaceutical Association (OPA)</td>
<td>88</td>
<td>30</td>
</tr>
<tr>
<td>American Society of Hospital Pharmacists (ASHP)</td>
<td>66</td>
<td>23</td>
</tr>
<tr>
<td>American Pharmaceutical Association (APhA)</td>
<td>64</td>
<td>22</td>
</tr>
<tr>
<td>Ohio Society of Hospital Pharmacists (OSHP)</td>
<td>39</td>
<td>13</td>
</tr>
<tr>
<td>Local Association</td>
<td>114</td>
<td>39</td>
</tr>
<tr>
<td>Other</td>
<td>38</td>
<td>13</td>
</tr>
</tbody>
</table>
Analytical Techniques for Research Questions

This section describes the procedures used in the analysis of data for each research question.

Research Question 1: The Relationship between Work Factors and Organizational Commitment

To determine if work factors and organizational commitment are related in a positive direction, it was necessary to calculate Pearson product-moment correlation coefficients (see equation 3) to evaluate relationships between overall job satisfaction and organizational commitment, extrinsic job satisfaction and organizational commitment, intrinsic job satisfaction and organizational commitment, and satisfaction with scheduling and organizational commitment (Hopkins, Glass, and Hopkins, 1987).

\[ r = \frac{s_{xy}}{s_x s_y} \]  

(3)

where:

- \( r \) = correlation coefficient for the sample
- \( s_{xy} \) = covariance
- \( s_x \) and \( s_y \) = standard deviation
The correlation coefficient ranges from a perfect positive relationship which has an r value of +1 to a perfect negative relationship which has a value of -1 (Hopkins, Glass, and Hopkins, 1987). According to Davis (1971), coefficients with an absolute value greater than 0.70 indicate a very strong association, those between ±0.50 and ±0.69 point to substantial association, ±0.30 to ±0.49 indicate moderate association, coefficients of ±0.10 to ±0.29 show low association, and values from ±0.01 to ±0.09 indicate negligible association. Thus, correlation coefficients were calculated for overall job satisfaction and organizational commitment, extrinsic job satisfaction and organizational commitment, intrinsic job satisfaction and organizational commitment, and satisfaction with scheduling and organizational commitment (see Figure #2). These correlation coefficients were used to evaluate the relationship between the variables and a critical r value (see equation 4) was used to reject or fail to reject the null hypotheses at alpha level 0.05. Representation of the null and alternative hypotheses for the correlations were:

\[ H_0: r \leq 0 \quad \quad H_a: r > 0. \]
Work Factor Component:

Overall job satisfaction
Intrinsic job satisfaction
Extrinsic job satisfaction
Satisfaction with scheduling

Organizational commitment

Figure #2: Work Factors’ Influence on Organizational Commitment

\[
crITICAL\ r = \frac{critical\ t}{\sqrt{(critical\ t)^2 + v}} \quad (4)
\]

where:

\[critical\ t = t\text{-value for } n-2\text{ degrees of freedom}\]
\[\alpha = 0.05, \text{ 1 tailed test}\]
\[v = n-2\text{ degrees of freedom}\]

Research Question 2: The Relationship between Work Factors and Employment Status

Pearson product-moment correlation coefficients (see equation 3) were used to evaluate the relationship between overall job satisfaction and hours worked, intrinsic job
satisfaction and hours worked, extrinsic job satisfaction and hours worked, and satisfaction with scheduling and hours worked (see Figure #3). Critical r values at an alpha level of 0.05 were used to test the null hypotheses. Representation of the hypotheses were as follows:

\[ H_0: r \leq 0 \quad H_a: r > 0. \]

---

Work Factors Component:

- Overall job satisfaction
- Intrinsic job satisfaction
- Extrinsic job satisfaction
- Satisfaction with scheduling

\[ \rightarrow \text{Employment status} \]

---

**Research Question 3: The Relationship between Work Factors and Role Conflict**

In order to evaluate the relationships between work factors and role conflict, Pearson product-moment correlation coefficients were used. Correlation coefficients were used to evaluate possible associations between overall job satisfaction and work conflict, extrinsic job satisfaction and work conflict, intrinsic job satisfaction and work conflict.
conflict, satisfaction with scheduling and work conflict, overall job satisfaction and interrole conflict, extrinsic job satisfaction and interrole conflict, intrinsic job satisfaction and interrole conflict, and satisfaction with scheduling and interrole conflict (see Figure #4). Critical \( r \) values at an alpha level of 0.05 were used to test hypotheses that the correlation coefficient is zero. The null and alternative hypotheses were represented as:

\[
H_0: r \geq 0 \quad \quad \quad H_a: r < 0.
\]

---

Work Factors Component:

- Overall job satisfaction
- Extrinsic job satisfaction
- Intrinsic job satisfaction
- Satisfaction with scheduling

Conflict Component:

- Work conflict
- Interrole conflict

---

Figure #4: Work Factors’ Influence on Role Conflict
Research Question 4: The Relationship between Organizational Commitment and Employment Status

A Pearson product-moment correlation coefficient was used to evaluate the association between organizational commitment and employment. A critical r value at an alpha level of 0.05 was used to test the null hypothesis of no relationship (see Figure #5). The null and alternative hypotheses were represented as:

\[ H_0: r \leq 0 \quad \text{H}_1: r > 0. \]

---

Organizational commitment \(\leftarrow\) Employment status

Figure #5: Organizational Commitment's Influence on Employment Status

---

Research Question 5: The Relationship between Family Factors and Employment Status

Correlation coefficients were used to evaluate possible relationships between availability/satisfaction with child care and employment status, availability/satisfaction with sick child care and employment status, availability/satisfaction with housekeeping services and employment status, and family support and employment status (see Figure #6). Critical r values at an alpha level of 0.05 were used to test the null hypotheses. The null and alternative hypotheses were represented as:
Family Factor Components:

- Satisfaction with child care
- Satisfaction with sick child care
- Satisfaction with housekeeping services
- Employment status
- Family support

Figure #6: Family Factors’ Influence on Employment Status

Research Question 6: The Relationship between Family Factors and Role Conflict

Pearson product-moment correlation coefficients were used to evaluate the relationships between family factors and family conflict along with family factors and interrole conflict. Correlation coefficients were used to evaluate relationships between availability/satisfaction with child care and family conflict, availability/satisfaction with sick child care and family conflict, availability/satisfaction with housekeeping services and family conflict, family support and family conflict, availability/satisfaction with child care and interrole conflict, availability/satisfaction with sick child care and interrole
conflict, availability/satisfaction with housekeeping services and interrole conflict, and
family support and interrole conflict (see Figure #7). Critical r values at an alpha level
of 0.05 were used to test the null hypotheses. The null and alternative hypotheses are
represented as:

\[ H_0: r \geq 0 \quad H_1: r < 0. \]

---

Family Factor Components: 
- Satisfaction with child care
- Satisfaction with sick child care
- Satisfaction with housekeeping services
- Family support

Conflict Component: 
- Family conflict
- Interrole conflict

---

**Figure #7: Family Factors' Influence on Role Conflict**

---

**Research Question 7: The Relationship between Work Conflict, Family Conflict, and Interrole Conflict with Employment Status**

Pearson product-moment correlation coefficients were used to evaluate the
relationships between work conflict, family conflict, and interrole conflict with the
employment status of women pharmacists (see Figure #8). Critical r values were used
to test the null hypotheses. The null and alternative hypotheses were represented as:

\[ H_0: r \geq 0 \quad \text{versus} \quad H_1: r < 0. \]

Conflict Component:

- Work conflict
- Family conflict
- Interrole conflict

→ Employment status

Figure #8: Conflict's Influence on Employment Status

The Possible Influence of Demographic Variables on Variables in the Study Model

Any demographic variable that may be related to overall job satisfaction, intrinsic job satisfaction, extrinsic job satisfaction, satisfaction with scheduling, organizational commitment, work conflict, family conflict, interrole conflict, satisfaction/availability of child care, satisfaction/availability of sick child care, satisfaction/availability of housekeeping services, family support, or employment status was statistically analyzed. Possible relationships with interval measured demographic variables such as income, number of children, hours worked, age, years of practice, current position years, previous positions, and career interruptions with each study variable were evaluated with
correlation coefficients. The null hypothesis of no association was tested with a critical 
$r$ value at an alpha level of 0.05. Dichotomous demographic variables (number of adults 
living in the household, living in a rural or urban area, and membership in various 
professional organizations) were analyzed with each study variable using a student’s t-test 
(shown in equation 5) to determine any difference between the means of the two groups 
at an alpha level of 0.05. Categorical demographic variables (practice site, marital 
status, and title) were analyzed with each study variable using analysis of variance at an 
alpha level of 0.05 to determine significant differences between the means of the groups. 
If any differences were found, a Scheffe’s post hoc analysis was conducted to determine 
which groups had significantly different means.

\[
t = \frac{\bar{x} - u}{s/\sqrt{n}} \tag{5}
\]

where:

- $\bar{x}$ = sample mean
- $u$ = population mean
- $s$ = standard deviation of sample
- $n$ = number in sample
A stepwise regression analysis was completed to ascertain which demographic variables had the most influence on employment status. In order to complete this analysis, the three categorical variables with more than two groups had to be collapsed into two categories which created dummy variables. Marital status was collapsed into married or single categories with women who were married or single but living with a partner making up the married category while those who were separated, divorced, widowed, or single with no partner made up the single group. Practice site was collapsed into institutional or community pharmacy groups. Working in a hospital, mental health facility, or nursing home/long term care facility constituted working for an institution while those employed by chain drug stores, independent pharmacies, clinic pharmacies, mail service pharmacies, or Health Maintenance Organizations were considered as working in an ambulatory-care (community) pharmacy environment. Only two women worked for a government agency, four were involved in education, three were working for industry, and 21 were involved in some other facet of pharmacy. These categories were deleted from the regression analysis as they do not belong in either ambulatory-care or institutional practice and only 30 (10%) of the respondents were employed in these areas. The 11 categories involved with title were collapsed into management and staff. The management group consisted of owner/partner, manager/director, and assistant/associate manager/director while the staff group was made up of general staff/employee, self-employed (not pharmacy owner), clinical staff/employee, and health facility consultant. Two women worked for industry, one
worked for a government agency, four were educators, and 20 had some other type of title. These groups were deleted from the regression analysis as they could not be considered as either management or staff and only 27 (10%) of the participants belonged to these groups.

Choosing a Statistical Analysis Method to Test the Study Model

Loehlin (1992) stated that the researcher should begin with a path diagram which depicts the relationships between a number of variables such that a two-headed line (\(<---\>) represents correlation while a one-headed line (\(-->\)) indicates a causal relationship. Olmstead and Bentler (1992) refer to the two-headed line as nondirectional and the one-headed line as unidirectional to indicate one variable influencing another but not establishing causation. According to Loehlin (1992), the model illustrates direct effects of two variables on each other by the single line connecting them. Also, a variable can have an indirect effect upon another variable by having a direct effect on one variable which has a direct effect on the variable at the end of the path. In other words, there is a variable between two variables that acts as an intermediate.

Loehlin (1992) also provided definitions for the types of variables found in structural equation modeling. Unobserved or latent variables are not measured directly but are represented by measured variables. For example, intelligence could be inferred from the Stanford-Binet or Wechsler scales of intelligence (Olmstead and Bentler, 1992). Long (1987) stated that unobserved variables generate the pattern or structure among
observed variables. Observed or measured variables are linked to latent variables through factor analysis from the discipline of psychometrics. The relationships between latent variables are specified through structural equation modeling from the discipline of econometrics. Loehlin (1992) further defined an exogenous variable as being a source variable, being independent, or having no causal input. Exogenous variables do not have arrows pointing toward them. On the other hand, endogenous variables are dependent or downstream variables that have arrows pointing towards them.

Furthermore, Loehlin (1992) described Sewall Wright's rules (developed around 1920) concerning the estimation of correlations between two variables in a path diagram. Loehlin stated that, "the correlation between any two variables in the diagram can be expressed as the sum of the compound paths connecting the two variables if one follows the following rules developed by Wright: (1) no loops (cannot go through the same variable twice), (2) no going forward then backward, and (3) a maximum of one curved arrow (indicating a correlation) per path. Then, the numerical value of the compound path is equivalent to the product of the values of the constituent arrows." If the correlations between variables and the values for the compound paths are known, one can solve for the value of the path coefficients. Through use of these rules, equations for each path are developed to identify the model. According to Loehlin (1992), the number of equations must at least equal the number of unknown parameters in order to identify the model.

If all the variables in a path diagram are measured variables, one can solve for
the causal paths as beta weights in a series of multiple regression analyses (Loehlin, 1992). In other words, regression analysis requires that all the variables within a study model be measured or observed directly. However, the ordinary multiple regression equation, \( Y = b_0 + b_1x_1 + b_2x_2 + \ldots + b_zx_z + e \), serves as the building block for all linear structural models (Bentler, 1992).

Covariance structure modeling (also known as structural equation modeling or analysis of covariance structures) attempts to explain the relationships among a set of observed or measured variables in terms of a smaller set of unobserved constructs or factors (also referred to as latent variables). The measured variables are approximate indicators of the latent variables which ideally have more than one indicator. Olmstead and Bentler (1992) stated that any variable that has only one indicator must be represented as a measured variable and not a latent construct. Thus, covariance structural modeling hypothesizes a set of relationships (directional or nondirectional) among latent and measured variables.

