COPING STRATEGIES AND HEALTH STATUS OF MARRIED, EMPLOYED, PROFESSIONAL WOMEN WITH CHILDREN

Thesis for the Degree of M. S. MICHIGAN STATE UNIVERSITY SUSAN ELIZABETH WILSON-STERN 1996

# 1997

4

## LIBRARY Michigan State University

#### PLACE IN RETURN BOX to remove this checkout from your record. TO AVOID FINES return on or before date due. MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE

٠

6/01 c:/CIRC/DateDue.p65-p.15

#### COPING STRATEGIES AND HEALTH STATUS OF MARRIED, EMPLOYED, PROFESSIONAL WOMEN WITH CHILDREN

By

Susan Elizabeth Wilson-Stern

#### A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

College of Nursing

#### ABSTRACT

#### COPING STRATEGIES AND HEALTH STATUS OF MARRIED, EMPLOYED, PROFESSIONAL WOMEN WITH CHILDREN

By

#### Susan E. Wilson-Stern

In 1994 70% of married women with children under the age of 18 years were in the work force. Research indicates that while women are taking on larger working roles, they continue to take primary responsibility for childrearing and domestic work as well. The rapid change in women's roles over the past thirty years necessitates research which examines the effects of multiple role stress on women's health. This study examines coping strategies and health outcomes of women functioning in multiple roles. The use of cognitive coping strategies in the home and work domains was examined in relation to measures of psychological well-being and physical symptoms. Data were analyzed from Wave V (1993, N=165) of an ongoing longitudinal study begun in 1985 (N=200). Married women with children who were professionally employed as either college faculty or business managers responded to a mailed questionnaire. Findings suggest a positive correlation between psychological well-being and the use of cognitive coping strategies at home. No significant correlation between the frequency of stress related physical symptoms and use of cognitive coping is shown.

#### ACKNOWLEDGEMENTS

I would like to thank Dr. Manfred Stommel for his expertise, patience, and encouragement while acting as the chairman of my thesis committee. He gave generously of himself and his time. Thanks also to Dr. Linda Beth Tiedje for allowing me access to the data analyzed for this thesis. Dr. Tiedje also functioned as a role model and confidante. Brigid Warren who epitomizes the clinician helped with relating research to the clinical setting. A special thankyou to Dr. Eric Lang who gave freely of his time and resources during the early stages of my research.

Above all I would like to acknowledge the support of my family. Without their help and understanding, I could not have completed this project.

## **TABLE OF CONTENTS**

LIST OF TABLES	vi
LIST OF FIGURES	vii
INTRODUCTION	l
REVIEW OF LITERATURE	5
Conceptual Definitions	6
Stress	6
Strain	8
Health	9
Coping	11
Model Relationship of Variables	13
Applications	15
METHODS	16
Sample	16
Procedures	17
Operational Definitions and Instruments	17
Health	18
Coping	19
DATA ANALYSIS	21

Findings	21
DISCUSSION	26
Methodological Problems	26
Implications of Findings	27
Implications for existing literature	27
Implications for Advance Practice Nurses	29
Implications for further research	30
APPENDIX A UCRIHS Approval	31
APPENDIX B Health Questionnaire	32
APPENDIX C Coping at Work	33
APPENDIX D Coping at Home	34
APPENDIX E Positive Affect	35
LIST OF REFERENCES	36

## LIST OF TABLES

Table 1.	Descriptive Statistics on Scales	19
Table 2.	Background Characteristics of Sample Subjects	22
Table 3.	Correlations Among Coping and Health Measures	23
Table 4.	Multiple Regressions of Health Measures on Coping Measu	ıres
	and Selected Control Variables	25

## LIST OF FIGURES

Figure 1.	Stress Model	10
-----------	--------------	----

#### INTRODUCTION

Working women with children represent one of the fastest growing segments of modern society. In 1960, 19% of women in the United States with preschool aged children were employed. By 1986 that number had jumped to 54% (Bureau of Census, 1987). Two-thirds of babies born in the United States are born to women aged 25-44 years. The labor force participation rate for this age group increased to 75.5% in 1994 (Wall Street Journal, 1995). In 1994 almost 70% of married women with children under eighteen years old were in the work force (Rawlings & Saluter, 1994). With such rapid changes in women's roles, more information is needed about the effects of employment demands on working women and their families (Mortimer & London, 1984; Hoffman, 1989). While a growing body of literature exists on the health effects of employment on women, the results have been mixed and in some cases contradictory. Some researchers hypothesize a negative effect on the health of employed women (Haw, 1982; Sorensen et al., 1985; Schwartz, 1989), while others predict health benefits for employed women (Pugliesi, 1988; Adelmann, et al., 1990). However, the majority of recent literature suggests that the combination of multiple roles (wife, mother, employee) has both positive and negative effects with the net impact lying somewhere between benign and positive (Barnett & Baruch, 1985; Rosenfield, 1989; Walker & Best, 1991).

In order to understand these conflicting results, some investigators are focusing on mitigating variables involved in the health impact of multiple role

stress. Social support (House, 1981), positive and negative spill-over from one role to another (Barnett & Marshall, 1992), and coping strategies (Killien & Brown, 1987) are some of the variables being examined in the current literature. Current understanding of how each of these relates to the overall health status of employed women is murky at best.

Further research is needed to illuminate the relationships among multiple role occupation, stress, coping and the impact on women's health. The purpose of this study is to examine the relationship between personal coping strategies and the physical and psychological health status of married, employed, professional women with children.

A brief review of role theory literature describes the often unique coping challenges present in managing the multiple life roles that working mothers encounter. Several suggest that employed women with small children feel a great deal of pressure from multiple role stress (McLanahan & Adams, 1987; Owen & Cox, 1988: Wortman et. al., 1991). These women must cope with the strain resulting from: 1) conflicts among personal needs, family and career obligations (Grey, 1983; Walker & Best, 1991); 2) child rearing conflicts associated with maternal fatigue and guilt (Johnson & Johnson, 1977); 3) concerns about new role adaptations (Collins et. al., 1992); and 4) difficulties maintaining an adequate external support structure (House et al., 1988).

This is a particularly salient area of study because a) little is known about the mechanisms involved in the mitigation of multiple role stress in working mothers; b) women are the most frequent users of the healthcare system (Waldron, 1983; Verbrugge, 1985; Mechanic, 1976), even when gynecological visits are controlled for; c) women with children are seen in the primary care setting when they bring their children for care and when they seek care for themselves, offering multiple opportunities for health

maintenance intervention by health care providers; d) the most frequent complaints brought to primary health care providers by women are non-specific complaints which are often stress related (Mechanic, 1976; Verbrugge, 1985); e) the pressure of handling multiple roles is greatest, and the psychological benefits of employment appear to be the least, among married women with small children (McLanahan and Adams, 1987; Owen and Cox,1988; Wortman, et. al., 1991). Finding out more about this group of women and how effectively they cope with multiple role stress will guide primary care providers in providing better health maintenance care and intervention for stress management.

