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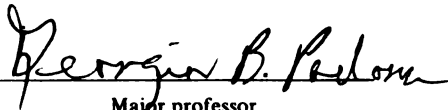
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THE RELATIONSHIP BETWEEN PERCEPTION OF
MENOPAUSE AS A PROBLEM; PERCEIVED CONTROL OF
MENOPAUSE SYMPTOMS; AND THE LIKELIHOOD TO TAKE
HORMONE REPLACEMENT THERAPY AMONG LOW-INCOME
AFRICAN AMERICAN WOMEN
presented by

Kathryn M. Tripp

has been accepted towards fulfillment
of the requirements for

M.S. degree in Nursing


Major professor

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THE LIKELIHOOD TO TAKE HORMONE REPLACEMENT THERAPY
AMONG LOW-INCOME AFRICAN AMERICAN WOMEN

By

Kathryn M. Tripp

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ABSTRACT

THE RELATIONSHIP BETWEEN THE PERCEPTION OF MENOPAUSE AS A PROBLEM; PERCEIVED CONTROL OF MENOPAUSE SYMPTOMS; AND THE LIKELIHOOD TO TAKE HORMONE REPLACEMENT THERAPY AMONG LOW-INCOME AFRICAN AMERICAN WOMEN

By

Kathryn M. Tripp

This secondary analysis examines the perceptions by African American Women (AAW) of their likelihood to take hormone replacement therapy (HRT). Research questions include: 1) What are AAW perceptions of menopause as a problem? 2) What are AAW perceptions of control of menopause symptoms? 3) What is the relationship among AAW perceptions of menopause as a problem, perceptions of control of menopause symptoms and their likelihood to take HRT? 4) What is the relationship between select sociodemographics (income, education, sources of payment for medication), menopausal status, degree of bothersomeness of menopausal symptoms and likelihood of taking HRT? The sample consisted of 197 AAW, ages 40 to 70. Findings include no correlation between perceptions of menopause as a problem, control of symptoms and likelihood to take HRT ($-.0506$) as well as no correlation between sociodemographics, menopausal status, menopausal symptoms and degree of bothersomeness and likelihood to take HRT ($.0775$). Overall, the perception of menopause by the low income AAW in this study is that of a life experience to be tolerated.

To those who believed in me and supported me in my quest

ACKNOWLEDGMENTS

I wish to thank my committee chair, Georgia Padonu, and committee, Geraldine Talarczyk and Brigid Warren for their time, experience, and guidance in bringing this project to fruition.

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INTRODUCTION

In 1992, the American College of Physicians published recommendations which included advising practitioners to consider hormone replacement therapy (HRT) for menopausal women of all races. This recommendation was intended to prevent disease and to prolong life since many health problems/changes are known to be linked to the biological decrease in ovarian production of estrogen which occurs in menopause (Grady, Rubin, Pettiti, Fox, Black, Ettinger, Ernster, & Cummings, 1992). Increasing estrogen levels through HRT has been shown to have benefits for short-term relief of menopausal symptoms and to reduce the long-term risk of diseases associated with menopause such as osteoporosis and coronary heart disease (CHD). Most women can benefit from taking HRT, but their risk must be evaluated individually. Increased incidence of breast and endometrial cancers, attributed to taking HRT, may offset these gains for some women. Research and subsequent publications of the risks and benefits of taking HRT have focused on white women. Very few studies have involved African American Women (AAW), their perceptions of menopause and the factors relating to their likelihood of taking HRT. AAW and white women differ regarding susceptibility to the development of osteoporosis and to death from CHD. It is

documented that osteoporosis occurs more frequently in white women than in AAW. In women not using HRT, Grady et al. (1992) report a 15.3% rate of hip fracture in white women versus only 5.6% in AAW. CHD is the leading cause of death for all post-menopausal women in the United States. Although the lifetime probability of developing CHD is similar in AAW and white women not taking HRT, mortality rates from CHD are higher for AAW (Keil, Sutherland, Knapp, Lackland, Gazes, & Tyroler, 1993). Use of HRT reduces the incidence of osteoporosis in white women and increases cardioprotection rates in both AAW and white women.