Olmstead and Bentler (1992) described the following example. There are ten variables in a sample of 100 subjects which produces a 100 X 10 data matrix which in turn reduces to a 10 X 10 symmetric matrix whose entries are the variances and covariances of the ten variables. Note that a covariance is a correlation between two variables multiplied by the standard deviations of those two variables. In the data, variables are simply correlated. The task of the model is to explain those correlations. covariance structural modeling utilizes the covariance matrix produced by the correlations
and standard deviations in the data to determine if the data fit the model.

Bentler and Speckart (1981) sum up the process of structural equation modeling as "the use of a complete model that combines a measurement model and a structural model that may be thought of as a practice somewhat analogous to a combination of factor analysis and path analysis. The measurement submodel of the complete model corresponds to a factor analysis except that unlike factor analysis, there is no rotation problem and unique variables or errors of measurement are allowed to be correlated. The causal model is similar to a path model consisting of many simultaneous regression equations except that the regressions are based on latent constructs (factors) rather than overt variables and that allowance is made for the possibility of correlated factors residuals. The measurement and causal parameters in the structural model can be estimated simultaneously, standard errors can be obtained, and the goodness of fit evaluated."

For this investigation, the researcher attempted to test the appropriateness of the entire study as to how each element of the model impacts other elements of the model. The study model consists of both latent constructs (work factors, family factors, and conflict) which have more than one indicator and measured variables. Therefore, structural equation modeling was the appropriate method of analysis.

A structural model specifies the relationships (directional and nondirectional) among latent variables as previously shown in Figure #1 while a measurement model (see Figure #9) defines each measured variable as a linear function of a latent variable
plus an error term. The measurement model is depicted in symbols used in conjunction with the EQS (Bentler and Wu, 1993) software package which was chosen to statistically analyze the study model. Terminology for variables includes: (1) $V =$ measured or observed variable represented as a square in the model, (2) $E =$ error associated with $V$, (3) $F =$ factor or latent variable represented as a circle in the model, and (4) $D =$ disturbance associated with $F$. 
Legend:

EJS = extrinsic job satisfaction
IJS = intrinsic job satisfaction
SS = satisfaction with scheduling
DC = satisfaction/availability of child care
SIC = satisfaction/availability of sick child care
HK = satisfaction/availability of housekeeping services
FS = family support
WC = work conflict
FC = family conflict
IC = interrole conflict
Imputing the Mean

EQS requires that there be no missing data points in order to test a structural model. Therefore, for every respondent that had missing data, the group mean was imputed for each missing item and the summed score was calculated. For example, if respondent #122 failed to answer item #5 on the Organizational Commitment Questionnaire, the group mean was imputed for item #5 and the total score was generated. Also, one respondent failed to indicate the number of hours worked per week. Therefore, this respondent was eliminated from this part of the data analysis.

However, there is a limitation concerning imputation of the grand group mean for missing data points. For the availability/satisfaction with daycare, 213 (73%) of the respondents completed this section of the questionnaire while 182 (63%) of the respondents completed the availability/satisfaction with sick child care portion. Therefore, imputing the grand mean could decrease the variance of the data for these two measured variables. For example, the variance calculated by SAS when ignoring missing data was 49.08 for the summated daycare scale and 45.16 for the summated sick child care scale. However, the variance calculated by EQS after imputing the group mean was 37.94 for the daycare scale and 30.49 for the sick child care scale. Thus, imputing the group mean decreased the variance which also decreases the standard deviation and decreases the covariance. Therefore, imputing the mean could have a weakening impact on path coefficients and fit of the model between family factors and daycare, family factors and sick child care, and family factors and conflict.
Choosing an Estimation Method for Structural Modeling

EQS bases its estimation methods in terms of distribution and weight matrix. The distribution component consists of: (1) normal distribution theory, (2) elliptical theory, which is meant to loosen the strict normality requirement to permit a wider range of symmetrically distributional data to be analyzed, and (3) arbitrary distribution theory, which permits modeling of data that has any distributional form. Weight matrices include identity or no weighting, fixed so that the matrix is calculated once from the input data, and reweighted so that optimal matrices are updated iteratively. EQS offers the following estimation methods for structural models: (1) least squares (normal distribution, identity weight matrix), (2) elliptical least squares (least squares for elliptical distribution), (3) generalized least squares (normal distribution, fixed weight matrix) which approaches the maximum likelihood method in large sample sizes, (4) elliptical generalized least squares (elliptical distribution), (5) arbitrary generalized least squares (arbitrary distribution), (6) reweighted least squares or maximum likelihood (normal distribution, reweighted weight matrix), and (7) elliptical reweighted least squares (elliptical distribution). Bentler and Wu (1993) state that normal theory maximum likelihood (ML) is the most commonly used estimation method for structural modeling. Therefore, for purposes of this study, the maximum likelihood method of estimation was chosen because the data approaches normality and reweighted matrices were desirable to allow for iterations.
In order to establish that ML was the appropriate method of testing this study model, each variable was observed for normal distribution by considering the mean, median, mode, skewness, and frequency distribution. In a perfectly normal distribution, the mean, median, and mode are equal and the value for skewness is zero. Skewness is the degree to which a frequency distribution is asymmetrical with negative skewness having its peak of clustered scores to the right while positive skewness has its cluster of scores toward the left (Hopkins, Glass, and Hopkins, 1987). The mean, median, mode, and skewness values appear in Table 8 for the variables used in the study model. While none of these variables were perfectly normally distributed, Bentler and Wu (1993) state that ML is fairly robust so that ML can be used in cases where the variables are not extremely nonnormal in distribution. Bentler (1992) further states that "in practice, normality is often an unreasonable assumption." Thus, ML was considered the appropriate method of estimation.
### TABLE 8
NORMALITY DATA FOR VARIABLES IN STUDY MODEL

<table>
<thead>
<tr>
<th>SUMMED SCORES</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>external job satisfaction</td>
<td>19.39</td>
<td>20</td>
<td>22</td>
<td>-0.28</td>
</tr>
<tr>
<td>intrinsic job satisfaction</td>
<td>47.37</td>
<td>48</td>
<td>48</td>
<td>-0.68</td>
</tr>
<tr>
<td>overall job satisfaction</td>
<td>74.03</td>
<td>75</td>
<td>72</td>
<td>-0.27</td>
</tr>
<tr>
<td>organizational commitment questionnaire</td>
<td>72.18</td>
<td>73</td>
<td>81</td>
<td>-0.52</td>
</tr>
<tr>
<td>scheduling satisfaction</td>
<td>33.78</td>
<td>35</td>
<td>42</td>
<td>-0.89</td>
</tr>
<tr>
<td>daycare</td>
<td>29.90</td>
<td>30</td>
<td>24</td>
<td>-0.03</td>
</tr>
<tr>
<td>sick child care</td>
<td>25.26</td>
<td>24</td>
<td>24</td>
<td>+0.46</td>
</tr>
<tr>
<td>housekeeping services</td>
<td>31.56</td>
<td>31</td>
<td>24</td>
<td>-0.08</td>
</tr>
<tr>
<td>family support</td>
<td>36.03</td>
<td>38</td>
<td>42</td>
<td>-1.58</td>
</tr>
<tr>
<td>work conflict</td>
<td>19.53</td>
<td>19</td>
<td>18</td>
<td>+0.28</td>
</tr>
<tr>
<td>family conflict</td>
<td>18.83</td>
<td>19</td>
<td>22</td>
<td>+0.09</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>24.48</td>
<td>24</td>
<td>29</td>
<td>-0.06</td>
</tr>
<tr>
<td>hours</td>
<td>37.06</td>
<td>40</td>
<td>40</td>
<td>-0.72</td>
</tr>
</tbody>
</table>
The hypothesis of this structural equation modeling was that the sample data were consistent with the study model. The null hypothesis was that the sample covariance matrix exactly fits the study model. The fit of the data to the study model was tested with the \( \chi^2 \) goodness of fit test (see equation 6) and the Bentler-Bonnett normed fit index (NFI) (see equation 7) where zero equals no fit while one indicates a perfect fit.

\[
X^2 = \sum [(O_i - E_i)^2 / E_i] \tag{6}
\]

where:

- \( O_i \) = the observed frequency for the \( i^{th} \) category
- \( E_i \) = the expected frequency for the \( i^{th} \) category

\[
NFI = 1 - \frac{\hat{Q}_k}{\hat{Q}_i} \tag{7}
\]

where:

- \( \hat{Q}_k \) = fitting function for the model of interest as calculated by EQS
- \( \hat{Q}_i \) = fitting function for the model of independence as calculated by EQS

EQS also provides methods to consider addition or deletion of model pathways. The Lagrange Multiplier test checks for additional pathways that could contribute to the
model while the Wald test looks for pathways that could be deleted in order to improve the fit of the data to the model (Bentler, 1992). These two tests were used to in this study to find the best fitting model.
CHAPTER IV
RESULTS AND DISCUSSION

INTRODUCTION

This chapter describes the results of the data analysis and tests of hypotheses for each of the seven research questions as well as tests involving the study model.

RESEARCH QUESTION 1: ARE WORK FACTORS RELATED TO THE ORGANIZATIONAL COMMITMENT OF WOMEN PHARMACISTS?

Descriptive and Correlational Analysis

Responses to the Minnesota Satisfaction Questionnaire Short-Form (MSQ-SF), the scheduling satisfaction section, and the Organizational Commitment Questionnaire (OCQ) were used to provide descriptive statistics and Pearson product-moment correlation coefficients for the four hypotheses associated with work factors and organizational commitment. Also, Pearson product-moment correlation coefficients, student’s t-tests, and analysis of variance were used to evaluate the possible impact of selected demographic variables upon work factors and organizational commitment as described in Chapter 3.
Responses to the MSQ-SF

Table 9 provides the frequency of responses, mean, standard deviation, and range for the MSQ-SF, scheduling satisfaction section, and OCQ. Of 291 respondents, 269 (92%) provided responses to all 20 items of the MSQ-SF which resulted in a mean score of 74.0 ± 10.9 of a possible 100 points. For extrinsic job satisfaction, 282 (97%) replied to each of six items in this scale which resulted in a mean score of 19.4 ± 4.7 of a possible high score of 30. For intrinsic job satisfaction, 277 (95%) responded to all 12 items to give a mean score of 47.4 ± 6.5 of a possible score of 60. A score of 75 or better on the MSQ-SF indicates a high degree of satisfaction while a score between 26 to 74 would indicate average satisfaction and a score below 26 would represent a low level of satisfaction (Weiss, et al., 1967). For extrinsic job satisfaction, a score of 23 or better indicates a high level of satisfaction while scores between eight and 23 point to average satisfaction and scores below eight indicate a low level of satisfaction. In terms of intrinsic job satisfaction, scores of 45 or above indicate a high level of satisfaction while scores between 16 and 45 show an average amount of satisfaction and scores less than 16 indicate a low level of satisfaction. Thus, the women pharmacists in this sample have an average level of overall and extrinsic job satisfaction and a high level of intrinsic job satisfaction.
**TABLE 9**  
DESCRIPTIVE STATISTICS FOR MSQ-SF, SATISFACTION WITH SCHEDULING, AND OCQ

<table>
<thead>
<tr>
<th>SUMMED SCALE</th>
<th>n</th>
<th>percent</th>
<th>mean</th>
<th>standard deviation</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>overall job satisfaction</td>
<td>269</td>
<td>92</td>
<td>74.0</td>
<td>10.9</td>
<td>43-100</td>
</tr>
<tr>
<td>extrinsic job satisfaction</td>
<td>282</td>
<td>97</td>
<td>19.4</td>
<td>4.7</td>
<td>6-30</td>
</tr>
<tr>
<td>intrinsic job satisfaction</td>
<td>277</td>
<td>95</td>
<td>47.4</td>
<td>6.5</td>
<td>17-60</td>
</tr>
<tr>
<td>satisfaction with scheduling</td>
<td>288</td>
<td>99</td>
<td>33.8</td>
<td>6.7</td>
<td>14-42</td>
</tr>
<tr>
<td>OCQ</td>
<td>285</td>
<td>98</td>
<td>72.2</td>
<td>17.1</td>
<td>21-104</td>
</tr>
</tbody>
</table>

*a  highest possible score = 100  
*b  highest possible score = 30  
*c  highest possible score = 60  
*d  highest possible score = 42  
*e  highest possible score = 105
In order to put these scores in perspective, Weiss, et al. (1967) provided MSQ-SF scores for other groups of workers. For example, in a study involving 387 engineers, the mean overall job satisfaction score was 77.88, the extrinsic job satisfaction score was 21.32, and the intrinsic job satisfaction was 48.53. Women pharmacists in this study have slightly lower levels of job satisfaction. In another study involving 227 office clerks, the overall score was 74.5 (very close to the women pharmacists), the extrinsic job satisfaction score was 19.4 (the same as the women pharmacists), and the intrinsic score was 47.3 (approximately the same as the women pharmacists). Last, 74 assemblers gave the following mean responses: overall job satisfaction score of 69.8, extrinsic score of 17.9, and intrinsic score of 44.5. These responses are slightly lower than those of the women pharmacists in this investigation. In conclusion, the women pharmacists in this study have about the same amount of job satisfaction as the office clerks that Weiss, et al. (1967) described.