It is hoped that this study will contribute to the understanding of the possible effects of coping on health outcomes in women occupying multiple roles. Perhaps women who utilize coping techniques that involve either changing or limiting the problem directly or changing or limiting the internal significance of the problem in order to manage multiple role stress will have fewer physical and psychological symptoms of disease than women who utilize these coping strategies to a lesser degree. This investigator hopes to answer the following questions about professional women who work and have families: 1) Are feelings of psychological well-being affected by how frequently coping strategies are used at home or at work? 2) Are perceptions of overall health affected by the use of coping strategies? 3) Do women who use coping strategies more frequently, less likely to experience stress related physical symptoms than women who utilize these strategies less often? This study seeks to examine how the use of coping strategies in both employee and family domains may impact upon the physical and psychological health of working women with children. Much can be learned by examining the health status of women who have functioned in multiple roles over at least eight years, as these

women have. This information will add to the developing knowledge base on the health status of employed women with children.

#### **REVIEW OF LITERATURE**

Sorensen and Verbrugge (1987) have identified three predominant models of study found in the current literature on women, work, stress and health. The first model is the Job-Stress model in which a negative effect of multiple role occupation on health status is hypothesized. This model looks predominantly at specific types of stressors found in the employment arena, i.e., work overload, time deadlines, high level of responsibility and lack of control over personal schedules and job tasks. Multiple role occupation is referred to obliquely: "stress associated with dual responsibilities at home and job may compound women's potential health risks." p. 238. Personal coping is not examined directly. Researchers using this model expect that as women increase their exposure to the external stressors of the work place they will begin to exhibit more of the same negative health effects seen in their male counterparts, i.e., increased cardiovascular and peptic ulcer disease.

The second model identified by Sorensen and Verbrugge (1987) is the Health Benefits model in which positive health effects are expected from employment because women increase their social support resources, enhance self-esteem by doing socially valued work, and enjoy more financial independence. Some researchers have hypothesized that employment may even increase longevity in women (Palmore, 1969). A qualifier does exist in most of this research, however. It seems that job satisfaction plays a significant role in health outcomes. Specifically, job satisfaction was examined in relation to social support, self efficacy, reasons for working and happiness. Those who felt satisfied at work were found to have better health than their dissatisfied counterparts. (Verbrugge, 1982).

The third model is the Role Expansion model in which the type and number of roles a person occupies is examined (Sorensen & Verbrugge, 1987). The roles of interest are usually parent, employee and spouse. It is postulated that a number of buffering or intervening factors modify the ultimate impact on health that role strain or overload may produce. This model supports the idea that both positive and negative effects result from functioning in multiple roles but the net effect is positive or benign. This happens because multiple role involvement can expand resources, rewards, self-esteem and satisfaction. With this model, the focus is on role demands as opposed to specific stressors. The more hours and involvement required by each role the greater the chance for conflict. Inter-role conflict is often the form of stress examined, either directly or indirectly.

The present study uses the Role Expansion Model as a conceptual base. Since this model acknowledges the multidimensional nature of the effects of multiple role occupation on health, it allows for the exploration of many mitigating factors. In the present study, the focus is on personal coping style as a mitigating factor that can modify the health outcomes of women managing multiple roles.

### **Conceptual Definitions**

#### **Stress**

The assumption is made that combining motherhood, a marriage and a professional career simultaneously is stressful. But what, exactly, is stress; and how does it affect health? Stress is ill-defined in research literature. In early research, it is difficult to determine whether stress is an actual event (Thoits, 1981), a reaction to an event (Fairbank & Hough 1979), a pile up of events

(Langner & Michael, 1963), a generalized physiological response (Hans Selye, 1985) or a compilation of normative stressors (McCubben & Patterson, 1980). The ambiguity in defining stress has even led some researchers to question the usefulness of stress as a concept in research (Elliott & Eisdorfer 1982). The concept remains so broad that consensus on its meaning has yet to be reached. For the purposes of this study, stress will be viewed within the context of multiple role stress and subsequent role strain. Stress is conceptually defined as any stimuli affecting an individual which requires an adaptation in order to maintain a steady state.

Current research supports the concept that stress is multidimensional and not limited to isolated stressful events. Some researchers who originally viewed stress as event focused now realize how important chronic role stress can be. In his early work, Pearlin focused on single traumatic events, i.e., job loss, loss of a spouse, divorce, etc. (Pearlin & Johnson 1977; Pearlin, Lieberman, Menagham, & Mullan 1981). However, Pearlin soon concluded that it was difficult to isolate the event from the multiple life changes that accompanied the event or the person's chronic stress levels prior to the event This realization led to exploration of the convergence of life events and multiple role stress (strain) (Pearlin, 1989). The chronic normative stress of meeting multiple role demands on a daily basis continues to be an area of interest in stress research (Kandel, et. al., 1985; Wortman, et al, 1991).

In this study, it is assumed that simultaneously occupying three major life roles (wife, mother, professional) is stressful. Each of these is a high demand role and can be expected to conflict with one another at some point (Kandel et al., 1985). Role stress is affected by the number and intensity of demands found within each role. Since this study focuses on the role of coping in mitigating the effects of role stress on health outcomes, potential variations

in role stress are examined. The factors controlled for are: 1) age groups of dependent children, i.e., preschool, school-aged, and teenaged; 2) marital status, 3) number of hours worked. The number and intensity of the demands within these roles are variable. For example, the number and/or ages of the children at home might affect the parenting role. Young children need far more help with basic care needs than older children, and the more children there are, the greater the demands on the parent. Some research suggests that employed mothers of preschool aged children may experience more role conflict and fewer benefits from work than women with no children or older children (McLanahan & Adams, 1987; Owen & Cox, 1988).

In the employee role, the number of hours worked may be an indicator of role demand. Someone working sixty hours per week may have more demands on their time than someone working forty hours per week. When the demands of different roles collide, either because there are too many demands or because they must be met simultaneously, role conflict can result. Marital status is also considered because support exists for the theory that married people enjoy better health than their single counterparts, but the cause is unclear (Kessler & Essex, 1982). These findings could be related to increased social support, increased socio-economic status or a combination of factors. Strain

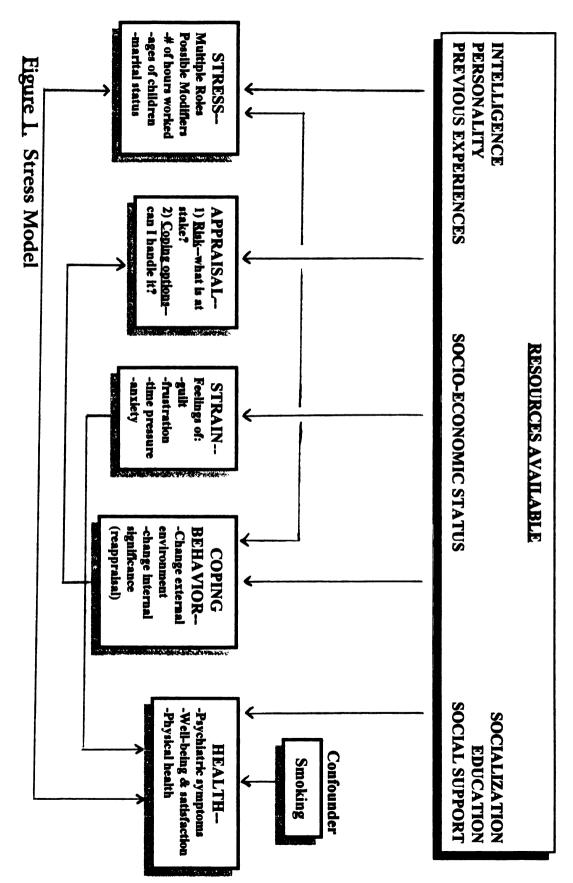
In Role Theory research, role stress is viewed as an antecedent to role strain. Role conflict, role accumulation, or role incompatibility are all part of role stress. Role *strain* is conceptually defined as a subjective feeling, i.e., frustration, insecurity, guilt, pressure or anxiety, resulting from role stress (Ward, 1986). The occupation of multiple roles relates to role stress; role strain relates to the subjective feelings of time pressure, guilt, anxiety, or