Many articles are found regarding perceptions of women concerning menopause and HRT (Logothetis, 1991; Roberts, 1991; U.S. Office of Technical Assessment, 1992; Groeneveld, Bareman, Barentsen, Dokter, Drogendijk, & Hoes, 1993; Sinclear, Bond, & Taylor, 1993; Fox-Young, Sheehan, O'Connor, Cragg, & Del Mar, 1995). These studies for the most part do not address racial differences in perceptions and little is known about the perceptions of AAW. Perceptions are important since they may impact knowledge, sources of information and behaviors. A woman's perceptions of the physical and social changes that she undergoes during menopause, or believes that she will undergo, influence the degree to which she feels able to manage these changes. Toward the goal of providing health promotion strategies for management of short-term symptoms and avoiding long-term consequences of menopause through risk reduction of CHD and osteoporosis, an understanding of the perceptions of AAW

regarding menopause must be determined (Padonu et al., 1996). The implications for developing useful and culturally relevant strategies for the management of menopause necessitate APN involvement in research concerning the perceptions of AAW.

Purpose

Given the critical research needs, the major purpose of this study was to determine the relationship of AAW's perceptions of menopause as a problem, their perceived ability to control menopause symptoms and their likelihood of taking HRT. A secondary purpose was to examine the relationship of select sociodemographics, health background and symptoms variables to their likelihood to take HRT.

Research Questions

The research questions for this study are:

1. What are AAW perceptions of menopause as a problem?
2. What are AAW perceptions of control of menopause symptoms?
3. What is the relationship among AAW perceptions of menopause as a problem, perceptions of control of menopause symptoms and their likelihood to take HRT?
4. What is the relationship between select sociodemographics (income, education, sources of payment for medication), menopausal status, degree of bothersomeness of menopausal symptoms and likelihood of taking HRT?

CONCEPTUAL FRAMEWORK

The conceptual framework utilized for this study is based on the Health Promotion Model (HPM) as developed by Nola Pender (1986). Pender proposed the model in the 1980's as a basis for integrating nursing and behavioral science perspectives as factors influencing health behaviors. Pender (1996) portrays the theoretical basis of the HPM as integrating a number of behavioral constructs from expectancy-value theory and social learning theory (renamed social cognitive theory) within a nursing perspective of holistic human function. In expectancy-value theory, as described by Feather in 1982, human behavior is "rational and economical". A person will engage in a behavior if it is deemed to be of positive personal value, based on information available, and if the action is likely to bring about the desired outcome. Social cognitive theory, as developed by Bandura (1986), presents an interactional model of causation in which human behavior is shaped by environmental events, personal factors and behavior. The theory emphasizes personal self-direction, self-regulation and perceptions of self-efficacy, or the person's judgment of his/her capabilities to organize and execute a particular course of action.

Pender combined aspects of both Feather's and Bandura's theories with the view of health as a lived experience unique to the individual, but having patterns in common with others (1989). Pender, Walker, Sechrist, and Stromberg (1987) define health promotion as an attempt to "increase

the well-being of an individual or group". Pender et al. (1987) state that the HPM is based on findings from studies of health promotion and wellness behavior, is consistent with current knowledge and can encompass new knowledge, thus meeting criteria for theoretical models.

The HPM utilizes a wellness orientation in which threat of disease is not a determinant of a person's health-promoting behavior. It includes a decision-making phase and an action phase. Pender's revised HPM (1996) includes three categories: individual characteristics and experiences; behavioral-specific cognitions and affects; and behavioral outcomes (see Figure 1). A schematic drawing follows of the portion of HBM which will be addressed in this study (see Figure 2).

Individual characteristics and experiences are variables which shape the decision-making phase. In this study, these are perceived control of menopausal symptoms and perception of menopause as a problem. Pender (1996) states that behavior-specific cognitions and affect constitutes a critical "core" for intervention as they are subject to modification through nursing action. Through health education, clients can be empowered to increase control over their own health (Bohny, 1997). The APN utilizing health education informs, motivates and encourages clients in their self-care.