Responses to Scheduling Satisfaction

This section of the questionnaire dealt with whether or not the women sampled were satisfied with their work schedule. Of the 291 respondents, 288 (99%) provided responses to all six items in the scheduling satisfaction section which provided a mean score of 33.8 ± 6.7 of a possible score of 42 (see Table 9). This would indicate that the respondents were fairly satisfied with their work schedule.
Responses to the Occupational Commitment Questionnaire (OCQ)

Of the 291 total respondents, 285 (98%) provided responses to all 15 items of the OCQ which resulted in a mean score of $72.2 \pm 17.1$ of a possible 105 (see Table 9). Gaither and Mason (1992) reported a mean OCQ score of 76.8 for all pharmacists, a mean score of 77.8 for males, and a 73.9 mean score for the 232 women pharmacists in their study. These researchers concluded that pharmacists had a moderate amount of organizational commitment. Likewise, the women pharmacists mean score of 72.2 indicates a moderate level of organizational commitment.

Correlational Coefficients Regarding Work Factors with Organizational Commitment

Table 10 provides Pearson product-moment correlation coefficients to evaluate hypotheses 1.1 through 1.4 regarding work factors and organizational commitment. The correlations between overall job satisfaction, extrinsic job satisfaction, internal job satisfaction, and scheduling satisfaction with organizational commitment all fell in the substantial association range of 0.50 to 0.69 (Davis, 1971).
TABLE 10
CORRELATION COEFFICIENTS FOR MSQ-SF AND SATISFACTION WITH SCHEDULING WITH OCQ

<table>
<thead>
<tr>
<th>OCQ/P-VALUE</th>
<th>overall job satisfaction</th>
<th>extrinsic job satisfaction</th>
<th>intrinsic job satisfaction</th>
<th>satisfaction with scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCQ</td>
<td>0.68</td>
<td>0.68</td>
<td>0.54</td>
<td>0.50</td>
</tr>
<tr>
<td>p-value</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Hypothesis 1.1

As overall job satisfaction increases, the organizational commitment of women pharmacists increases.

A 0.68 correlation coefficient between overall job satisfaction and organizational commitment indicated substantial association between the two variables. The $r_{\text{calc}}$ value of 0.68 ($n = 266$, $p < 0.0005$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.
Hypothesis 1.2

As extrinsic job satisfaction increases, the organizational commitment of women pharmacists increases.

A 0.68 correlation coefficient between extrinsic job satisfaction and organizational commitment indicated substantial association between the two variables. The $r_{\text{calc}}$ value of 0.68 ($n = 278$, $p < 0.0005$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Therefore, the null hypothesis was rejected which indicated that the correlation coefficient was significantly different from zero.

Hypothesis 1.3

As intrinsic job satisfaction increases, the organizational commitment of women pharmacists increases.

A 0.54 correlation coefficient between intrinsic job satisfaction and organizational commitment indicated substantial association between the two variables. The $r_{\text{calc}}$ value of 0.54 ($n = 273$, $p < 0.0005$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.
Hypothesis 1.4

As satisfaction with scheduling increases, the organizational commitment of women pharmacists increases.

A correlation coefficient of 0.50 between satisfaction with scheduling and organizational commitment indicated substantial association between the variables. The $r_{\text{calc}}$ value of 0.50 ($n=283$, $p < 0.0005$) was compared to an $r_{\text{crit}}$ value of 0.104 ($n=250$). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

The Influence of Demographic Variables on Work Factors and Organizational Commitment

Table 11 provides correlation coefficients for demographic variables that could impact work factors or organizational commitment. Values ranged from zero to 0.18. The correlations between the respondent's age and intrinsic job satisfaction ($r_{\text{calc}} = 0.18$ for $n = 276$, $r_{\text{crit}} = 0.104$ for $n = 250$) and years in practice and intrinsic job satisfaction ($r_{\text{calc}} = 0.17$ for $n = 276$, $r_{\text{crit}} = 0.104$ for $n = 250$) were the only significant relationships found, indicating that as the woman grows older, her intrinsic job satisfaction increases. However, the 0.18 and 0.17 values indicated only a low association between the two variables. These values suggested there was very little correlation between the demographic variables with work factors and organizational
commitment.

### TABLE 11
CORRELATION COEFFICIENTS* FOR DEMOGRAPHIC VARIABLES WITH WORK FACTORS AND OCQ

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>overall job satisfaction</th>
<th>extrinsic job satisfaction</th>
<th>intrinsic job satisfaction</th>
<th>satisfaction with scheduling</th>
<th>OCQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>-0.03 (0.61)</td>
<td>0.001 (0.98)</td>
<td>-0.08 (0.19)</td>
<td>-0.10 (0.09)</td>
<td>-0.01 (0.84)</td>
</tr>
<tr>
<td>children</td>
<td>0.07 (0.22)</td>
<td>0.03 (0.64)</td>
<td>0.09 (0.12)</td>
<td>0.07 (0.26)</td>
<td>0.08 (0.18)</td>
</tr>
<tr>
<td>age</td>
<td>0.11 (0.08)</td>
<td>0.01 (0.84)</td>
<td>0.18 (0.003)</td>
<td>0.06 (0.28)</td>
<td>0.07 (0.24)</td>
</tr>
<tr>
<td>years in practice</td>
<td>0.01 (0.10)</td>
<td>0.002 (0.97)</td>
<td>0.17 (0.005)</td>
<td>0.01 (0.85)</td>
<td>0.07 (0.28)</td>
</tr>
<tr>
<td>years in current position</td>
<td>0.03 (0.60)</td>
<td>-0.01 (0.85)</td>
<td>0.09 (0.14)</td>
<td>-0.02 (0.70)</td>
<td>0.0001 (0.99)</td>
</tr>
<tr>
<td>previous positions</td>
<td>0.05 (0.40)</td>
<td>0.0009 (0.99)</td>
<td>0.07 (0.27)</td>
<td>-0.02 (0.74)</td>
<td>0.0001 (0.99)</td>
</tr>
<tr>
<td>career interruptions</td>
<td>0.02 (0.71)</td>
<td>-0.05 (0.37)</td>
<td>0.06 (0.28)</td>
<td>0.04 (0.46)</td>
<td>-0.002 (0.97)</td>
</tr>
</tbody>
</table>

*a p-values appear in parentheses

Student's t-tests were calculated to test dichotomous demographic variables' impact on work factors and organizational commitment. The results showed differences
between groups in membership in NARD in terms of organizational commitment \[ t_{\text{calc}} = -4.98 \text{ (d.f. = 283; } p = 0.0001) \], membership in NARD and overall job satisfaction \[ t_{\text{calc}} = -3.88 \text{ (d.f. = 267; } p = 0.003) \], and membership in NARD and satisfaction with scheduling \[ t_{\text{calc}} = -2.68 \text{ (d.f. = 286; } p = 0.02) \]. Of the 285 participants who responded to all items in the OCQ and to membership in NARD, 15 were members and had a mean score of 85.1 ± 9.8 on the OCQ while those who did not belong had a score of 71.5 ± 17.2. Of the 269 respondents who provided answers for NARD membership and the 20 items involved with overall job satisfaction, 10 belonged to NARD and had a mean score of 84.4 ± 8.5 while 259 did not belong and had a mean score of 73.6 ± 10.7. Of the 288 respondents providing answers to the satisfaction with scheduling scale and membership in NARD, 14 were members of NARD and had a mean score of 37.1 ± 4.6 on the scheduling satisfaction scale while 274 did not belong and had a mean score of 33.6 ± 6.8. NARD previously stood for National Association of Retail Druggists and generally serves pharmacists in community settings although any pharmacist or interested individual may belong to NARD. This finding will be further investigated through analysis of variance with practice site and organizational commitment.

Analysis of variance indicated differences between groups in terms of practice site and overall job satisfaction \[ F_{\text{calc}} = 2.70 \text{ (d.f. } = 10,258; p = 0.004) \], practice site and extrinsic job satisfaction \[ F_{\text{calc}} = 2.37 \text{ (d.f. } = 10,271; p = 0.01) \], practice site and intrinsic job satisfaction \[ F_{\text{calc}} = 1.97 \text{ (d.f. } = 10,266; p = 0.03) \], practice site and satisfaction with scheduling \[ F_{\text{calc}} = 3.16 \text{ (d.f. } = 10,277; p = 0.0007) \], practice site and
organizational commitment \(F_{\text{calc}} = 2.97 \text{ (d.f. } = 10,274); p=0.001\), title and intrinsic job satisfaction \(F_{\text{calc}} = 2.07 \text{ (d.f. } = 10,276); p=0.03\), title and overall job satisfaction \(F_{\text{calc}} = 1.97 \text{ (d.f. } = 10,258); p=0.04\), marital status and intrinsic job satisfaction \(F_{\text{calc}} = 3.10 \text{ (d.f. } = 4,272); p=0.02\), and marital status and overall job satisfaction \(F_{\text{calc}} = 2.49 \text{ (d.f. } = 4,264); p=0.04\). A Scheffe’s post hoc analysis was completed for all these group differences in order to determine exactly which groups had significantly different mean scores. The post hoc analyses failed to identify which demographic groups had different mean scores for any of the work factor variables or organizational commitment. This could be due to the conservativeness of the Scheffe test combined with so many groups of practice sites (11), titles (11), and levels of marital status (five).

Even though these relationships between these demographic variables with work factors and organizational commitment were statistically significant, they were not extremely meaningful. For instance, the 0.18 correlation between age and intrinsic job satisfaction was a low association. Only 15 participants were members of NARD which makes the results of the student’s t-test somewhat questionable due to the unequal number of respondents in each group. Therefore, no conclusion can be made concerning the impact of membership in NARD upon work factors and organizational commitment. Also, the analysis of variance in combination with the Scheffe’s post hoc analysis failed to identify differences in mean scores between levels of demographic groups. Thus, no conclusion can be made as to which groups have higher or lower scores.
RESEARCH QUESTION 2: ARE WORK FACTORS RELATED TO THE EMPLOYMENT STATUS OF WOMEN PHARMACISTS?

Descriptive and Correlational Analysis

Responses to the Minnesota Satisfaction Questionnaire Short-Form (MSQ-SF), the scheduling satisfaction section, and the number of hours worked per week were used to provide descriptive statistics and Pearson product-moment correlation coefficients for the four hypotheses associated with work factors and employment status. Also, Pearson product-moment correlation coefficients, student's t-tests, and analysis of variance were used to evaluate the possible impact of selected demographic variables upon employment status as described in Chapter 3.

Responses to the MSQ-SF and the scheduling satisfaction section were discussed in conjunction with Research Question 1. Descriptive statistics for the responses to these scales appear in Table 9. Furthermore, the impact of demographic variables upon responses to the MSQ-SF and satisfaction with scheduling were described previously in the discussion of Research Question 1.

Responses to Average Number of Hours Worked per Week

Of the 291 respondents, 290 (99%) provided information as to how many hours they worked per week as a pharmacist. The women pharmacists in this investigation worked an average of 37.1 ± 13.1 hours per week with a range of 0 to 70 hours.
Correlational Coefficients Regarding Work Factors with Employment Status

Table 12 provides Pearson product-moment correlation coefficients used to evaluate the relationships described in hypotheses 2.1 through 2.4 regarding work factors and employment status. The correlations between overall job satisfaction, extrinsic job satisfaction, intrinsic job satisfaction, and satisfaction with scheduling with employment all fell in the negligible association range of 0.01 to 0.09 (Davis, 1971).

<table>
<thead>
<tr>
<th>Employment Status/p-value</th>
<th>overall job satisfaction</th>
<th>extrinsic job satisfaction</th>
<th>intrinsic job satisfaction</th>
<th>satisfaction with scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours per week</td>
<td>0.02</td>
<td>0.004</td>
<td>0.03</td>
<td>-0.05</td>
</tr>
<tr>
<td>p-value</td>
<td>0.73</td>
<td>0.95</td>
<td>0.66</td>
<td>0.41</td>
</tr>
</tbody>
</table>
Hypothesis 2.1

As overall job satisfaction increases, the employment status of women pharmacists increases.

A 0.02 correlation coefficient between overall job satisfaction and average number of hours worked per week indicated negligible association between the two variables. The $r_{\text{calc}}$ value of 0.02 ($n = 268, p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different than zero.

Hypothesis 2.2

As extrinsic job satisfaction increases, the employment status of women pharmacists increases.

A 0.004 correlation coefficient between extrinsic job satisfaction and average number of hours worked per week indicated nearly no association between the two variables. The $r_{\text{calc}}$ of 0.004 ($n = 281, p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was not rejected, indicating that the correlation was not significantly different than zero.
Hypothesis 2.3

As intrinsic job satisfaction increases, the employment status of women pharmacists increases.

A 0.03 correlation coefficient between intrinsic job satisfaction and the average number of hours worked per week indicated a negligible association between the two variables. The $r_{\text{calc}}$ value of 0.03 ($n = 276$, $p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was not rejected, indicating that the correlation was not significantly different than zero.

Hypothesis 2.4

As satisfaction with scheduling increases, the employment status of women pharmacists increases.