insecurity that may result from role stress. Multiple role stress and subsequent role strain is the type of stress addressed in this study.

#### Health

The mechanism through which stress affects health is complex. The generalized adaptation syndrome causes a number of physiological effects which can lead to physical symptoms and/or morbidity. In order for this response to occur the subject must perceive some sort of physical or mental stimulation (strain), which in turn stimulates the fight-or-flight response. When this stimulation is chronic or persistent, illness can be the result (Selye, 1956). Psychological distress and morbidity can be the result of chronic time pressures and feelings of frustration and inadequacy caused by inter-role conflict (Barnett & Marshall, 1992). However, it is clear that individuals experience stress within the context of available resources, i.e., previous experience, social support, personality, and prior socialization (see Figure 1). It appears that negative health effects from stress are experienced when demands exceed available resources (Lazarus & Folkman, 1984).

The outcome measures used in the current literature to capture the concept of health include life role satisfaction (Hall, 1972), symptoms of depression and anxiety (Pearlin & Schooler, 1978), and physical symptoms (Kahn, 1964). In this study, health status is described not only by the presence or absence of illness but by subjective feelings of well-being, as well. This view of health status follows a nursing model approach (Pender, 1987) but is also supported by personality research in psychology (Rodin & Salovey, 1989). For the purposes of this study good health is defined as subjective perceptions of psychological well-being as well as the absence of physical illness. Illness is represented by type and frequency of physical symptoms of disease and the perception of overall health.



10

 $\wedge$ 

I

Coping

Perhaps the conflicting results of role conflict research are due to variations in personal coping. It is possible that the effect of multiple role occupation may range from deleterious to positive depending on how the individual copes. In this thesis it is hypothesized that personal coping is the factor that mediates the impact of multiple role stress upon the health of professionally employed women with children in the home.

When reviewing and synthesizing the early role conflict coping research, two broad categories of coping strategies emerge. While coping research examines many types of coping strategies, two general categories seem common to most: 1) coping strategies that have an impact upon the problem or the environment which creates the problem and 2) coping strategies which deal with the individual and how she views or responds to the problem internally. Kahn et al. (1964) discussed two types of problem-oriented coping strategies: 1) those directed toward the environment (fixing an external problem) and 2) those directed toward the self (fixing an internal problem or changing the internal significance of an external problem). Hall's (1972) research identified similar types of coping. His study of college educated women presented a model of coping with multiple role stress which included these forms of coping. 1) Type I coping, called structural role redefinition, entails altering the external expectations of role performance, e.g., renegotiating with others about role expectations or hiring outside help; 2) type II, personal role redefinition, involves changing ones own perceptions or expectations about ones performance in a given role, e.g. telling yourself that you can't do it all; 3) type III, reactive role behavior, involves increasing effort to meet all the demands made when no other option appears workable. Pearlin & Schooler (1978) also describe three major types of coping: 1) changing the situation out of which the stressful

experience arises; 2) controlling the meaning of the experience; 3) controlling or decreasing the emotional consequences of the stress if nothing more can be done. These early researchers have provided a firm, broad base of information about coping strategies used in managing multiple role stress. While the coping strategies identified by each one differs somewhat they all seem to indicate that action can be taken by an individual to mitigate the adverse effects of stress. This action may be directed toward the external environment or internally, toward the self.

While there are many approaches to conceptualizing human coping, Lazarus and Folkman (1984) utilize concepts and relationships that fit this research particularly well. Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person." (p. 141). This study will utilize their conceptual definition of coping because it contains the key components of interest to this investigator. Lazarus and Folkman (1984) look at coping in terms of cognitive appraisal. Appraisal is the process by which individuals attach significance to their experiences. The appraisal process is broken into primary and secondary components. "Secondary appraisals of coping options and primary appraisals of what is at stake interact with each other in shaping the degree of stress and the strength and quality (or content) of the emotional reaction." (p. 35). The focus is on the person's interpretation of the situation and how prepared he/she feels to meet the situation. The function of the coping process is to alter either the problem, or the emotional response to the problem. In theory, a person who perceives little or no threat or who feels very comfortable meeting the threat would experience very little physical or emotional impact from the stimuli.

Lazarus and Folkman's theoretical framework for the inter-relationships of stress, coping and health is of particular importance in conceptualizing the relationships explored in this thesis. For example, the appraisal process described above would be directly related to role strain discussed earlier on page 12. If appraisal is the process of attaching significance to a particular stimuli and strain is the subjective feeling of discomfort, it seems logical that strain is a direct result of appraisal. In investigating coping with multiple role stress, it seems important to look at specific actions the individual may take that would either change the stressful situation or change the meaning of that situation for the individual. Thus, for the purposes of this study, *cognitive* coping is defined as, conscious mental activity which approaches the problem with the emphasis on solving a perceived problem.

This study uses questions about coping strategies in both home and work domains that either, 1) address change in the stressful situation, e.g., reducing workload, scheduling, prioritization etc. or, 2) change the personal interpretation of the role stress, e.g., redefining situations, reducing personal expectations, lowering standards.

#### **Model Relationship of Variables**

How life stress is mitigated by the individual is depicted in Figure 1. In this model, we see the proposed pathway from stress to health impact. We will examine the basic pathway first and then discuss the inter-relationships in more detail. First is the source of stress, in this case, multiple-role occupation, which leads to the appraisal of stress, both primary (what is at stake?) and secondary (can I handle it?) which precedes the subjective experience of strain. Next comes the coping response. The effectiveness of that response determines the health outcome. The effectiveness of coping and the coping response

chosen form a feedback loop to stress, either adding to or diminishing overall stress.

As discussed earlier, the occupation of multiple roles is assumed to be a source of stress. Cognitive appraisal encompasses the initial evaluation of the source, type, magnitude and likely impact of the perceived stress (primary appraisal) as well as the consideration of available actions (secondary appraisal). Cognitive coping is characterized by conscious, mental activity which approaches the problem with the emphasis on solving the problem. The effectiveness of the coping response determines the impact upon health. Health becomes the measure of long-term coping effectiveness.