Forming an action plan is the next step in the process leading to behavioral outcome or health promoting behavior.

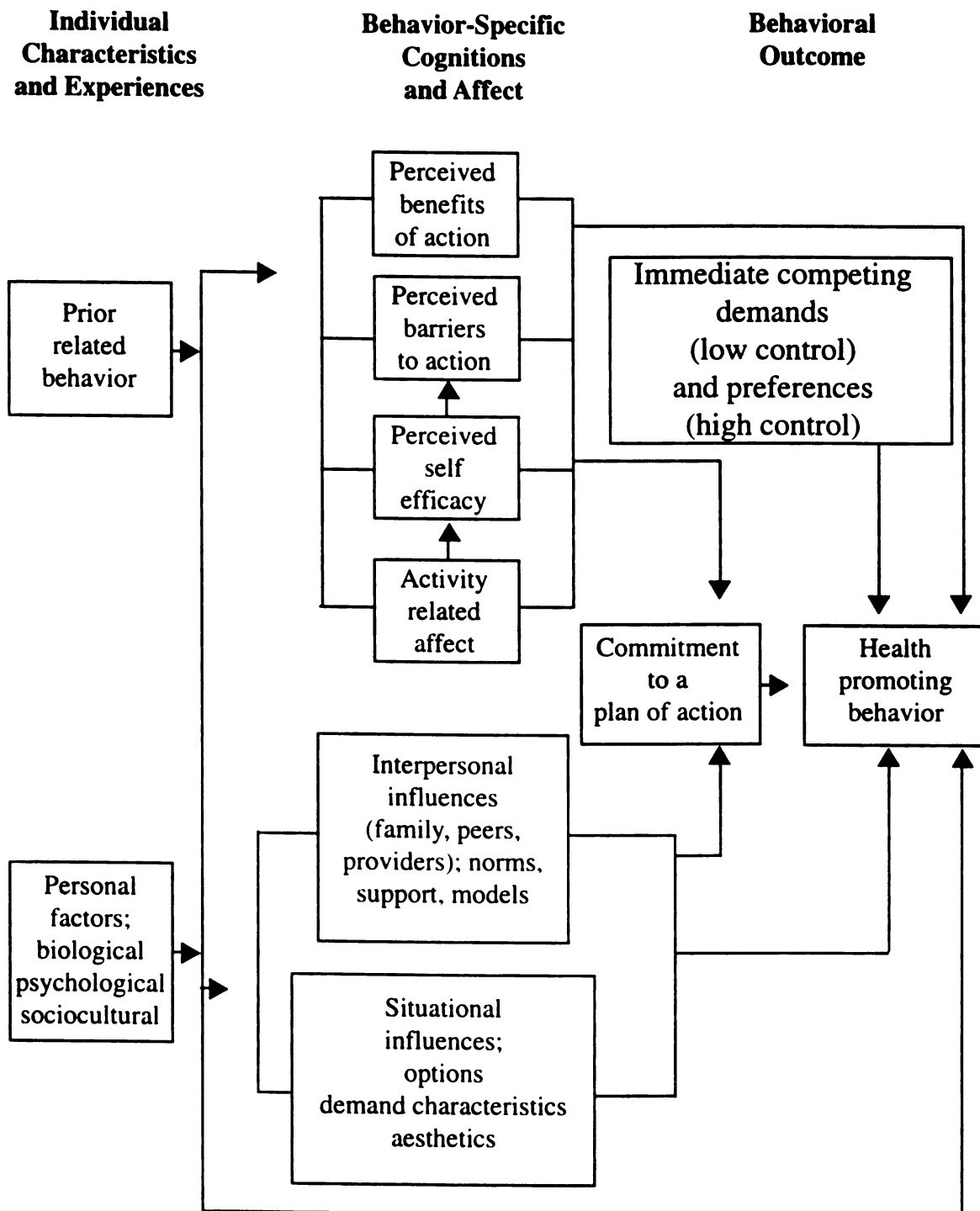


Figure 1. Pender, N., Walker, S., Sechrist, K., & Stromborg, M. (1988). Development and testing of the health promotion model. *Cardiovascular Nursing*, 24(6), 41-43.