A -0.05 correlation coefficient between satisfaction with scheduling and the average number of hours worked per week indicated negligible association between the two variables. The $r_{\text{calc}}$ value of -0.05 ($n = 287$, $p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.104 ($n = 250$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
The Influence of Demographic Variables on Employment Status

Table 13 provides correlation coefficients for demographic variables that could impact the average number of hours per week that a woman pharmacist works. A 0.57 correlation coefficient [n = 288; p = 0.0001; \( r_{crit} = 0.104 \) (n=250)] between the percent of income contributed to the household by the women and average number of hours worked per week indicated a substantial association between the two variables. This may indicate that as one works more hours, one contributes more to family income. Next, a -0.48 [n = 290; p = 0.0001; \( r_{crit} = 0.104 \) (n=250)] correlation coefficient between the number of children in the household and employment status indicated a moderate association between the two variables. This negative relationship suggested that as the number of children increases, the number of hours worked per week decreases. Likewise, the -0.43 correlation coefficient [n = 288; p = 0.0001; \( r_{crit} = 0.104 \) (n=250)] between the number of career interruptions and employment status showed a moderate association between the two variables. In this case, it is possible that career interruptions indicated maternity leaves and reflected the number of children in the household. However, as the number of career interruptions increases, the average number of hours worked per week decreases. Other correlation coefficients between age and employment status [\( r_{calc} = -0.12; n = 289; p = 0.04; r_{crit} = 0.104 \) (n=250)] and years in practice and employment status [\( r calc = -0.13, n = 276; p = 0.02; r_{crit} = 0.104 \) (n=250)] had low association between the variables. These results indicated a weakly inverse relationship between the number of hours worked per week with age and the number of years employed.
TABLE 13
CORRELATION COEFFICIENTS* FOR DEMOGRAPHIC VARIABLES
WITH EMPLOYMENT STATUS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Employment status (hours per week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>0.57 (0.0001)</td>
</tr>
<tr>
<td>number of children</td>
<td>-0.48 (0.0001)</td>
</tr>
<tr>
<td>age of respondent</td>
<td>-0.12 (0.04)</td>
</tr>
<tr>
<td>years in practice</td>
<td>-0.13 (0.03)</td>
</tr>
<tr>
<td>years in current position</td>
<td>-0.09 (0.14)</td>
</tr>
<tr>
<td>previous positions</td>
<td>-0.11 (0.10)</td>
</tr>
<tr>
<td>career interruptions</td>
<td>-0.43 (0.0001)</td>
</tr>
</tbody>
</table>

* p-values appear in parentheses

Student's t-tests were calculated to evaluate two group demographic variables' influence on employment status. The results showed differences between groups in the number of adults in the household \[ t_{\text{calc}} = 5.26 \text{ (d.f.} = 281; \text{ } p < 0.0001) \], membership in NARD \[ t_{\text{calc}} = -3.51 \text{ (d.f.} = 288; \text{ } p=0.0005) \], membership in the American Pharmaceutical Association (APhA) \[ t_{\text{calc}} = -3.66 \text{ (d.f.} = 288; \text{ } p=0.0003) \], membership in the Ohio Pharmaceutical Association (OPA) \[ t_{\text{calc}} = -2.15 \text{ (d.f.} = 288; \text{ } p=0.03) \], membership in the American Society of Hospital of Pharmacists (ASHP) \[ t_{\text{calc}} = -2.40 \text{ (d.f.} = 288; \text{ } p=0.02) \], and membership in some other professional organization \[ t_{\text{calc}} = -3.77 \text{ (d.f.} = 288; \text{ } p=0.0004 \]. Of 283 respondents providing information to both the
number of adults living in the household and the average number of hours worked per week, 224 (79%) indicated there were two adults on the premises. These women worked an average of 35.0 ± 13.5 hours per week while women living in households with only one adult worked an average of 44.7 ± 8.3 hours per week. This indicated that the women pharmacists in this study that live in single adult households work more hours than the women who have another adult in the home. Of 290 participants answering both items concerning membership in NARD and employment status, 15 (5%) indicated membership in NARD with a mean employment status of 48.4 ± 6.7 hours while those not belonging to NARD worked an average of 36.4 ± 13.1 hours per week. Similarly, 64 (22%) of 290 respondents indicated membership in APhA and worked 42.3 ± 10.8 hours per week while non-members worked 35.6 ± 13.4 hours weekly. Of the 290 respondents that provided information for both membership in OPA and average number of hours worked per week, 203 (70%) did not belong to OPA and worked an average of 36.0 ± 13.6 hours per week while those that did belong to OPA worked and average of 39.4 ± 11.6 hours per week. Sixty-six (23%) of 290 respondents belonged to ASHP and worked an average of 40.5 ± 13.5 hours per week while those who did not belong worked an average or 36.0 ± 12.8 hours per week. Of the 290 respondents, 38 (13%) belonged to some other professional organization and worked an average of 44.7 ± 13.4 hours per week while those not belonging to this type of group worked an average of 35.9 ± 12.7 hours per week. These differences in average hours worked per week in terms of professional organization membership could indicate that those belonging to
some type of professional organization work more hours per week than those who do not belong to such groups.

Analysis of variance indicated differences between groups in terms of practice site and employment status \(F_{\text{calc}} = 2.35; \text{ (d.f.)} = 10,279; p = 0.01\), title and employment status \(F_{\text{calc}} = 6.44; \text{ (d.f.)} = 10,279; p = 0.0001\), and marital status and employment status \(F_{\text{calc}} = 8.25; \text{ (d.f.)} = 4,285; p = 0.0001\). A Scheffe’s post hoc test to determine which practice sites had different means for employment status failed to identify these groups. This could be due to the large number of practice sites (11) and the conservative Scheffe test. However, the post hoc analysis indicated that the groups with significant different mean hours worked per week were between director/manager (44.1 ± 7.5 hours per week) and staff/employee (33.5 ± 12.3 hours per week) and director/manager and clinical staff/employee (31.2 ± 14.2 hours per week). This indicates that directors/managers work significantly more hours per week than staff pharmacists. Also, the post hoc analysis involving marital status and hours worked per week indicated that married women and single (no partner) women as well as married women and divorced women work significantly different amounts per week. Married women worked 34.6 ± 13.4 hours per week while single (no partner) women worked 44.6 ± 10.3 hours per week and divorced women worked 44.0 ± 6.7 hours per week. This indicates that married women do not work as many hours as single or divorced women pharmacists.
RESEARCH QUESTION 3: ARE WORK FACTORS RELATED TO ROLE CONFLICT OF WOMEN PHARMACISTS

Descriptive and Correlational Analysis

Responses to the MSQ-SF, satisfaction with scheduling, and Kopelman, Greenhaus, and Connolly’s (1983) work conflict and interrole conflict scale were used to provide descriptive statistics and Pearson product-moment correlation coefficients for the eight hypotheses associated with work factors, work conflict, and interrole conflict. Also, Pearson product-moment correlation coefficients, t-tests, and analysis of variance were used to evaluate the possible impact of selected demographic variables upon work conflict and interrole conflict. Descriptive statistics and information regarding demographic variables’ impact on work factors were included in the discussion of Research Question 1.

Responses to Work Conflict

Of the 291 total respondents, 284 (98%) provided responses to all eight items corresponding to work conflict. A mean score of $19.5 \pm 5.9$ resulted of a possible score of 40 (see Table 14). Kopelman, Greenhaus, and Connolly (1983) reported the mean response to each item in the work conflict scale was 2.57 (or 22.56 for all eight items) for a study involving college students. For this scale, the higher the score, the greater the work conflict so that a total low score of eight represents disagreement with the scale
statements and indicates no work conflict. Therefore, the women pharmacists in this study, like the college students in Kopelman, Greenhaus, and Connolly's study, experienced a low to moderate level of conflict.

**TABLE 14**  
**DESCRIPTIVE STATISTICS FOR WORK AND INTERROLE CONFLICT**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>percent</th>
<th>mean</th>
<th>standard deviation</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>work conflict&lt;sup&gt;a&lt;/sup&gt;</td>
<td>284</td>
<td>98</td>
<td>19.5</td>
<td>5.9</td>
<td>8-37</td>
</tr>
<tr>
<td>interrole conflict&lt;sup&gt;b&lt;/sup&gt;</td>
<td>272</td>
<td>93</td>
<td>24.5</td>
<td>7.3</td>
<td>8-40</td>
</tr>
</tbody>
</table>

<sup>a</sup> highest possible score = 40  
<sup>b</sup> highest possible score = 40

**Responses to Interrole Conflict**

Responses to the interrole conflict scale involved 272 (93%) of the 291 study participants. These women had a mean score of $24.5 \pm 7.3$ of a possible 40 (see Table 14). The college students in Kopelman, Greenhaus, and Connolly's study had a 2.57 mean score per item for a 20.56 total score while employees at a midwestern electronics firm provided a mean score of 2.51 per item for a mean total score of 20.08 (Goff, Mount, and Jamison, 1990). Thus, the women pharmacists in this study indicated they
had a moderate level of interrole conflict.

Correlational Coefficients Regarding Work Factors with Work Conflict and Interrole Conflict

Table 15 provides Pearson product-moment correlation coefficients for work factors correlated with work conflict and interrole conflict. The negative correlations between work factors and work conflict indicated substantial to very strong association. However, negative correlations between work factors and interrole conflict indicated moderate to low association. Thus, as satisfaction with work factors decreases, work conflict tends to increase in a fairly strong association. Likewise, as satisfaction with work factors decreases, there is a moderate increase in interrole conflict.

<table>
<thead>
<tr>
<th></th>
<th>overall job satisfaction</th>
<th>extrinsic job satisfaction</th>
<th>intrinsic job satisfaction</th>
<th>satisfaction with scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>work conflict</td>
<td>-0.72 (0.0001)</td>
<td>-0.64 (0.0001)</td>
<td>-0.59 (0.0001)</td>
<td>-0.51 (0.0001)</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>-0.33 (0.0001)</td>
<td>-0.34 (0.0001)</td>
<td>-0.23 (0.0001)</td>
<td>-0.41 (0.0001)</td>
</tr>
</tbody>
</table>

* p-values appear in parentheses
Hypothesis 3.1

There is a negative relationship between overall job satisfaction and work conflict.

The calculated correlation coefficient between overall job satisfaction and work conflict of -0.72 (n = 267; p < 0.0005) was compared to the critical r value of 0.104 (n=250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

Hypothesis 3.2

There is a negative relationship between extrinsic job satisfaction and work conflict.

The calculated correlation coefficient between extrinsic job satisfaction and work conflict of -0.64 (n = 275; p < 0.0005) was compared to the critical r value of 0.104. The null hypothesis was rejected and indicated that the correlation coefficient was significantly different than zero.
Hypothesis 3.3

There is a negative relationship between intrinsic job satisfaction and work conflict.

The calculated Pearson product-moment correlation coefficient of -0.59 (n = 274, p < 0.0005) between intrinsic job satisfaction and work conflict was compared to the critical r value of 0.104 (n = 250). This test allowed the rejection of the null hypothesis, indicating that the correlation coefficient was significantly different from zero.

Hypothesis 3.4

There is a negative relationship between satisfaction with scheduling and work conflict.

The calculated r value of -0.51 (n = 282; p < 0.0005) was compared to the critical r value of 0.104 (n = 250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.
Hypothesis 3.5

There is a negative relationship between overall job satisfaction and interrole conflict.

The calculated correlation between overall job satisfaction and interrole conflict of -0.33 (n = 255; p < 0.0005) was compared to the critical r value to 0.104 (n = 250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different than zero.

Hypothesis 3.6

There is a negative relationship between extrinsic job satisfaction and interrole conflict.

The calculated Pearson correlation coefficient between extrinsic job satisfaction and interrole conflict of -0.34 (n = 265; p < 0.0005) was compared to the comparable critical r value of 0.104 (n = 250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.
Hypothesis 3.7

There is a negative relationship between intrinsic job satisfaction and interrole conflict.

The calculated correlation coefficient of -0.23 (n = 262; p < 0.0005) was compared to the critical r value of 0.104 (n = 250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

Hypothesis 3.8

There is a negative relationship between satisfaction with scheduling and interrole conflict.