Not all coping responses are cognitive in nature, of course. There are numerous coping responses, not all of which are conscious. An example would be avoidance. Avoidance is the use of something else to insulate the person from the discomfort of stress. This would include the use of drugs or alcohol, smoking or engaging in risk-taking behavior. All of these coping responses have the effect of diverting attention or avoiding the discomfort resulting from stress. If cognitive coping is characterized as a conscious, mental activity, then it is possible to completely by-pass the Appraisal and Strain portion of the model. Stress can lead directly to a coping behavior if the process is unconscious. A feedback loop exists in which the type of coping chosen can affect stress. For example, avoidance usually leads to an increase in stress and conflict, whereas positive cognitive coping will decrease stress and conflict.

This study will be limited to cognitive coping because this form of coping lends itself to teaching interventions in the primary care setting. Coping strategies which incorporate basic problem solving techniques such as, analysis of the problem, assessment of available resources and barriers, brain storming, culling, planning and ultimately problem resolution are relatively

easy to teach. Cognitive reappraisal, in which the patient is guided through the process of reassessing the impact of stress to reduce strain, is also a fairly simple procedure. These are techniques most professional nurses are familiar with because they mirror the "Nursing Process" taught in most schools of nursing (Pender, 1987).

Throughout the process modeled above, all relationships between steps are influenced by the overall availability of personal resources, i.e., finances, social support, previous experience, personality, etc. (House, Umberson, & Landis, 1988). The main relationship examined in this study, however, is the one between coping and health.

#### **Applications**

How working mothers cope with multiple role demands and the effects that different coping strategies have on overall health is of particular importance to the primary healthcare provider. The primary care provider is often asked to intervene when working mothers present with symptoms of fatigue, depression, marital dysfunction, stress related maladies, and health maintenance issues. If use of positive coping strategies were found to help mitigate the negative health effects of stress, then health maintenance teaching could be designed to help clients learn and utilize these strategies at home and at work. In this study, it is hypothesized that women who utilize cognitive coping techniques that involve either changing or limiting the problem directly or changing and limiting the emotional response to the problem in order to manage multiple role stress will have fewer stress related physical symptoms and greater psychological well-being than women who utilize these coping strategies to a lesser degree.

#### **METHODS**

#### Sample

The data for the following analysis are part of a longitudinal study begun in 1985 by principal investigators, Monica Biernat, Carol-Ann Emmons, Eric Lang, Linda Beth Tiedje, and Camille Wortman. Their work was funded, in part, by grants from the National Institute of Mental Health, grant #MH40255-01, and the National Science Foundation, grant #BNS-841-7745. The parent study seeks to clarify the mechanisms through which exposure to multiple role stress leads to subsequent health and functioning problems for married professional women with young children. The larger study examines women's experiences in each of their primary roles, any inter-role conflict, their coping strategies, social support, personal goals, personality factors, health behaviors, and family backgrounds. Five waves of data from personal and telephone interviews as well as a mailed questionnaire were collected from 1985-1993. At intake, the women in the sample were employed full-time in one of two occupational fields. They were either college faculty or mid-level business managers. All of the subjects had at least one child under the age of five years in the home at the time of the first wave (1985). They were married and living with their spouses.

Female college professors were randomly selected from lists of full-time women faculty members obtained from the personnel departments of large and small universities in the southeastern Michigan and Chicago areas. Women mid-level managers were selected from a random stratified sampling of

Detroit and Chicago area advertising, accounting, legal and banking firms. The sampling frame was stratified into small, medium, and large companies. The companies were randomly selected from within these strata to obtain an equal number of participants across the three types of companies. A total of 104 companies were contacted, 72 in Michigan and 32 in Illinois. Sixty-eight of the Michigan companies (94%) and 26 of the Chicago-area companies (81%) agreed to participate. In providing two professionally distinct groups it is hoped that greater generalizabilty can be obtained.

This study relies on secondary data analysis to examine the patterns of physical and psychological health as well as coping strategies used by the subjects as described in wave V data (collected 1992-1993).

#### **Procedures**

Wave V (1993) data were collected using a mailed, self-administered questionnaire. Signed, informed consent was obtained from each respondent and confidentiality was insured. The subjects' anonymity in the data file is protected by coding the respondent ID by number only. The use of secondary data did not allow this investigator access to the personal identities of the subjects. The proposal was forwarded to UCRIHS for review (see consent form Appendix A) and approved.

#### **Operational Definitions and Instruments**

The women in this sample (current study) have functioned in multiple roles over a prolonged period of time. This study describes health status and use of cognitive behaviors as measured by both an established, empirically tested scale and three new scales. The empirically tested scale was used to measure positive feelings of well-being. Another scale of stress related symptoms was created by the investigators of the parent study to measure physical symptoms of disease. The two coping scales were also designed for the

parent study. In addition to these scales, a single-item health measure was used. Information on control variables, such as, marital status, number of hours worked, smoking status and ages of children, were also collected. Health

Physical health was measured by a single item self-rating question about overall health as well as a list of physical symptoms. Several studies support the accuracy of the single item self-rated scale when compared to objective measures of health (Eisenberg, 1979). The physical symptoms scale measured how many times the respondents experienced particular stress related symptoms within the previous month. Using the overall report of health and the physical symptom scale should produce a better overall picture of health than using one or the other exclusively. If only the single-item scale is used the chance of responses limited to " good" to "excellent" is fairly high, thus unnecessarily limiting variability. If only the physical symptoms scale is used then inappropriate assumptions could be made about overall health when only symptom sover the last 30 days are asked for. The correlation between the symptom scale and the single item score is fairly strong, r = .45, p = < .000, though, the symptom scale clearly measures a related but distinct dimension of health.

The symptom list utilizes a 5-point response scale (1 = "never" to 5 = "15 or more days") which asks how many days within the past month the person has been bothered by symptoms such as colds, headaches, infections, tinnitus, constipation, etc.. This scale was developed by the investigators of the parent study and does not have established reliability and validity values.

Psychological health was measured by a nine item Positive Affect scale. The measure of personal well-being derives from Bradburn's Affect Balance Scale (Bradburn, 1969). In its entirety, the scale measures positive and

negative affect and has high validity and reliability. The scale employs a 6point response scale (1 = "none of the time" to 6= "all of the time") to such questions as , "How many times in the past month did you feel relaxed and free of tension?" and "How many times in the past month have you felt particularly excited or interested in something?". In each of the health scales the lower the rating the healthier the person, the higher the score the poorer the health outcome. Alpha coefficients for reliability were calculated for all the scales used in this study (see Table 1).