APPLICATION OF MODIFIED PENDER'S HEALTH PROMOTION MODEL

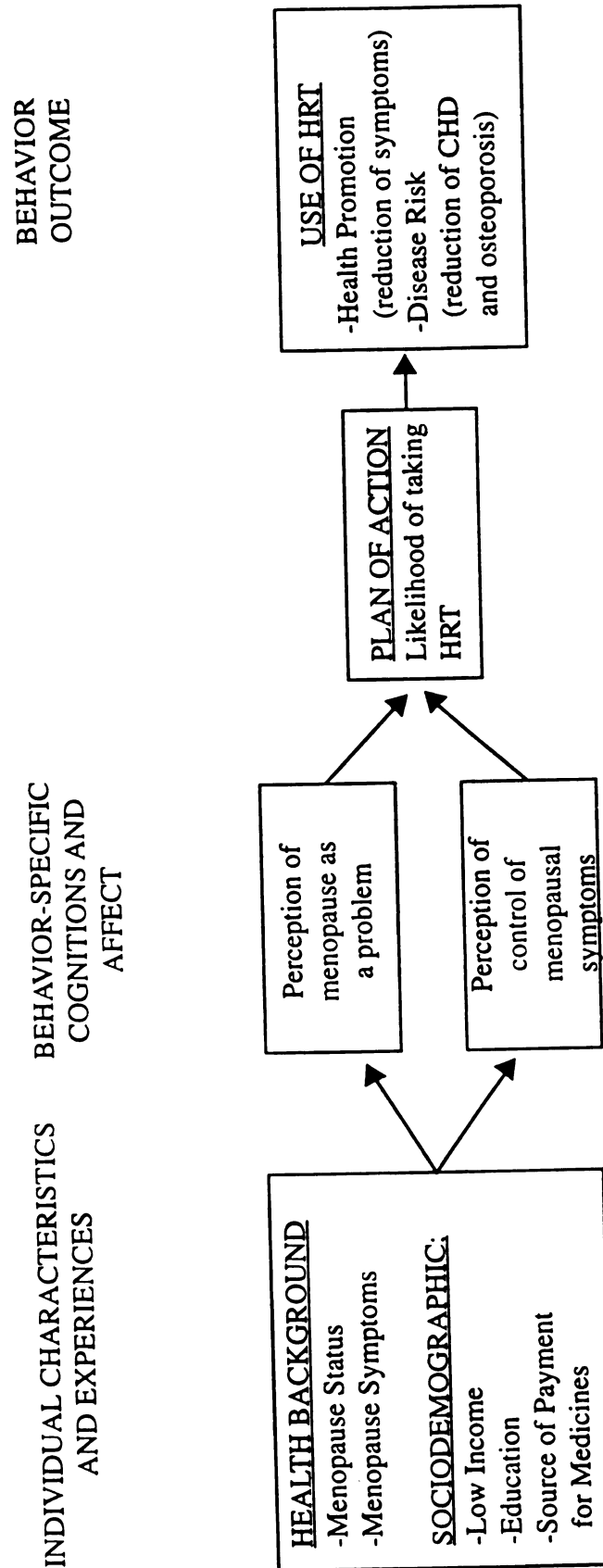


Figure 2. Adaptation of Pender's (1988) Model.

The action plan in this study is the likelihood of taking HRT. Commitment to a plan of action is the first step in behavioral outcome. In this study, the behavioral outcome stopped at the plan of action, the likelihood of taking HRT.

CONCEPTUAL DEFINITIONS

The following are conceptual definitions for this study.

Perception of Menopause as a Problem

Pender does not directly define perception but utilizes it in terms of subjective judgment (1987). For the purpose of this study, perception will be defined as subjective judgment. Merriam-Webster's Collegiate Dictionary (1994) defines problem as "a source of perplexity, distress or vexation". Menopause is the final menstrual period that a woman experiences and is generally accepted to have occurred in the absence of menses for 12 months (U.S. Office of Technology Assessment, 1992). This study will define perception of menopause as a problem as the subjective judgment of menopause as a source of perplexity, distress or vexation.