The calculated correlation coefficient between satisfaction with scheduling and interrole conflict of -0.41 (n = 270; p < 0.0005) was compared to the critical r value of 0.104 (n = 250). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.
The Influence of Demographic Variables on Work Conflict and Interrole Conflict

Table 16 provides correlation coefficients for demographic variables that could impact work conflict or interrole conflict. Only one of these correlations was significant: the calculated correlation between income and interrole conflict of 0.19 (n = 270; 0.025 < p < 0.05) indicated a low association. Perhaps as income increases, the responsibility to the job increases possibly due to the number of hours worked or type of position, and interrole conflict increases. Conflict between work and family increases due to increased demands of the job which may interfere with family responsibilities.
TABLE 16
CORRELATION COEFFICIENTS FOR DEMOGRAPHIC VARIABLES WITH WORK AND INTERROLE CONFLICT

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Work Conflict</th>
<th>Interrole Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>0.05 (0.45)</td>
<td>0.19 (0.002)</td>
</tr>
<tr>
<td>number of children</td>
<td>-0.04 (0.46)</td>
<td>-0.05 (0.41)</td>
</tr>
<tr>
<td>age of respondent</td>
<td>-0.08 (0.17)</td>
<td>-0.04 (0.53)</td>
</tr>
<tr>
<td>years in practice</td>
<td>-0.08 (0.21)</td>
<td>0.01 (0.88)</td>
</tr>
<tr>
<td>years in current practice</td>
<td>-0.06 (0.32)</td>
<td>0.05 (0.42)</td>
</tr>
<tr>
<td>previous positions</td>
<td>0.07 (0.22)</td>
<td>0.01 (0.88)</td>
</tr>
<tr>
<td>career interruptions</td>
<td>-0.03 (0.59)</td>
<td>-0.02 (0.79)</td>
</tr>
</tbody>
</table>

* p-values appear in parentheses

The possible differences between mean scores on work conflict and interrole conflict due to the impact of two group demographic variables were tested by using student’s t-tests. Differences were found between mean scores of work conflict based on membership in NARD \( t_{\text{calc}} = 2.53 \) (d.f. = 282); \( p=0.02 \), mean scores of interrole conflict based on membership in the American Society of Hospital Pharmacists (ASHP) \( t_{\text{calc}} = -2.31 \) (d.f. = 270); \( p=0.02 \), mean score of interrole conflict based on membership in the Ohio Society of Hospital Pharmacists \( t_{\text{calc}} = -2.04 \) (d.f. = 270); \( p=0.05 \), mean score on interrole conflict based on membership in some other professional organization \( t_{\text{calc}} = -2.17 \) (d.f. = 270); \( p=0.04 \). Of the 284 respondents
who answered all eight items on the work conflict scale and indicated membership in NARD, 13 belonged to NARD and had a mean score of $15.3 \pm 6.2$ while those not belonging had a mean score of $19.7 \pm 5.9$. Of the 272 participants responding to both the interrole conflict scale and membership in ASHP, 64 belonged to the group and had a mean score of $26.3 \pm 7.3$ on the interrole conflict scale while those who did not belong had a mean score of $23.9 \pm 7.2$. Of the 272 respondents providing information concerning interrole conflict and membership in OSHP, 35 belonged to this group and had a mean score of $26.6 \pm 6.3$ while those who did not belong had a mean score of $24.2 \pm 7.4$. Thirty-five of 272 respondents belonged to some other professional group and had a mean score of $27.1 \pm 7.9$ while those who did not belong to this type of group had a mean score of $24.1 \pm 7.1$. This influence of membership in professional groups could indicate that as one joins such organizations, one devotes more time and energy to one’s profession which decreases the time available for family matters and increases interrole conflict.

Analysis of variance with Scheffe’s post hoc analysis was used to find differences in mean scores of work or interrole conflict in terms of practice site, title, or marital status. For practice site and work conflict, the calculated $F$ (d.f. = 10,273; $p=0.0005$) value of 3.27 was compared to the $F$ critical (d.f. = 10,200) value of 1.88. This indicated that practice site did have an influence on work conflict. For marital status and work conflict, the calculated $F$ (d.f. = 4,279; $p=0.01$) value was 3.17 and was compared to the $F$ critical value of 2.42 (df=4,200). This indicated that the mean work
conflict score of the various groups of marital status were not equal. Last, title had some influence on interrole conflict. The calculated F (d.f. = 10,261; p=0.0004) value of 3.37 was compared to the F critical value (df=10,200) of 1.88. However, the Scheffe's post hoc analyses failed to identify the levels of the demographic variables that had significantly different mean conflict scores.

RESEARCH QUESTION 4: IS ORGANIZATIONAL COMMITMENT RELATED TO EMPLOYMENT STATUS OF WOMEN PHARMACISTS?

Descriptive and Correlational Analysis

Table 9 provides descriptive data for the Organizational Commitment Questionnaire (OCQ) while such data for employment status is located in association with Research Question 2. Also, the possible impact of demographic variables upon organizational commitment and employment status was discussed in conjunction with Research Questions 1 and 2, respectively.

Correlational Coefficient Regarding Organizational Commitment and Employment Status

The calculated value of the Pearson product-moment correlation coefficient between organizational commitment and employment status was 0.07 which indicated a negligible association.
Hypothesis 4

As organizational commitment increases, the employment status of women pharmacists increases.

A calculated correlation coefficient of 0.07 (n = 284; p > 0.05) when compared to a critical r value of 0.104 (n = 250) resulted in failure to reject the null hypothesis. Therefore, the correlation coefficient was not significantly different than zero.

RESEARCH QUESTION 5: ARE FAMILY FACTORS RELATED TO THE EMPLOYMENT STATUS OF WOMEN PHARMACISTS?

Descriptive and Correlational Analysis

Responses to the family factors section of the questionnaire as well as the average number of hours worked per week provided descriptive statistics and Pearson product-moment correlation coefficients for the four hypotheses associated with family factors and employment status. Also, correlation coefficients, student’s t-tests, and analysis of variance were used to evaluate the possible impact of demographic variables on family factors as described in Chapter 3. The analysis of the influence of demographic variables on employment status was discussed in conjunction with Research Question 2.
Responses to Family Factors

Table 17 provides the frequency of responses, mean, standard deviation, and range for the four components of family factors. Of 291 respondents, 213 (73%) answered all six items regarding satisfaction/availability of child care which resulted in a mean score of 29.9 ± 7.0 of a possible 42. This indicated that the respondents were somewhat satisfied with child care in their respective communities. For the satisfaction/availability of sick child care, 182 (63%) of the 291 participants provided answers to all six items in the scale. This resulted in a mean score of 25.3 ± 6.7 which indicated very slight satisfaction with sick child care in the community. In terms of satisfaction/availability of housekeeping services within their community, 237 (81%) of the 291 respondents completed all six items in this scale which resulted in a mean score of 31.6 ± 6.7. This indicated moderate satisfaction with available housekeeping services within the respondents' community. The six items in the family support scale were answered by 278 (96%) of the respondents. This resulted in a mean score of 36.0 ± 6.9 which indicated that these women have moderately supportive families in terms of their employment.
TABLE 17
DESCRIPTIVE STATISTICS FOR FAMILY FACTORS

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>percent</th>
<th>mean</th>
<th>standard deviation</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>child care&lt;sup&gt;a&lt;/sup&gt;</td>
<td>213</td>
<td>73</td>
<td>29.9</td>
<td>7.0</td>
<td>11-42</td>
</tr>
<tr>
<td>sick child care&lt;sup&gt;b&lt;/sup&gt;</td>
<td>182</td>
<td>63</td>
<td>25.3</td>
<td>6.7</td>
<td>6-42</td>
</tr>
<tr>
<td>housekeeping&lt;sup&gt;c&lt;/sup&gt;</td>
<td>237</td>
<td>81</td>
<td>31.6</td>
<td>6.7</td>
<td>8-42</td>
</tr>
<tr>
<td>family support&lt;sup&gt;d&lt;/sup&gt;</td>
<td>278</td>
<td>96</td>
<td>36.0</td>
<td>6.9</td>
<td>6-42</td>
</tr>
</tbody>
</table>

<sup>a</sup> highest possible score = 42  
<sup>b</sup> highest possible score = 42  
<sup>c</sup> highest possible score = 42  
<sup>d</sup> highest possible score = 42

Correlational Coefficients Regarding Family Factors with Employment Status

Table 18 provides Pearson product-moment correlation coefficients for hypotheses 5.1 through 5.4 regarding family factors and employment status. The correlations between satisfaction/availability of child care and average number of hours worked per week, satisfaction/availability of sick child care and average number of hours worked per week, satisfaction/availability of housekeeping services and average hours worked per week, and family support and average number of hours worked per week all fell into the negligible association range.
<table>
<thead>
<tr>
<th>Employment Status/p-values</th>
<th>child care</th>
<th>sick child care</th>
<th>housekeeping services</th>
<th>family support</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours per week</td>
<td>0.04</td>
<td>0.002</td>
<td>0.05</td>
<td>-0.02</td>
</tr>
<tr>
<td>p-value</td>
<td>0.59</td>
<td>0.98</td>
<td>0.47</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Hypothesis 5.1

As availability and satisfaction with child care increases, the employment status of women pharmacists increases.

A 0.04 correlation coefficient between child care and the average number of hours worked per week indicated no association between the two variables. The $r_{calc}$ value of 0.04 ($n = 212$, $p > 0.05$) was compared to the $r_{crit}$ value of 0.104. Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different than zero.
Hypothesis 5.2

As availability and satisfaction with sick child care increases, the employment status of women pharmacists increases.

A 0.002 correlation coefficient between satisfaction with sick child care and average number of hours worked per week showed no association between the two variables. The $r_{\text{calc}}$ value of 0.002 ($n = 181$, $p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.135 ($n = 150$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.

Hypothesis 5.3

As availability and satisfaction with housekeeping services increases, the employment status of women pharmacists increases.

A 0.05 correlation coefficient indicated negligible association between satisfaction/availability of housekeeping services and employment status. The $r_{\text{calc}}$ value of 0.05 ($n = 236$, $p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.117. Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
Hypothesis 5.4

As family support of employment increases, the employment status of women pharmacists increases.

A negative correlation coefficient of -0.02 indicated a negligible relationship between family support and employment status. The $r_{\text{calc}}$ value of -0.02 ($n = 277$, $p > 0.05$) was compared to the $r_{\text{crit}}$ value of 0.104. Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.

The Influence of Demographic Variables on Family Factors

Table 19 provides correlation coefficients for demographic variables and family factors. Values ranged from -0.10 to 0.18. The correlation coefficient between satisfaction with housekeeping services and age was 0.18 ($0.025 < p < 0.05$) and the correlation coefficient was 0.16 ($0.025 < p < 0.05$) between satisfaction with housekeeping services and years in practice. The comparative $r$ critical value for both correlations was 0.117 ($n=200$). These were the only two correlation coefficients that were significantly different from zero between demographic variables and family factors. These low associations between satisfaction with housekeeping and years in practice and age implied that as one become older, one might be more likely to utilize housekeeping services and therefore be able to respond to inquiries regarding satisfaction with these
TABLE 19
CORRELATION COEFFICIENTS* FOR DEMOGRAPHIC VARIABLES WITH FAMILY FACTORS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>child care</th>
<th>sick child care</th>
<th>housekeeping</th>
<th>family support</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>-0.02 (0.74)</td>
<td>0.06 (0.41)</td>
<td>-0.006 (0.93)</td>
<td>-0.08 (0.16)</td>
</tr>
<tr>
<td>number of children</td>
<td>0.10 (0.16)</td>
<td>-0.07 (0.36)</td>
<td>0.01 (0.85)</td>
<td>-0.01 (0.86)</td>
</tr>
<tr>
<td>age of respondent</td>
<td>0.04 (0.52)</td>
<td>-0.06 (0.41)</td>
<td>0.18 (0.006)</td>
<td>0.07 (0.08)</td>
</tr>
<tr>
<td>years in practice</td>
<td>0.03 (0.64)</td>
<td>-0.04 (0.56)</td>
<td>0.16 (0.02)</td>
<td>0.04 (0.55)</td>
</tr>
<tr>
<td>years in current practice</td>
<td>-0.05 (0.51)</td>
<td>-0.01 (0.17)</td>
<td>0.02 (0.71)</td>
<td>-0.05 (0.40)</td>
</tr>
<tr>
<td>previous positions</td>
<td>0.03 (0.65)</td>
<td>0.03 (0.73)</td>
<td>0.07 (0.25)</td>
<td>-0.04 (0.54)</td>
</tr>
<tr>
<td>career interruptions</td>
<td>0.02 (0.80)</td>
<td>-0.02 (0.76)</td>
<td>0.10 (0.12)</td>
<td>0.02 (0.69)</td>
</tr>
</tbody>
</table>

* p-values appear in parentheses

Student's t-test used to examine dichotomous demographic variables' impact on family factors resulted in differences in mean family support scores for those having membership in NARD (mean=39.5 ± 4.7) and those who did not belong (mean=35.9
and differences in mean housekeeping scores for those involved in a local association (mean = 32.8 ± 6.8) and those not participating in a local pharmacy group (mean = 30.8 ± 6.5) \([t_{\text{calc}} = -2.33; \ (d.f. = 235; \ p = 0.02)\)]. While these results were statistically significant, only 15 participants were members of NARD which makes drawing a conclusion from this test difficult. Also, a two point difference in mean score on the satisfaction with housekeeping services scale in terms of membership in a local professional group may be statistically significant, but has little meaning.

Analysis of variance established differences in mean scores of satisfaction/availability of sick child care between practice sites \([F_{\text{calc}} = 2.12; \ (d.f. = 10,171; \ p = 0.03)\]), mean scores of satisfaction/availability of housekeeping services between practice sites \([F_{\text{calc}} = 1.97; \ (d.f. = 10,226; \ p = 0.04)\]), and the differences in mean scores of family support between level of marital status \([F_{\text{calc}} = 3.36; \ (d.f. = 4,273; \ p = 0.01)\]). The Scheffe's post hoc analysis failed to identify which levels of practice site differed in terms of sick child care and housekeeping. However, the Scheffe's post hoc analysis did show that those who were married and those who were single with no partner differed in terms of family support. Those who were married had a mean score 36.4 ± 6.7 while the single women had a mean score of 32 ± 7.8. This indicated that married women felt more support for their employment than did single women.
RESEARCH QUESTION 6: ARE FAMILY FACTORS RELATED TO ROLE CONFLICT OF WOMEN PHARMACISTS?