	# of Items	Mean	Std. Dev.	Range	Alpha	Mean Inter- Item Correlation
Coping at Work	14	2.6	.45	1.6 - 3.8	.66	.12
Coping at Home	17	2.2	.41	1.3 - 3.1	.72	.13
Positive Affect	9	3.7	.89	1.4 - 5.6	.94	.62
Physical Symptoms	19	1.3	1.29	0 - 7.18	.77	.16

#### Table 1. Descriptive Statistics on Scales

#### Coping

The coping variable is measured by two scales developed for this study. These scales were based on work done by Hall (1972). One scale asks about coping strategies used in the work domain, and the other asks about strategies used in the home domain. These scales use 14-item (work) and 17-item (home) Likert scale responses rated from l=not at all to 4=very true on statements, such as, "I recruited more help at home so that I could spend more time on home activities that I do best or enjoy most" or "I told myself, `Just do the best you can." (See Appendices C & D.) The tools were designed to measure different aspects of cognitive coping responses as conceptualized in Hall's work (Hall 1972). This researcher hoped that subscales measuring external and internal coping strategies could be distinguished in both the home and work coping scales. Unfortunately, factor analysis did not support the existence of distinct internal or external coping subscales. Therefore, each coping scale will be used as a whole to measure more general coping strategies.

The coping scales were analyzed for internal consistency using inter-item correlations and item-total correlations. As a result some items were deleted from the scales. The final Coping at Home scale consisted of 17 items with an alpha of .72, and the Coping at Work scale has 14 items and an alpha of .66 (see Table 1). One question was thrown out of the Work scale due to a typing error that changed its meaning (question C1n, see Appendix C). On both of the coping scales, the higher the score, the higher the use of cognitive coping strategies.

#### DATA ANALYSIS

This is a cross-sectional, correlational study. The dependent variable is health status as measured by 1) singe-item self-reported health, 2) physical symptoms and, 3) positive affect scales. The independent variables are coping responses used in both the work and home domains. Data analysis included assessment of relationships using Pearson's product-moment correlation (r) and multiple regression analysis. Multiple regression analysis was used to help statistically control for the possible influences on health of: 1) marital status, 2) number of hours worked, 3) ages of children, grouped into preschool, school-aged and teen-aged, and 4) smoking status.

#### Findings

The women in this study started participation in a larger longitudinal study in 1985. At that time selection criteria were: 1) full-time professional employment, 2) marriage, and 3) at least one pre-school aged child in the home. The data for the current study were gathered in 1993 during Wave V data collection of the larger study. With the exception of the age of the children, the vast majority of women continue to meet these criteria. 91.5% of the sample are still married (not necessarily to the same spouse); the average number of children at home is two (2); 97% have their children living with them at all times; 96.4% have at least one school aged child; 22% have at least one teenager; and 36% still have preschoolers. The average number of hours worked per week is 44. The majority of these women continue to meet the challenges of managing multiple roles (see Table 2).

	N	%	
Employment			
Employed	159	96.49	<b>V</b> o
Not Employed	6	3.6%	-
Occupation			
Faculty	80	48.59	<b>V</b> o
Manager	85	51.59	%
Marital Status			
Married	150	90.9	%
Not Married	14	8.5%	6
Children at Home*			
All the time	155	93.9	<b>%</b>
Half the time	5	3.0%	
Other than all o time	or half the 6	3.6%	6
Age of Children			
Preschoolers	59	35.79	%
6 to 12 years	159	96.39	
13 to 18 years	36	21.9	<b>%</b>
Children may be in mor category.	e than one		
Family Income			
<b>\$</b> 30K - 49,999	8	4.8%	6
\$50K - 99,999		36.19	-
\$100K - 149,9		31.5	
\$150K - 199,9		10.3	
\$200K - 249,9		7.9%	
>\$250,000 missing	8 7	4.8% 4.2%	
шзэшқ	Mean	Mode	Range
# of Children	2.0	2.0	1 - 4
# of hours worked	44	40	12 - 70

Table 2. Background Characteristics of Sample Subjects N = 165

Simple, bivariate correlations between the two coping scales and the health status variables yielded few significant correlations. Positive affect appears to be moderately affected by the use of cognitive coping strategies. Employing positive coping strategies at home and at work appears to improve the positive affect of these women (r = -.291, p < .00 at work; r = -.25, p < .00) but shows no sign of improving physical health. There were no significant correlations between self reported health status or the frequency of stress related symptoms and the use of positive coping strategies, however. The chart below shows statistical findings using Pearson's product-moment correlations (see Table 3).

	СОРЕ	WORK	COPE HOME		
HEALTH	r=111	p = .173	r =056	p = .482	
SYMPTOMS	r =112	p = .166	r =036	p = .654	
POSITIVE AFFECT	r =291	p = .000	r =252	p = .001	

Table 3. Correlations Among Coping and Health Measures

Other factors likely to have an impact upon the dependent variable of health, such as, smoking habits, marital status, number of hours worked per week and the age of the children in the home, were also examined using multiple regression analysis. The effects of the coping variables were examined again within a multivariate context along with the confounding variables. When this method of analysis was used, only the effects of positive coping strategies at *home* seem to influence positive affect (b= -.47, p< .03). Among the control variables only smoking had a direct effect; it appears to reduce overall health (b= .53, p<.05). This result is expected, of course, but the overall weakness of

all the control variables in predicting health outcomes is somewhat surprising. (see Table 4).

In light of these findings, the answers to the research questions appear to be as follows: 1) Are feelings of psychological well-being affected by how frequently positive coping strategies are used at home or at work? Examination of correlations shows a positive correlation between positive affect and coping in both the home (r = -.252, p = .001) and work (r = -.291, p < .001) .001) domains (see Table 3). (The - sign of the r values results from the reverse scoring of the positive affect scale, with lower scores indicating greater positive affect.) However, after controlling for the stress modifiers, coping at work no longer seems to exert an independent effect on positive affect (b= -.28, p = .14). It would appear that only the use of these coping strategies in the home improves a woman's positive affect. 2) Are perceptions of overall health affected by the use of coping strategies? Apparently, neither the use of cognitive coping at home nor at work has any impact on subjective perceptions of general health (work: r = -.111, p = .173; home: r = -.056, p = .482). The multivariate regression model confirms these findings (home: b=-.07, p=.68; work: b = -.28, p = .14) Thus, coping does not appear to influence overall health in this sample population. 3) Are women who use positive coping strategies less often, more likely to experience physical symptoms of disease than women who utilize these strategies frequently? These findings show no significant correlation between use of coping strategies and physical symptoms (work: r = -.112, p = .166; home: r = -.036, p = .654), these correlational findings are corroborated by the multivariate analysis (see Table 4).

Table 4. Multiple Regressions of Health Measures on Coping Measuresand Selected Control Variables

	DEPENDENT VARIABLES								
INDEPENDENT VARIABLES	(1) <u>Overall Health</u> b beta T-Sig		(2) <u>Symptoms</u> b beta T-Sig			(3) <u>Positive Affect</u> b beta T-sig			
(1) Coping Work	13	09	.39	15	05	.61	28	14	.14
(2) Coping Home	07	04	.68	41	13	.21	47	21	.03
Control Variables	1								
(1) # Hours Worked	-2.4	-3.8	.99	01	04	.63	.002	.03	.73
(2a) Children Aged 1-5	.18	.14	.13	09	04	.67	005	003	.97
(2b) Children Aged 6-12	02	02	.86	17	08	.39	.01	.007	.94
(2c) Children Aged 13-18	.11	.09	.34	.09	.04	.66	.25	.16	.06
(3) Marital Status	24	11	.25	31	07	.42	38	12	.13
(4) Smoking	.53	.22	.01	.78	.16	.06	.02	.007	.93
R²		.08			.06			.15	
F-Sig		1.43			1.06			3.13	

#### DISCUSSION

#### **Methodological Problems**

While few of the relationships explored in this research proved to be strongly correlated, it would appear that an individual may exert some control over how stress affects their psychological well-being via the use of cognitive coping strategies at home. Unfortunately, a number of methodological problems exist in this study which may have influenced the research findings.