Perception of Control of Menopause Symptoms

Bandura (1986) defines control as the ability to "prevent, terminate or lessen the severity of aversive events". For the purpose of this study, perception of control of menopausal symptoms will be defined as the subjectives judgment of ones' ability to prevent, terminate or lessen the severity of aversive events.

Menopause Symptoms and Degrees of Bothersomeness

For the purpose of this study, menopause symptoms will be defined as the short-term effects of vasomotor symptoms and vaginal dryness as well as selective symptoms believed by individual women to be directly related to menopause. Degree of bothersomeness is defined subjectively.

Likelihood of Taking HRT

Merriam-Webster's Collegiate Dictionary (1994) defines likelihood as a noun meaning probability. For the purpose of this study, likelihood of taking HRT will be defined as the probability of making use of hormone replacement therapy, estrogen in combination with progestogen, in menopause.

Sociodemographics

Demographics are defined by Merriam-Webster's Collegiate Dictionary as the statistical characteristics of human populations. The prefix, socio, refers to social or societal factors. In this study, sociodemographics include the selective societal factors of income, education and sources of payment.

Menopausal Status

In this study, menopausal status will relate only to whether or not the individual regards herself to be currently experiencing menopausal symptoms.

REVIEW OF LITERATURE

In the literature, studies dealing with the topic of menopause have burgeoned, but focus mainly on the risks and

benefits of taking HRT. The following studies pertained to the study variables.

Perceptions of Menopause as a Problem

Problems, as defined in this study as causing distress, perplexity and vexation, were most commonly mentioned in menopause experiences involving surgical menopause (Dennerstein, Smith, Morse, 1994; Backstrom, 1997; Fox-Young, O'Connor, Cragg, & DelMer, 1995). Many studies indicated that women with perceived good health had neutral to positive opinions of menopause and suffered few problems (Avis & McKinlay, 1995; Groeneveld, Bareman et al., 1993; Dennerstein, Smith, & Morse, 1994; Dokter, Drogejisk, & Hoes, 1993). Hot flashes and vaginal dryness were the two most common menopausal symptoms reported as problems. Fear of osteoporosis and cardiovascular disease were problems considered, but the here-and-now vasomotor problems were most frequently cited as interfering with quality of life (Wilbur, Holm, & Dan, 1992; Schmitt, Gogate, Rothert, Rovner, Holmes, Talarczyk, Given, & Kroll, 1991; Rothert, Rovner, Holmes, Schmitt, Talarczyk, Kroll, Gogate, 1990; Matthews, Wing, Kuller, Meilahn, Kelsey, Costello, & Caggiula, 1990). Standing and Glazer (1992) in a study of 66 low income clinic patients, 93.4 percent black, found that women had a somewhat positive general attitude toward menopause. These women also reported finding menopause "mysterious and difficult to understand". This concept was shared by women in other studies (Roberts, 1991; Logothetis, 1991; Roberts, Chambers, Blake, & Webber, 1992). Padonu,

Holmes-Rovner, Rothert, Schmitt, Kroll, Rovner, Talarczyk, Breer, Ransom, and Gladney (1996), in their study of 55 AAW, found menopause to be regarded as a natural transition with a set of expected problems.

In summary, menopause is an individual experience with various levels of distress reported.

Perceptions of Control of Menopause Symptoms

Control, as defined by prevention, termination and lessening of aversive events, was the subject of fewer studies than menopause as a problem. HRT was proposed when seeking control of the short-term effects of vasomotor symptoms and vaginal dryness as well as avoidance of coronary heart disease and osteoporosis in the long-term (Schmitt, Gogate et al., 1991; Matthews et al., 1990; Rothert et al., 1990). Mishell (1989) in fact, proposed that lifelong HRT be considered for all menopausal women to minimize the "benign symptoms and reverse the predictable osteoporosis and atherosclerotic heart disease which can accompany estrogen deficiency".