Descriptive Statistics and Correlational Analysis

Responses to the family factors section of the questionnaire along with responses to Kopelman, Greenhaus, and Connolly's (1983) family and interrole conflict scales were used to provide descriptive statistics and Pearson product-moment correlation coefficients for the eight hypotheses associated with family factors and family and interrole conflict. Descriptive statistics for family factors were provided in Table 17 while such data for interrole conflict was included in Table 14. Also, Pearson product-moment correlation coefficients, student's t-tests, and analysis of variance were used to test the possible impact of selected demographic variables upon family factors, family conflict, and interrole conflict. The influence of demographic variables on family factors was discussed in conjunction with Research Question 5. A similar description of demographic variables' impact on interrole conflict was provided in conjunction with Research Question 3.

Responses to Family Conflict

Of 291 participants, 263 (90%) answered all eight items in the family conflict scale which ranges from eight to 40. These responses produced a mean score of 18.8 ± 5.9 with a range of 8-35. A high score of 40 would indicate a great deal of family
conflict while a score of eight represents disagreement with the scale and indicates no experience of family conflict. Thus, the women in this study indicated that they experienced a low to moderate amount of family conflict. Similarly, the college students in Kopelman, Greenhaus, and Connolly's (1983) study had a mean score of 2.45 per item to provide an overall family conflict score of 19.6. These students indicated a low to moderate level of family conflict.

**Correlational Coefficients Regarding Family Factors and Role Conflict**

Table 20 provides Pearson product-moment correlation coefficients to evaluate the relationships proposed in hypotheses 6.1 through 6.8 concerning family factors and role conflict. The correlations between satisfaction/availability of child care and family conflict, satisfaction/availability of housekeeping services and family conflict, satisfaction/availability of child care and interrole conflict, and satisfaction/availability of housekeeping services with interrole conflict all fell into the negligible association range. The coefficients between availability/satisfaction with sick child care and family conflict and availability/satisfaction with sick child care and interrole conflict fell into the low association range. However, the coefficients between family support and family conflict and family support and interrole conflict fell into the moderate association range.
TABLE 20
CORRELATION COEFFICIENTS* FOR FAMILY AND INTERROLE CONFLICT
WITH FAMILY FACTORS

<table>
<thead>
<tr>
<th>FAMILY FACTOR</th>
<th>family conflict</th>
<th>interrole conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>satisfaction/availability of child care</td>
<td>-0.07 (0.32)</td>
<td>-0.07 (0.31)</td>
</tr>
<tr>
<td>satisfaction/availability of sick child care</td>
<td>-0.17 (0.02)</td>
<td>-0.19 (0.01)</td>
</tr>
<tr>
<td>satisfaction/availability of housekeeping services</td>
<td>-0.03 (0.69)</td>
<td>-0.09 (0.18)</td>
</tr>
<tr>
<td>family support</td>
<td>-0.35 (0.0001)</td>
<td>-0.31 (0.0001)</td>
</tr>
</tbody>
</table>

* p-values appear in parentheses

Hypothesis 6.1

There is a negative relationship between satisfaction with child care and family conflict.

A -0.07 correlation coefficient indicated negligible association between satisfaction/availability with child care and family conflict. The \( r_{\text{calc}} \) value of -0.07 (\( n = 201, p > 0.05 \)) was compared to the \( r_{\text{crit}} \) value of 0.117 (\( n = 200 \)). Based on this statistical test, the null hypothesis was not rejected, indicating the correlation coefficient was not significantly different that zero.
Hypothesis 6.2

There is a negative relationship between satisfaction with sick child care and family conflict.

The low correlation coefficient of $-0.17$ ($n = 172$, $0.01 < p < 0.025$) between satisfaction/availability of sick child care and family conflict compared to a critical $r$ of 0.135 ($n = 150$) indicated that the calculated value was significantly different from zero. Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different than zero.

Hypothesis 6.3

There is a negative relationship between satisfaction with housekeeping and family conflict.

A correlation coefficient of $-0.03$ showed negligible association between the two variables. The $r_{calc}$ value of $-0.03$ ($n = 222$, $p > 0.05$) was compared to the critical $r$ value of 0.117 ($n = 200$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
Hypothesis 6.4

There is a negative relationship between satisfaction with family support and family conflict.

A -0.35 correlation coefficient indicated a moderate relationship between family support and family conflict. The $r_{\text{calc}}$ value of -0.35 ($n=258$, $p < 0.0005$) was compared to the $r_{\text{crit}}$ value of 0.104. Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

Hypothesis 6.5

There is a negative relationship between satisfaction with child care and interrole conflict.

A -0.07 correlation coefficients between satisfaction/availability with child care and interrole conflict indicated a negligible association. The calculated $r$ value of -0.07 ($n=209$, $p > 0.05$) was compared to the critical $r$ value of 0.117 ($n=200$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
Hypothesis 6.6

There is a negative relationship between satisfaction with sick child care and interrole conflict.

A -0.19 correlation coefficient indicated a low association between satisfaction/availability of sick child care and interrole conflict. The $r_{\text{calc}}$ value of -0.19 ($n=178$, $p=0.01$) was compared to the critical $r$ value of 0.135 ($n=150$). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

Hypothesis 6.7

There is a negative relationship between satisfaction with housekeeping services and interrole conflict.

A -0.09 correlation coefficient indicated a negligible association between satisfaction with housekeeping services and interrole conflict. A critical $r$ value of 0.117 ($n=200$) was compared to the $r_{\text{calc}}$ value of -0.09 ($n=229$, $p > 0.05$). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
Hypothesis 6.8

There is a negative relationship between family support and interrole conflict.

A -0.31 correlation coefficient indicated a moderate association between family support and interrole conflict. The critical r value of 0.104 (n=250) was compared to the calculated r value of -0.31 (n=265, p < 0.0005). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly different from zero.

The Influence of Demographic Variables on Family Conflict

Table 21 provides correlation coefficients for demographic variables that could impact family conflict. The correlation coefficient between income and family conflict was 0.14 [n=261; 0.025 < p < 0.05; r_{crit} = 0.104 (n=250)] and the coefficient between the number of children living in the household and family conflict was 0.17 [n=263; 0.0005 < p < 0.005; r_{crit} = 0.104 (n=250)]. These were the only correlations that were significantly different from zero. However, they indicate low association.
TABLE 21
CORRELATION COEFFICIENTS FOR DEMOGRAPHIC VARIABLES WITH FAMILY CONFLICT

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>family conflict</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>0.14</td>
<td>0.02</td>
</tr>
<tr>
<td>number of children</td>
<td>0.17</td>
<td>0.006</td>
</tr>
<tr>
<td>age of respondent</td>
<td>-0.05</td>
<td>0.41</td>
</tr>
<tr>
<td>years in practice</td>
<td>-0.07</td>
<td>0.30</td>
</tr>
<tr>
<td>years in current position</td>
<td>-0.07</td>
<td>0.28</td>
</tr>
<tr>
<td>previous positions</td>
<td>0.11</td>
<td>0.07</td>
</tr>
<tr>
<td>career interruptions</td>
<td>0.07</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Student's t-tests were conducted to examine dichotomous demographic variables' influence on family conflict. Only one of these variables, the number of adults living in the household, had a significant impact on family conflict. Those women pharmacists living in one adult households had a mean score of 21.0 ± 5.9 while women pharmacists in a two adult household had a mean score of 18.3 ± 5.8 on the family conflict scale. The $t_{calc}$ of 2.60 (d.f. = 254; p=0.01) was compared to the $t_{crit}$ of 1.97 (d.f. = 200). Thus, women living in one adult households experienced more family conflict than those women living in two adult households. This differs from the expected results that women living in two adult households would experience more family conflict simply because there was another adult present who might have conflicting ideas. It is possible
that women living in households with two adults did not want to express negative feelings about their family life or that they answered the items in the most socially desirable way. Another possibility is that women living in one adult households really do experience more family conflict through children, parents, or significant others.

Analysis of variance indicated differences between groups in terms of marital status and family conflict \([F_{\text{calc}} = 5.72; (\text{d.f.} = 4,258; p=0.0002)]\). A Scheffe’s post hoc analysis showed that differences in mean score of the family conflict scale occurred between married women pharmacists (mean = 18.3 ± 5.9) and single (no partner) women pharmacists (mean = 22.3 ± 3.5) and between those married and those who were divorced (mean = 23.2 ± 5.8). Thus, single and divorced women experienced more family conflict than married women. Again, this differs from the expected results that married women would experience more family conflict simply because the husband might have conflicting ideas. Perhaps these married women did not want to express negative feelings concerning their family lives or they responded in socially desirable ways. Another possibility is that single and divorced women really do experience more family conflict through children, parents, and significant others.
RESEARCH QUESTION 7: ARE WORK CONFLICT, FAMILY CONFLICT, OR INTERROLE CONFLICT RELATED TO EMPLOYMENT STATUS?

Descriptive and Correlational Analysis

Responses to the work conflict, family conflict, and interrole conflict scales as well as the average number of hours worked per week were used to provide descriptive statistics and Pearson product-moment correlation coefficients for the relationships proposed in the three hypotheses associated with conflict and employment status. Discussion of demographic variables' influence on work conflict and interrole conflict was provided in conjunction with Research Question 3. A description involving family conflict and demographic variables was provided with Research Question 6. A discussion concerning demographic variables and employment status was completed with Research Question 2.

Correlational Coefficients Regarding Conflict and Employment Status

Table 22 provides Pearson product-moment correlation coefficients to evaluate the proposed relationships described in hypotheses 7.1 through 7.3 regarding conflict and employment status. The correlation between work conflict and employment status as well as the correlation between family conflict and employment fell into the negligible association range. However, the correlation between interrole conflict and employment status indicated a moderate association between the two variables.
TABLE 22
CORRELATION COEFFICIENTS FOR WORK, FAMILY, AND INTERROLE CONFLICT WITH EMPLOYMENT STATUS

<table>
<thead>
<tr>
<th>Employment status/p-values</th>
<th>work conflict</th>
<th>family conflict</th>
<th>interrole conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>average hours per week</td>
<td>0.02</td>
<td>0.06</td>
<td>0.36</td>
</tr>
<tr>
<td>p-value</td>
<td>0.70</td>
<td>0.31</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Hypothesis 7.1

As work conflict increases, the employment status of women pharmacists decreases.

A 0.02 correlation coefficient indicated a negligible relationship between work conflict and employment status. The \( r_{calc} \) value of 0.02 (\( n=283; p > 0.05 \)) was compared to the \( r_{crit} \) value of 0.104 (\( n=250 \)). Based on this result, the null hypothesis was not rejected, indicating that the correlation coefficient was not significantly different from zero.
Hypothesis 7.2

As family conflict increases, the employment status of women pharmacists decreases.

A 0.06 correlation coefficient indicated negligible association between the two variables. The critical r value of 0.104 (n=250) was compared to the calculated r value of 0.06 (n=262; p > 0.05). Based on this result, the null hypothesis was not rejected, indicating that the correlation was not significantly different from zero.

Hypothesis 7.3

As interrole conflict increases, the employment status of women pharmacists decreases.

A correlation coefficient of 0.36 indicated a moderate association between interrole conflict and employment status. A critical r value of 0.104 (n=250) was compared to the calculated r value of 0.36 (n=271; p < 0.0005). Based on this result, the null hypothesis was rejected, indicating that the correlation coefficient was significantly differently from zero.
REGRESSION ANALYSIS OF DEMOGRAPHIC VARIABLES' IMPACT ON EMPLOYMENT STATUS

The stepwise regression analysis resulted in four demographic variables explaining 59.6% of the variance of employment status at a significance level of 0.15. The percent of family income contributed by the woman pharmacist explained 50.0% of the variance, title explained another 5.1%, career interruptions explained another 2.9%, and the number of adults living in the household accounted for another 2.0% of the variance. The resultant regression equation was as follows:

\[ ES = 7.46 + 0.29 (I) + 6.03 (A) - 1.77 (CI) + 6.00 (T) \]  \hspace{1cm} (7)

where:

- ES = employment status measured in average hours worked per week
- I = percent of family income contributed by the woman
- A = number of adults living in the household
- T = title (0 = staff and 1 = management)

ANALYSIS OF THE STUDY MODEL

The EQS software package was used as described in Chapter 3 to test the fit of the investigation's data to the study model (see Figure #9). After 22 iterations, the EQS
system identified the covariance matrix (see Table #23), the correlation matrix (see Table #24), and the following structural equation for the dependent variable hours:

\[
\text{Hours} = 0.100 \times \text{OC} + 0.638 \times \text{CON} + 0.500 \times \text{WF} - 0.112 \times \text{FF} + 0.958 \times \text{E}_i
\]  

where:

- Hours = employment status measured as average number of hours worked per week
- OC = organizational commitment
- CON = conflict
- WF = work factors
- FF = family factors
- E_i = residual associated with hours

Also, Figure #10 depicts the calculated path coefficients for the entire study model.