The most critical problem is that of measuring the independent variable of coping. Coping is a broad and ill defined concept. It is likely that people use a variety of coping behaviors, not all of which are cognitive in nature. If subjects are unaware of what they do to cope it is unlikely that self-report measures will be of much use in capturing coping style. Even if the research is limited to strictly cognitive coping behaviors, which coping behaviors should be measured? Cognitive coping encompasses more than just cognitive problem-solving behaviors and reappraisal.

The coping scales were designed to measure specific types of coping strategies, but the factor analysis indicated that there were no stable subscales. The items seem to measure multiple dimensions of coping without falling into clearly discernible subscales. Thus a certain ambiguity remains concerning the meaning of the combined scale scores. This methodological problem could have implications for the practical applications of the research findings. For example, if a primary care provider wanted to design a program to teach cognitive coping techniques to help working mothers improve their

psychological well-being, it would be difficult to pin-point exactly what type of coping responses to teach. While the scales do provide a general direction, they are lacking in specificity. Perhaps expanding and refining the coping scales would lead to a clearer picture of the relationship between coping and health.

The study is further limited by the homogeneity of the subjects. Little variation exists in demographics or in responses to the research variables. This limits generalizability. The majority of the subjects are in excellent health. For example, the mean response on the overall health scale (1 = excellent, 4 = poor) was 1.74 with a standard deviation of .69. Similarly, on average, these women reported only 1.33 symptoms (SD= 1.29). Thus, it may be that these women are still too young to show significant health consequences of multiple role stress (average age is 42 yrs.). It would be interesting to analyze longitudinal data over a twenty year time period and assess change in health status and use of cognitive coping patterns.

The regression involving a single item response (self-rating of health) as a dependent variable poses additional analysis problems because its use violates the underlying assumption of the ordinary least squares procedure in which error should be normally distributed around the estimated regression line. Thus, the estimated parameters in this regression are likely to be biased and the associated significance test are likely to be invalid.

#### **Implications of Findings**

#### Implications for existing literature

The findings of this study seem to support the Role Expansion Model which hypothesizes that effects of multiple role stress on women's health are mitigated in a multi-dimensional way. While the impact of cognitive coping (in the home) on positive affect is statistically significant, this study showed no significant effect from cognitive coping in the work domain. The reason for this probably lies in the inter-dependence of multiple factors in stress mediation. Further investigation into the types of conflict encountered in these two domains as well as the differences in how women cope at home as opposed to work may help illuminate this. It is also interesting to note that other researchers have found the use of cognitive (concrete) coping strategies to be more effective in mitigating stress in the home domain than in the work domain. Pearlin & Schooler (1978) found that, "...individuals' coping interventions are most effective when dealing with problems within the close interpersonal role areas of marriage and child-rearing and least effective when dealing with the more impersonal problems found in occupation" (p 2).

The Role Expansion model also supports the concept that the overall effects of stress on health is mitigated in such a way that the net effect is somewhere between positive and benign (Sorensen & Verbrugge, 1987). Though there are likely other explanations, the women in this study appear to be in excellent health. Most Role Expansion theorists cite the rewards of increased social support, socio-economic status, role satisfaction, personal efficacy, enhanced sense of personal control as possible factors in mitigating multiple role stress (Sorensen & Verbrugge, 1987). The specific effects of personal coping have generally not been examined in this body of literature, however. The blending of coping theory and multiple role theory offers a promising area of study.

This study adds further support to the growing body of coping literature which suggests that coping strategies which involve a reframing (Anderson & Leslie, 1991), or reappraisal (Lazarus & Folkman, 1985), or perceptual control of the internal meaning of a particular stressor/s (Pearlin & Schooler, 1978),

28

appear to enjoy greater psychological well-being than those who do not use these coping strategies.

The findings that smoking negatively impacts upon overall health comes as no surprise and further supports the growing volumes of literature on the subject (Chesney, 1991; Roden & Salovey, 1989).

#### Implications for Advance Practice Nurses

The Advance Practice Nurse can be sensitive to the needs of women who manage multiple roles on a daily basis. Adequate assessment of stress and depression should be part of health maintenance for these women.

Findings suggest that utilization of the coping strategies which either alter the source of conflict or the psychological appraisal of the conflict, in the home domain, may increase positive affect. If cognitive coping techniques can be taught (which is controversial), it seems reasonable for the Advanced Practice Nurse to address this in the primary care setting. Attempts to teach cognitive coping techniques and general stress management could be incorporated into health maintenance and used as intervention for stressrelated complaints.

Caution should be exercised in generalizing from this sample. The subjects in this study are professional women who have likely been professionally socialized into utilizing cognitive coping response more frequently than most women. It may be that problem-solving techniques learned during their education and professional development closely approximate cognitive coping strategies. If this is the case, then this sample of women would be practiced and proficient at utilizing these particular types of coping strategies. It is possible that women less familiar with these techniques would have more difficulty implementing them if they were to learn them in an out patient setting with minimal follow-up. Implications for further research

Gaining insight into how multiple role occupation affects women's health and what factors may mediate those effects is a salient area of study. The need for further information about specific coping strategies utilized by women to manage multiple role stress has been discussed. Understanding how women cope and which coping techniques work best would be valuable information to the primary care provider. It is important to understand the differences between coping in the home domain and the work domain. Are certain coping techniques more efficacious at home than at work ? Do women use different coping mechanisms than men? Does education or age impact upon the types of cognitive coping used by women? The answer to these questions would add to the coping literature on working women.

Defining the concept of coping and designing cognitive coping scales that can clearly reflect particular aspects of coping is an ongoing research problem. Great strides have been made by the classic researchers like Hall, Pearlin & Schooler, Lazarus & Folkman, and others, but further work is needed.

Role theory also offers interesting avenues of investigation. Does the amount of time spent in each role impact upon the amount of overall stress/strain? Are certain roles inherently more rewarding than others? How does personal coping impact upon role overflow? Can a great deal of satisfaction in one role compensate for strain in another role?

Of course this study does not examine the effects of factors such as social support, personal efficacy, locus of control, and personal resources; etc. but a general direction for patient teaching can be ascertained. These findings add further impetus to explore the complex relationships between stress and health in women occupying multiple roles.

30

**APPENDIX A** 

#### APPENDIX A

UCRIHS Approval

# MICHIGAN STATE

March 18, 1996

TO: Susan Wilson-Stern 357 Holt Rd. Williamston, MI 48895

 RE:
 IRBS:
 96-129

 TITLE:
 COPING STRATEGIES AND HEALTH STATUS OF MARRIED, EMPLOYED, PROFESSIONAL WOMEN WITH CHILDREN

 REVISION REQUESTED:
 N/A

 CATEGORY:
 1-C, E

 APPROVAL DATE:
 03/18/96

The University Committee on Research Involving Human Subjects'(UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

- RENEWAL: OCRIMS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.
- REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

PROBLIDES/ CELNEES: Should either of the following arise during the course of the work, investigators must notify UCRINS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

OFFICE OF RESEARCH AND GRADUATE STUDIES

If we can be of any future help. please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171.