EQS was also used to calculate the direct and indirect effects of variables upon each other within the study model. For example, the latent variable, work factors, has a direct effect on hours because there is an arrow drawn directly from work factors to hours. However, work factors also has indirect effects on hours through organizational commitment and conflict. In other words, by influencing organizational
### TABLE 23
MODEL COVARIANCE MATRIX

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>hours</th>
<th>IJS(^a)</th>
<th>EJS(^b)</th>
<th>OC(^c)</th>
<th>schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours</td>
<td>175.833</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IJS(^a)</td>
<td>0.474</td>
<td>43.569</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EJS(^b)</td>
<td>0.386</td>
<td>18.288</td>
<td>22.309</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC(^c)</td>
<td>9.511</td>
<td>63.834</td>
<td>51.985</td>
<td>285.208</td>
<td></td>
</tr>
<tr>
<td>schedule</td>
<td>0.419</td>
<td>19.850</td>
<td>16.165</td>
<td>56.426</td>
<td>45.502</td>
</tr>
<tr>
<td>daycare</td>
<td>2.184</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>sick child care</td>
<td>1.188</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>housekeeping</td>
<td>2.619</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>family support</td>
<td>1.513</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>family conflict</td>
<td>2.395</td>
<td>-7.088</td>
<td>-5.772</td>
<td>-20.149</td>
<td>-6.265</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>5.331</td>
<td>-15.776</td>
<td>-12.847</td>
<td>-44.844</td>
<td>-13.945</td>
</tr>
<tr>
<td>work factors</td>
<td>0.406</td>
<td>19.214</td>
<td>15.647</td>
<td>54.618</td>
<td>16.984</td>
</tr>
<tr>
<td>conflict</td>
<td>1.991</td>
<td>-5.566</td>
<td>-4.533</td>
<td>-15.822</td>
<td>-4.920</td>
</tr>
<tr>
<td>family factors</td>
<td>-0.317</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

\(^a\) = intrinsic job satisfaction  
\(^b\) = extrinsic job satisfaction  
\(^c\) = organizational commitment
TABLE 23 (continued)

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>daycare</th>
<th>sick child care</th>
<th>housekeeping</th>
<th>family support</th>
<th>work conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>daycare</td>
<td>37.940</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sick child care</td>
<td>6.081</td>
<td>30.485</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>housekeeping</td>
<td>13.406</td>
<td>7.293</td>
<td>37.601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>family support</td>
<td>7.747</td>
<td>4.214</td>
<td>9.291</td>
<td>45.665</td>
<td></td>
</tr>
<tr>
<td>work conflict</td>
<td>-1.673</td>
<td>-0.910</td>
<td>-2.007</td>
<td>-1.160</td>
<td>34.254</td>
</tr>
<tr>
<td>family conflict</td>
<td>-0.546</td>
<td>-0.297</td>
<td>-0.654</td>
<td>-0.378</td>
<td>8.547</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>-1.214</td>
<td>-0.661</td>
<td>-1.456</td>
<td>-0.842</td>
<td>19.022</td>
</tr>
<tr>
<td>work factors</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>-18.599</td>
</tr>
<tr>
<td>conflict</td>
<td>-0.428</td>
<td>-0.233</td>
<td>-0.514</td>
<td>-0.297</td>
<td>6.711</td>
</tr>
<tr>
<td>family factors</td>
<td>-1.620</td>
<td>-0.882</td>
<td>-1.943</td>
<td>-1.123</td>
<td>0.243</td>
</tr>
</tbody>
</table>
TABLE 23 (continued)

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>family conflict</th>
<th>interrole conflict</th>
<th>work factors</th>
<th>conflict</th>
<th>family factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>family conflict</td>
<td>32.486</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interrole conflict</td>
<td>6.202</td>
<td>51.559</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>work factors</td>
<td>-6.065</td>
<td>-13.498</td>
<td>16.440</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conflict</td>
<td>2.188</td>
<td>4.871</td>
<td>-4.762</td>
<td>1.718</td>
<td></td>
</tr>
<tr>
<td>family factors</td>
<td>0.079</td>
<td>0.176</td>
<td>0.000</td>
<td>0.062</td>
<td>0.235</td>
</tr>
</tbody>
</table>
TABLE 24
MODEL CORRELATION MATRIX

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>hours</th>
<th>IJS&lt;sup&gt;a&lt;/sup&gt;</th>
<th>EJS&lt;sup&gt;b&lt;/sup&gt;</th>
<th>OC&lt;sup&gt;c&lt;/sup&gt;</th>
<th>schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IJS&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.005</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EJS&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.006</td>
<td>0.587</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.042</td>
<td>0.573</td>
<td>0.652</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>schedule</td>
<td>0.005</td>
<td>0.446</td>
<td>0.507</td>
<td>0.495</td>
<td>1.000</td>
</tr>
<tr>
<td>daycare</td>
<td>0.027</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>sick child care</td>
<td>0.016</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>housekeeping</td>
<td>0.032</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>family support</td>
<td>0.017</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>work conflict</td>
<td>0.095</td>
<td>-0.563</td>
<td>-0.640</td>
<td>-0.625</td>
<td>-0.487</td>
</tr>
<tr>
<td>family conflict</td>
<td>0.032</td>
<td>-0.188</td>
<td>-0.214</td>
<td>-0.209</td>
<td>-0.163</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>0.056</td>
<td>-0.333</td>
<td>-0.379</td>
<td>-0.370</td>
<td>-0.288</td>
</tr>
<tr>
<td>work factors</td>
<td>0.008</td>
<td>0.718</td>
<td>0.817</td>
<td>0.798</td>
<td>0.621</td>
</tr>
<tr>
<td>conflict</td>
<td>0.108</td>
<td>-0.643</td>
<td>-0.732</td>
<td>-0.715</td>
<td>-0.556</td>
</tr>
<tr>
<td>family factors</td>
<td>-0.049</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<sup>a</sup> = intrinsic job satisfaction  
<sup>b</sup> = extrinsic job satisfaction  
<sup>c</sup> = organizational commitment
TABLE 24 (continued)

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>daycare</th>
<th>sick child care</th>
<th>housekeeping</th>
<th>family support</th>
<th>work conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>daycare</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sick child care</td>
<td>0.179</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>housekeeping</td>
<td>0.335</td>
<td>0.215</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>family support</td>
<td>0.186</td>
<td>0.113</td>
<td>0.224</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>work conflict</td>
<td>-0.046</td>
<td>-0.028</td>
<td>-0.056</td>
<td>-0.029</td>
<td>1.000</td>
</tr>
<tr>
<td>family conflict</td>
<td>-0.016</td>
<td>-0.009</td>
<td>-0.019</td>
<td>-0.010</td>
<td>0.256</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>-0.027</td>
<td>-0.017</td>
<td>-0.033</td>
<td>-0.017</td>
<td>0.453</td>
</tr>
<tr>
<td>work factors</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.784</td>
</tr>
<tr>
<td>conflict</td>
<td>-0.053</td>
<td>-0.032</td>
<td>-0.064</td>
<td>-0.034</td>
<td>0.875</td>
</tr>
<tr>
<td>family factors</td>
<td>-0.543</td>
<td>-0.329</td>
<td>-0.654</td>
<td>-0.343</td>
<td>0.086</td>
</tr>
</tbody>
</table>
### TABLE 24 (continued)

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>family conflict</th>
<th>interrole conflict</th>
<th>work factors</th>
<th>conflict</th>
<th>family factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>family conflict</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interrole conflict</td>
<td>0.152</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>work factors</td>
<td>-0.262</td>
<td>-0.464</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conflict</td>
<td>0.293</td>
<td>0.517</td>
<td>-0.896</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>family factors</td>
<td>0.029</td>
<td>0.051</td>
<td>0.000</td>
<td>0.098</td>
<td>1.000</td>
</tr>
</tbody>
</table>
FIGURE #10

STANDARDIZED SOLUTION STUDY MODEL

Legend:

EJS = extrinsic job satisfaction
IJS = intrinsic job satisfaction
SS = satisfaction with scheduling
DC = daycare
SIC = sick child care
HK = housekeeping
FS = family support
WC = work conflict
FC = family conflict
IC = interrole conflict
e = error term
D = disturbance term
commitment and conflict, work factors indirectly influenced hours. Tables 25 and 26 provide EQS calculated values for both direct and indirect effects.
## TABLE 25
DIRECT EFFECTS OF VARIABLES ON EACH OTHER

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>work factors</th>
<th>conflict</th>
<th>family factors</th>
<th>OC&lt;sup&gt;a&lt;/sup&gt;</th>
<th>error</th>
<th>disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours</td>
<td>0.008</td>
<td>0.638</td>
<td>-0.049</td>
<td>0.100</td>
<td>0.958(E&lt;sub&gt;1&lt;/sub&gt;) 0.060(E&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>0.277</td>
</tr>
<tr>
<td>IJS&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.718</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.696(Ê&lt;sub&gt;2&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>EJS&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.817</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.577(E&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>OC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.798</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.603(E&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>SS&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.621</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.784(E&lt;sub&gt;6&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>DC&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-0.543</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.840(E&lt;sub&gt;7&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>SCC&lt;sup&gt;f&lt;/sup&gt;</td>
<td>-0.329</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.944(E&lt;sub&gt;8&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>HOU&lt;sup&gt;g&lt;/sup&gt;</td>
<td>-0.654</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.757(E&lt;sub&gt;9&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>family support</td>
<td>-0.343</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.939(E&lt;sub&gt;10&lt;/sub&gt;)</td>
<td>-</td>
</tr>
<tr>
<td>work conflict</td>
<td>-0.784</td>
<td>0.875</td>
<td>0.086</td>
<td>-</td>
<td>0.485(E&lt;sub&gt;11&lt;/sub&gt;) 0.379</td>
<td></td>
</tr>
<tr>
<td>family conflict</td>
<td>-0.262</td>
<td>0.293</td>
<td>0.029</td>
<td>-</td>
<td>0.956(E&lt;sub&gt;12&lt;/sub&gt;) 0.127</td>
<td></td>
</tr>
<tr>
<td>interrole conflict</td>
<td>-0.464</td>
<td>0.517</td>
<td>0.051</td>
<td>-</td>
<td>0.856(E&lt;sub&gt;13&lt;/sub&gt;) 0.224</td>
<td></td>
</tr>
<tr>
<td>conflict</td>
<td>-0.896</td>
<td>-</td>
<td>0.098</td>
<td>-</td>
<td>-</td>
<td>0.433</td>
</tr>
</tbody>
</table>

<sup>a</sup> = organizational commitment  
<sup>b</sup> = intrinsic job satisfaction  
<sup>c</sup> = extrinsic job satisfaction  
<sup>d</sup> = satisfaction with scheduling  
<sup>e</sup> = daycare  
<sup>f</sup> = sick child care  
<sup>g</sup> = housekeeping services
TABLE 26
INDIRECT EFFECTS OF VARIABLES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>work factors</th>
<th>family factors</th>
<th>error</th>
<th>disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>hours</td>
<td>-0.492</td>
<td>0.062</td>
<td>0.060(E5)</td>
<td>0.277</td>
</tr>
<tr>
<td>work conflict</td>
<td>-0.784</td>
<td>0.086</td>
<td>-</td>
<td>0.379</td>
</tr>
<tr>
<td>family conflict</td>
<td>-0.262</td>
<td>0.029</td>
<td>-</td>
<td>0.127</td>
</tr>
<tr>
<td>interrole conflict</td>
<td>-0.464</td>
<td>0.051</td>
<td>-</td>
<td>0.224</td>
</tr>
</tbody>
</table>

Study Model Hypothesis:

The sample covariance matrix exactly fits the model.

The $\chi^2$ goodness of fit test resulted in a calculated $\chi^2$ value of 210.89 (46 degrees of freedom; $p=0.001$) which was compared to a critical $\chi^2$ value of 55.8 (40 degrees of freedom). Therefore, the null hypothesis was rejected indicating that the data did not fit the model. Also, the Bentler-Bonett normed fit index of 0.798 did not indicate good fit of the data to the study model. Values above 0.9 represent good fit.

Structural equation modeling also provides the researcher with alternatives in the event that the data did not fit the model. Generally, pathways are identified that could be dropped from or added to the model to allow better fit.
For this investigation, the Wald test identified five parameters that could be dropped from the model and generate a better fit. However, four of the five pathways involved employment status, the dependent study variable. In other words, if every parameter involving hours were dropped from the model, the data would fit the model better. Essentially, this action would delete employment status from the study model. Thus, no parameters were deleted and the structure equation modeling was not done again as it would not accomplish the purpose of the study.

In addition to deleting parameters, the Lagrange multiplier test identified three parameters that could be added to the model in order to improve the fit. These involved work conflict to work factors, family support to conflict, and work factors to family factors. While results of these additions to the model might be interesting, there was no reason to run the EQS program again due to the deletions suggested by the Wald test.

In short, the data did not fit the study model exactly. Additionally, deletions generated by the Wald test indicated that employment status did not belong in the study model as the dependent variable. Therefore, work factors, family factors, conflict, and organizational commitment did not indicate the number of hours worked per week. However, Pearson product-moment correlation coefficients as well as pathway coefficients within the model suggest that there were relationships between work factors, family factors, conflict, and organizational commitment that could generate a working model provided that employment status was not the dependent variable.
CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

This chapter discusses the conclusions of each research question as well as the study model. Recommendations for future investigations are also included.