University Committee on Research Involving Human Sabject (UCRUHS)

5 David E. Wright, Ph. UCRIHS Chair ( DEW : bed

Sincerely

Michigan State University 222 Administration Building East Lansing Michigan 48824-1046 511/355 2180

fax 51/M2-11/1 cc Manfred Stommel

The Michigan State (Inversion (U) A in Instantional (Inversion Laterback on Action

MSU 4 or showing street

**APPENDIX B** 

## **APPENDIX B**

#### Health Questionnaire

# Section H: HEALTH

- H1. Now I'd like to ask you some questions about your health. First, how has your health been during the past 12 months-fair, excellent, good, fair, poor?
  - 1. Excellent
  - 2. 🗌 Good
  - 3. Fair
  - 4. D Poor

# H2. Please indicate how often you have had each symptom during the <u>past month</u> by placing an "X" in the appropriate box.

	Never	1-2 Days		7-14 Days	15 or more Days
	(1)	(2)	(3)	(4)	(5)
H2a. Cold or flu					
H2b. Menstrual cramps					
H2c. Stomach cramps (nonmenstrual)					
H2d Bloating (edema)					
H2e. Headaches (nonmigraine)					
H2f. Chest pains					
H2g. Infections of the eye, ear, nose, or throat					
H2h. Ringing in the cars (tinnitus)					
H2i. Sinus problems; excluding allergies or hay fever					
H2j. Shortness of breath					
H2k. Nausea or upset stomach					
H21. Loss of appeute					
H2m. Constipation					
H2n. Diarrhea					
H2o. Urinary tract or pelvic infections					
H2p. Abnormal menstrual periods					
H2q. Breast swelling					
H2r. Muscular swelling, cramping, or pain					
H2s. Joint swelling or pain					
H21. Other (specify):					

**APPENDIX C** 

## APPENDIX C

## Coping at Work

# Section C: COPING STRATEGIES

C1. Below are some strategies that women sometimes use to cope with having too much to do at work. Please indicate the extent to which these statements are true by placing an "X" in the appropriate box.

During the <u>past few months</u> :	Not at All (1)	Somewhat True (2)	Fairly True (3)	Very True (4)
Cla. Among those professional activities that I had discretion over, I divested myself of those that were not really important.				
C1b. I was careful not to take on additional professional activities that would have increased the sense of time pressure I felt.				
C1c. I recruited more help and/or delegated some of my work to assistants.				
Cld. I tried to anticipate stressful periods at work and plan ahead for them.				
C1e. Sometimes when people at work asked me to do things that I didn't think were important, I just didn't get around to them.				
Clf. I tried to prioritize my work by making lists of what needed to be done and then figuring out when I'd be able to do each thing.				
C1g. When at work, I tried to be as efficient as possible- for example, I tried not to waste time chatting or on other unimportant activities.				
C1h. I tried to work as hard as possible so that I could do all of the work that was expected of me on the job.				
C1i. I cut back on activities like lunch, leisure activities, and sleep in order to have more available time for work.				
C1j. I allocated certain times for the most important aspects of my work and did not let other pressures interfere with that.				
C1k. I talked with a supervisor or superior to eliminate or reduce certain responsibilities so that I would have less work to do.				
C11. I set personal deadlines to supplement externally imposed ones.				
C1m. I tried not to let little things get to me.				
C1n. I told myself that it would be the end of the world if I didn't get all my work done on time.				
Clo. I told myself, "Just do the best you can".				

**APPENDIX D** 

## APPENDIX D

### Coping at Home

C2. Below are some strategies that women sometimes use to cope with having too much to do at <u>home</u>. Please indicate how true these statements are by placing an "X" in the appropriate box.

During the past few months:	Not at All (1)	Somewhat True (2)	Fairly True (3)	Ver <u>y</u> True (4)
C2a. I recruited more help at home so that I could spend more time on home activities that I do best or enjoy most.				
C2b. I tried to keep my husband and children informed about the demands of my job so that they wouldn't have unrealistic expectations of me at home.				
C2c. I tried to recognize that I'd have to lower my standards about such things as how clean the house is and how elaborate the meals are.				
C2d. I told myself that, although I have to give up some activities with my family now, the situation will get better when my career is more established.				
C2c. I tried to set priorities of what needed to be done at home by making lists and then figuring out when I'd be able to do each thing.				
C2f. When at home, I tried to be as efficient as possible - for example, I tried not to waste time talking on the phone.				
C2g. I tried to work as hard as possible so that I could do all the things that are expected of me at home.				
C2h. I cut back on activities like lunch, leisure activities, and sleep in order to have more time available for my husband and children.				
C2i. I allocated certain times for my children/family and did not let other pressures interfere with that.				
C2j. I allocated certain times to spend alone with my husband and did not let other pressures interfere with that.				
C2k. I allocated certain times for housework, errands, mea preparation, home and car maintenence, etc. and did not let other pressures interfere with that.	1			
C21. I allocated certain times for myself (for relaxation, leisure, etc.) and did not let other pressures interfere.				
C2m. I talked with my husband or others in the house to eliminate or reduce some work for which I am responsible.				
C2n. I tried not to let little things get to me.				
C20. I told myself, "Just do the best you can."				
C2p. I told myself, "You can't do everything."				
C2q. I tried to ignore the things that weren't being done to my satisfaction.				

**APPENDIX E** 

## APPENDIX E

### Positive Affect

•

## During the past month, how much of the time have you felt:

	All of the Time (1)	Most of the Time (2)	A Good Bit of the Time (3)	Some of the Time (4)	A Little of the Time (5)	None of the Time (6)
FU74. On top of the world						
FU75. Particularly excited or interested in something						
FU76. Pleased about having accomplished something						
FU77. Proud because someone compli- mented you on something you had done						
FU78. That things were going your way						
FU79. That the future looks hopeful and promising						
FU80. Relaxed and free of tension						
FU81. How much of the time have you generally enjoyed the things you do?					`	
FU82. How much of the time, during the past month, have you felt cheerful or light-hearted?	1					

#### LIST OF REFERENCES

Adelmann, P. K., Antonucci, T. C., Crohan, S. E., & Coleman, L. M. (1990). A causal analysis of employment and health in mid-life women. <u>Women & Health, 16(1)</u>, 5-19.

Barnett, R. C., & Baruch, G. K. (1985). Women's involvement in multiple roles and psychological distress. Journal of Personality and Social Psychology, 49, 135-145.

Barnett, R. C., & Marshall, N. L. (1992). Worker and mother roles, spill-over effects, and psychological distress. <u>Women & Health, 18(2)</u>, 9-35.

Bradburn, N. M. (1969). <u>The structure of psychological well-being</u>. Chicago: Aldine.

Bureau of the Census, United States Department of Commerce.