RESEARCH QUESTION 1

Results showed that the women respondents in this study indicated a moderate level of overall and extrinsic job satisfaction. Their results on the intrinsic job satisfaction portion of the Minnesota Satisfaction Questionnaire-Short Form indicated a high level of intrinsic job satisfaction. Also, results of the satisfaction with scheduling showed that the respondents were fairly satisfied with their work schedule. Furthermore, the results showed that these women had a moderate level of organizational commitment. Together, these results showed that the women pharmacists in this study were fairly satisfied with their places of employment. However, employers could look for ways to improve overall and extrinsic job satisfaction as well as organizational commitment. Organizational commitment could be a vital part of recruitment and retention as those committed to the organization speak well about their employer to others and will be less likely to seek another position elsewhere.
As expected, work factors and organizational commitment were positively correlated. Elements of job satisfaction positively influenced organizational commitment. Therefore, if employers can increase the level of job satisfaction, they may be able to increase the level of organizational commitment, and perhaps recruit and retain more employees.

RESEARCH QUESTION 2

Study of Hypotheses 2.1 through 2.4 indicated that work factors did not positively correlate with employment status. Higher levels of job satisfaction did not lead to more hours worked per week possibly because the respondents worked an average of 37.1 ± 13.1 hours weekly. If 40 hours per week is considered one full-time equivalent, many of the respondents are very close to being full-time workers. Even if employers could improve levels of job satisfaction, the hours women worked per week would probably not increase unless overtime were offered.

However, demographic variables did have an impact on employment status as described in Chapter 4. This study was designed to identify factors that could assist employers in the recruitment and retention of women pharmacists by studying factors that positively correlated with the average number of hours worked per week. Employers do not have any control over most of these demographic variables (number of children, age, years in practice, career interruptions, and number of adults living in the household) that share a negative relationship with employment status. Moreover, employers do not
control practice site or marital status. However, employers might have some influence regarding income, professional memberships (if provided as a company benefit), and title. Higher salaries, company provided membership in professional organizations, and titles other than "staff pharmacist" might increase employment status if employers were willing to offer them. On the other hand, hiring women who do not have any demographic attributes that are negatively correlated with employment status cannot be encouraged. Avoiding the employment of women who are married, have children, or are older is discriminatory.

**RESEARCH QUESTION 3**

Study of Hypotheses 3.1 through 3.4 indicated that work factors and work conflict were negatively related as expected. As job satisfaction and scheduling satisfaction decreased, work conflict increased. However, the women pharmacists in this study had a mean score of $19.5 \pm 5.9$ on the work conflict scale. A score of 24 represents a neutral score, thus scores above 24 indicate a higher level of work conflict and scores below 24 reflect a lower level of work conflict. Thus, the participants of this study did not experience a high level of work conflict.

Likewise, work factors were negatively associated with interrole conflict as anticipated in Hypotheses 3.5 through 3.8. As job satisfaction and scheduling satisfaction decreased, interrole conflict increased. Study participants had a mean score of $24.5 \pm 7.3$ on the interrole conflict scale which approximated a neutral result. Therefore, the
women pharmacists in this study did not experience a high level of interrole conflict.

However, the strength of the associations between work factors and work conflict were greater than those between work factors and interrole conflict. Perhaps women answering the interrole conflict scale did not want to provide socially undesirable answers to items that involved negative statements concerning one's family life. For example, women might not want to agree with the statement from the interrole conflict scale, "My job makes it difficult to be the kind of spouse or parent I'd like to be." Even if this statement were true, it might be socially desirable to deny it. Moreover, women pharmacists who did not have families should have responded with the neutral answer, neither agree nor disagree. These socially desirable and neutral answers could have an weakening influence on the correlation coefficient between work factors and interrole conflict.

RESEARCH QUESTION 4

It was anticipated that there would be a positive relationship between organizational commitment and employment status. However, study of Hypothesis 4 indicated that the two variables are not associated. An increase in organizational commitment did not result in an increase in employment status.

It is possible that employment status should not have been the dependent variable in this study. Perhaps it is really a work factor that is more under the control of the employer instead of the employee. If this is the case, the number of hours worked per
week would not be correlated with organizational commitment as employment status would not be free to change with any increase in level of commitment. In other words, the employee has control over her level of commitment, but the employer has control over the number of hours worked per week. Therefore, perhaps organizational commitment would have been a better choice for the dependent variable in this study as indicated by the positive relationships with work factors. With this in mind, employers who could positively impact organizational commitment might be more capable of recruiting and retaining employees.

RESEARCH QUESTION 5

It was expected that family factors would have a negative relationship with employment status. However, study of Hypotheses 5.1 through 5.4 indicated that satisfaction with family factors did not influence employment status. As satisfaction with family factors increased, employment status did not increase accordingly.

Results showed that the women pharmacists were somewhat satisfied with daycare and only slightly satisfied with sick child care services within their communities. Caution should be used when considering these results as only 73% of the respondents answered the daycare portion of the questionnaire while only 63% provided answers to the sick child care section. The women in this study were slightly to moderately satisfied with available housekeeping services. Plus, the respondents reported that they were quite satisfied with the amount of family support they received. Results of the family support
section showed that the data was skewed to the left (-1.58). Caution should be used when evaluating the results of the family support scale because women pharmacists may have responded in a socially desirable manner. In other words, they did not want to state any negative feelings concerning their families. However, all the family factor scales were positive. There were no indications that the women pharmacists were unhappy with available domestic services or that families did not support the working woman pharmacist.

The possible relationships between family factors and organizational commitment were not assessed in this investigation. However, future investigations should include this pathway especially if organizational commitment replaces employment status as the dependent variable. It is possible that an employer who supports or provides assistance with domestic services positively influences organizational commitment. However, no empirical evidence appears in the pharmacy literature to support this proposed relationship.

**RESEARCH QUESTION 6**

Study of Hypotheses 6.1 and 6.3 indicated that there was no relationship between satisfaction/availability of child care and satisfaction/availability of housekeeping services and family conflict. However, study of Hypotheses 6.2 and 6.4 indicated that satisfaction/availability of sick child care and family support were negatively related to family conflict. As these two variables increased, family conflict decreased. Similarly,
study of Hypotheses 6.5 and 6.7 indicated no relationship between satisfaction/availability of child care with interrole conflict and satisfaction/availability of housekeeping with interrole conflict. However, study of Hypotheses 6.6 and 6.8 indicated an inverse relationship between satisfaction/availability of sick child care and family support with interrole conflict. As these two variables increased, interrole conflict decreased.

The results of the family factors section were positive. The women pharmacists in this study were not dissatisfied with available domestic services or family support. As discussed previously, social desirability could have influenced responses to both the family support and interrole conflict scales. Also, the women in the study indicated they did not experience family conflict. Again, this could be a social desirability problem. Women may not have wanted to state negative feelings about their families. If this is the case, the correlations between family and interrole conflict with family factors would be impacted. Inflated family factor values along with deflated conflict values would produce smaller Pearson product-moment correlation coefficients.

**RESEARCH QUESTION 7**

Study of Hypotheses 7.1 and 7.2 indicated that work and family conflict did not correlate with employment status. However, interrole conflict did correlate with employment status, but not as expected in Hypothesis 7.3. Interrole conflict and employment status had a positive relationship.
Again, the number of hours worked per week may be under the control of the employer and not the employee. Should this occur, an increase in the level of work or family conflict would not result in a decreased number of hours worked per week. The woman pharmacist would simply work the hours requested by her manager.

The positive relationship between interrole conflict and employment status could suggest that as the number of hours worked increases, hours available to the family decreases, and interrole conflict increases. If the employer controls the number of hours worked per week, the employee cannot control interrole conflict by working fewer hours.

THE STUDY MODEL

The data did not fit the study model and deletion of the parameters suggested by the Wald test would have deleted employment status from the model. This action would have contradicted the purpose of the investigation. This model was based on theories that did not hold true in this group of women pharmacists.

Therefore, perhaps the model should be changed. It is possible that the measured variables chosen in conjunction with the latent variables were inadequate. The results of the stepwise regression analysis indicated that income, the number of adults living in the household, and job title were the most important variables in predicting employment status. Likewise, results of the influences of demographic variables on employment status suggest that income, number of children living in the household, career interruptions, age, the number of years in practice, number of adults living in the
household, membership in professional organizations, practice site, marital status, and job title impact employment status. These variables need to be incorporated into the study model even though the employer has little control over most of the demographic variables. Structural equation modeling requires a minimum of two measured variables per latent construct, so the addition of more measured variables should improve the method of measurement for the latent constructs and also improve the fit of the data to the model.

**FUTURE INVESTIGATIONS**

The results showed that demographic variables impact employment status and should be included in any future investigation that attempts to predict the average number of hours worked per week. In terms of structural equation modeling, most demographic variables could be divided between work and family factors. For example, income, years in current position, practice site, and job title could be included as work factors. Similarly, the number of adults living in the household, the number of children living in the household, place of residence (rural or urban), age, and marital status could be included with family factors.

In terms of the study model, employment status should not stand alone. The average number of hours worked per week could be included as a work factor. Also, the positive correlation between employment status and interrole conflict could be interpreted that as the average number of hours worked per week increases,
responsibilities to the workplace increases, time for the family decreases, and interrole conflict increases. Thus, a two-way arrow between employment status and conflict would be in order. However, if employment status were included as a work factor, a two-way arrow would be required between conflict and work factors. The Lagrange multiplier test also suggested a pathway between work factors and family factors. Furthermore, organizational commitment could be the dependent variable of choice. (See Figure #11 for the suggested future study model). As organizational commitment increases, perhaps retention of women pharmacists increases and this could also attract others to a workplace where turnover is low. Therefore, knowledge of organizational commitment would be valuable to employers.

Lastly, research concerning the employment status of women pharmacists should continue as the number of women continues to grow within the profession. Furthermore, as our society continues to evolve, it is possible that as more women venture into the workplace, men will become more active within the household. If this occurs, the employment status of men will also require investigation in terms of work factors, family factors, and conflict between the two.
FIGURE #11
SUGGESTED FUTURE STUDY MODEL

Legend:

EJS = extrinsic job satisfaction
IJS = intrinsic job satisfaction
SS = satisfaction with scheduling
ES = employment status
I = income
YCP = years in current practice
PS = practice site
JT = job title
WC = work conflict
FC = family conflict
IC = interrole conflict
DC = daycare
SIC = sick child care
HK = housekeeping
FS = family support
A = number of adults living in the household
C = number of children living in the household
R = place of residence (rural or urban)
MS = marital status
Appendix A

PILOT TEST QUESTIONNAIRE
PLEASE NOTE

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Appendix B

FINAL QUESTIONNAIRE
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Appendix C

COVER LETTER FOR QUESTIONNAIRE
April 1, 1993

Paula Pharmacist
123 PRN Drive
Pills, Ohio 43210

Dear Ms. Pharmacist:

As a woman involved in the practice of pharmacy, this research may be of interest to you. This study, sponsored by the Ohio State University College of Pharmacy, will explore and describe relationships between job factors, family factors, and employment status. The researcher hopes to discover areas of job satisfaction or types of domestic services that female pharmacists desire in order to be employed.

Your response to the enclosed questionnaire is extremely important to this research. You have been randomly selected from a list of women pharmacists registered in Ohio and your opinion represents six other women pharmacists. Please take 15 to 20 minutes of your time, enjoy the tea enclosed, and complete the questionnaire. Your response is completely confidential. The researcher will use the code number on the questionnaire only to identify that yours has been returned. All coding will be seen only by the researcher and will be destroyed after the research is completed.

For your information, the research project is being done as partial fulfillment of requirements for the doctor of philosophy degree at OSU. If you should have any questions, please call me at 614-393-1437. I personally appreciate your help in completing the questionnaire! Please return it in the enclosed addressed, postage paid envelope by April 15, 1993.

If you would like to have the results of the study sent to you, please indicate by circling your code number on the back of the questionnaire. I will mail results to you in the late fall of 1993. Again, thanks for your time.

Sincerely,

Kimberly Broedel-Zaugg, RPh, MBA

Academic Advisor
Appendix D

POST CARD FOLLOW-UP
April 29, 1993

Dear Study Participant,

About four weeks ago, you should have received a questionnaire packet concerning women pharmacists, job factors, and family factors. Please take a few moments of your time to complete the questionnaire and drop it in the mail today. Your opinions are very important to this research. If you have already mailed your questionnaire, thanks!

Thank you.

Kimberly Broedel-Zaugg, RPh, MBA
Appendix E

COVER LETTER FOR SECOND MAILING
May 13, 1993

Paula Pharmacist
123 PRN Drive
Pills, Ohio  43210

Dear Ms. Pharmacist:

Recently you should have received a questionnaire concerning women pharmacists, job factors, family factors, and employment status. If you have already completed the questionnaire, thank you. If you have not received the questionnaire or have misplaced it, another one is enclosed.

Your response is extremely important to this research as you have been randomly selected from a list of women pharmacists registered in Ohio. Please take 15-20 minutes of your time, enjoy the tea enclosed, and complete the questionnaire. Your response is completely confidential. The researcher will use the code number only to identify that yours has been returned. All coding will be seen only by the researcher and will be destroyed after the research has been completed.

I personally appreciate your help in completing the questionnaire! Please return it in the enclosed addressed, postage paid envelope by May 20, 1993. If you should have any questions, please call me at 614-393-1437.

If you would like the results of the study sent to you, please indicate by circling your code number on the back of the questionnaire. I will mail results to you in the late fall of 1993. Again, thanks for your time.

Sincerely,

Kimberly Broedel-Zaugg, RPh, MBA
PhD candidate

Stephen Birdwell, RPh, PhD
Academic Advisor
LIST OF REFERENCES