(1987). Statistical abstracts of the United States. Washington, DC.

Chesney, M.A. (1991). Women, work-related stress, and smoking. In M. Frankhauser (Ed.), <u>Women, Work, and Health</u>, (pp. 139-155). New York: Plenum Press.

Collins, C., Tiedje, L. B., & Stommel, M. (1992). Promoting positive well-being in employed mothers: A pilot study. <u>Health Care for Women</u> International, 13, 77-85.

Elliott, G. R., & Eisdorfer, C. (1982). Conceptual issues in stress research. In G. R. Elliott & C. Eisdorfer (Eds.), <u>Stress and human health</u> (pp. 11-45). New York: Springer.

Eisenberg, J. M. (1979). Sociological influences on decision making by clinicians. <u>Annals of Internal Medicine</u>, 90, 957-964.

Fairbank, D. T., & Hough, R. L. (1979). Life events classification and the event-illness relationship. Journal of Health and Social Behavior, 19, 41-47.

Grey, J. (1983). The married professional woman: An examination of her role conflicts and coping strategies. <u>Psychology of Women Quarterly, 7(3)</u>, 235-243.

Hall, D. T. (1972). A model of coping with role conflict: The role behavior of college educated women. <u>Administrative Science Quarterly</u>, 17, 471-489.

Haw, M. A. (1982). Women, work and stress: A review and agenda for the future. Journal of Health and Social Behavior. 23, 132-144.

Hoffman, L. W. (1989). Effects of maternal employment in the twoparent family, <u>American Psychologist, 44</u>, 283-292.

House, J. S. (1981). <u>Work stress and social support</u>. Reading. Mass.: Addison-Wesley.

House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. <u>Annual Review of Sociology</u>, 14, 293-318.

Johnson, F. A., & Johnson, G. L. (1977). Attitudes toward parenting in dual-career families. <u>American Journal of Psychiatry, 134(4)</u>, 391-395.

Kahn, R. L., Wolfe, D. M., Quinn, R., Snoek, J. D., & Rosenthal, R. A. (1964). Organizational stress. New York: Wiley.

Kandel, D. B., Davies, M., Raveis, V. H. (1985). The stressfulness of daily social roles for women: Marital, occupational and household roles. Journal of Health and Social Behavior, 26, 64-78.

Kessler, R., & Essex, M. (1982). Marital status and depression: The importance of coping resources. <u>Social Forces, 61,</u> 484-507.

Killien, M., & Brown, M. A. (1987). Work and family roles of women: Sources of stress and coping strategies. <u>Health Care for Women International</u>, <u>8</u>, 169-184.

Lazarus, R. S., & Folkman, S. (1984). <u>Stress, appraisal, and coping.</u> New York: Springer Publishing.

McBride, A. (1988). Mental health effects of women's multiple roles. Image, 20 (1), 41-47.

McBride, A. (1989). Multiple roles and depression. <u>Health Values:</u> <u>Achieving High-level Wellness, 13(2)</u>, 46-49.

McCubbin, H. I. & Patterson, J. M. (1983). Stress: The family inventory of life events and changes. In E. E. Filsinger (Ed.), <u>Marriage and</u> <u>family assessment</u>. Beverly Hills, CA: Sage.

McLanahan, S., & Adams, J. (1987). Parenthood and psychological well-being. <u>Annual Review of Sociology, 5</u>, 237-257.

Mechanic, D. (1976). Sex, illness and the use of health services. Journal of Human Stress, 2, 29-40.

Mortimer, J. T., & London, J. (1984). The varying linkages of work and family. In P. Voydanoff (Ed.), <u>Work and family: Changing roles of men</u> <u>and women</u> (pp. 20-35). Palo Alto, CA: Mayfield.

Owen, M., & Cox, M. (1988). Maternal employment and the transition to parenthood. In A.E. Gottfried, & A. W. Gottfried (Eds.), <u>Maternal employment and children's development</u> (pp. 85-118). New York: Plenum.

Palmore, E. B. (1969). Physical, mental, and social factors in predicting longevity. <u>Gerontologist. 9</u>, 103-108.

Pearlin, L. I., & Johnson, J. S. (1977). Marital status, life strains, and depression. <u>American Sociological Review, 42,</u> 704-715

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behavior, 19, 2-21.

Pearlin, L. I., Lieberman, M. A., Menaghan, E. G., Mullan, J. T. (1981). The stress process. Journal of Health and Social Behavior, 22, 337-356.

Pearlin, L. I. (1989). The sociological study of stress. Journal of Health and Social Behavior, 30(3), 241-256.

Pender, N. J. (1987). <u>Health promotion in nursing practice</u>, 2nd ed., Norwalk, CT: Appleton & Lange.

Pugliesi, K. (1988). Employment characteristics, social support and the well-being of women. <u>Women & Health, 14(1)</u>, 35-55.

Rawlings, S., & Saluter, A. (1994). Household and family characteristics: March 1994. In <u>Current population reports population</u> <u>characteristics</u> (pp. 20-483). Washington DC: U.S. Department of Commerce, Bureau of Census.

Rodin, J., & Salovey, P. (1989). Health Psychology. <u>Annual Review in</u> <u>Psychology</u>, 40, 533-579.

Rosenfield, S. (1989). The effects women's employment: Personal control and sex differences in mental health. Journal of Health and Social Behavior, 30, 77-91.

Schwartz, F. (1989). Management women and the new facts of life. Harvard Business Review, 67, 65-76.

Selve, H. (1985). History and present status of the stress concept. In R. S. Lazarus, & A. Monat (Eds.), <u>Stress and coping: An anthology</u> (pp 17-29). New York: Columbia University Press.

Selve, H. (1956). The stress of life. New York: McGraw-Hill.

Sorensen, G., Pirie, P., Folsom, A., Jacobs, D., & Gillum, R. (1985) Sex differences in the relationship between work and health: The Minnesota heart survey. Journal of Health and Social Behavior, 26, 379-394.

Sorensen, G., & Verbrugge, L. M. (1987). Women, work, and health. Annual <u>Review of Public Health, 8,</u> 235-251.

Thoits, P. A. (1981) Undesirable life events and psychophysiological distress. A problem of operational confounding. <u>American Sociological</u> <u>Review, 46, 97-109</u>.

Verbrugge, L. M. (1985). Gender and health: An update on hypotheses and evidence. Journal of Health and Social Behavior, 26, 156-182.

Verbrugge, L. M. (1982). Work satisfaction and physical health. Journal of Communication and Health, 7, 262-283.

Waldron, I. (1983). Sex differences in illness incidence, prognosis and mortality. Social Science Medicine, 17, 321-333.

Walker, L. O., & Best, M. A. (1991). Well-being of mothers with infant children: A preliminary comparison of employed women and homemakers. <u>Women and Health, 17(1), 71-89.</u>

Working women: Adding to their numbers. (1995, March 10). The Wall Street Journal, People Patterns.

Wortman, C., Biernat, M., & Lang, E. (1991). Coping with role overload. In M. Frankhauser (Ed.), <u>Women, Work, and Health</u>, pp. 85-93). New York: Plenum Press.