Several studies which did not include AAW produced conflicting findings. Fifteen-hundred women in the Grampian region of Scotland were surveyed for knowledge of menopause and attitudes toward it (Sinclair, Bond, & Taylor, 1993). They indicated a belief that women are unable to control menopausal changes inside their bodies. Bernhard and Shepard's sample (1993), on the other hand, believed that they could manage menopause on their own by accepting changes in their bodies and relying on diversion, such as

work. Accepting the self as aging seems to be a common hurdle in a society which values youth, fertility and physical beauty (Choi, 1995). Quinn (1991) in a small qualitative study (n=10) utilized grounded theory and Orem's self-care theory to develop coping strategies to control symptoms. Theisen, Mansfield, Seery, and Voda (1995) found a positive correlation between control of menopausal symptoms and availability of open discussion of menopause with family members. Holistic sources, such as Doughty (1996), suggest "natural" remedies for symptom control as well as HRT.

In summary, control of menopause symptoms is viewed individually, as the overall experience of menopause is perceived. Opinions range from the utilization of coping skills, to the use of "natural" remedies, to the taking of HRT.

Types of Menopause Symptoms and Degrees of Bothersomeness

Avis and Mckinlay (1995), in their findings from the Massachusetts Women's Health Study, cited the bothersomeness of hot flashes. Their sample was selected from 38 Massachusetts cities/towns described as having among other variables, the "same racial composition". The N=2572 was not differentiated as to race. Padonu et al. (1996) reported 12 symptoms, including hot flashes, vaginal dryness and other selective symptoms reported by AAW. The 12 symptoms had been compiled from an instrument used in the 1992 Michigan State University College of Nursing study of "Women's Judgements of Estrogen Replacement Therapy".

Symptoms experienced and the degree of symptom bothersomeness varied with individual women.

Likelihood of Taking HRT

The majority of studies on likelihood or probability of use of HRT describe users as being thin, healthy, well-educated, white women (Egelund et al., 1991). Grady et al. (1992), in their review of English language literature from 1970 onward, found that many women, whether African-American or Caucasian, make decisions to utilize HRT for prevention of coronary heart disease despite their concerns of cancer related to HRT. Ransom et al. (1996) in their study detected a more negative attitude toward using ERT themselves among the AAW nurses than among the white nurses. Younger age (50-59), undergoing hysterectomy and physician discussion of HRT were cited as significant factors for increased use of HRT in McGagny and Jacobson's 1997 study of 328 AAW. Pham, Grisso, and Freeman (1997) determined in their study of 68 AAW and white women that the AAW were less likely to have had HRT prescribed for them. Other studies, which do not include race as a variable, mentioned diverse reasons for taking or not taking HRT. Sinclair, Bond, and Taylor (1993) found that only 16 percent of their 1500 participants had ever used HRT. The most common reason given for their not utilizing it was that doctors had not suggested it. In a sample of 91 women, Jeffe, Freiman, and Fisher (1996) stated that 54 percent used HRT for prevention of osteoporosis and/or cardiovascular disease and 61 percent for relief of vasomotor symptoms such as hot flashes.

Additional reasons cited for taking HRT include retarding memory dysfunctions such as Alzheimer's disease (Kampen & Sherwin, 1994).

Studies done by Rotherth et al. (1990) and Schmitt et al. (1991) indicate a need for knowledge of risks and benefits of HRT to aid in the decision-making process, regardless of the outcomes utilized by individuals.

Low Income African-American Women: Menopause and HRT

AAW were included in the samples of few studies involving menopause and the use of HRT. Pham, Grisso, and Freeman (1997) compared the experiences of 33 AAW and 35 white women, finding more positive attitudes toward menopause among the AAW and fewer recommendations for HRT by their physicians. Another study compared attitudes and beliefs of a group of AAW nurses to those of a group of white nurses in relation to the risks and benefits of ERT. The AAW were less likely to use HRT themselves (Ransom, Guerin, Holmes-Rovner, Dodson, & Padonu, 1997). Grady et al. (1992) reviewed English-language literature since 1970. The meta-analysis was done to provide summary estimates of relative risk for women, black and white, using HRT. It was concluded that the cardioprotective benefits of HRT would be nearly identical.

Standing and Glazer (1992) conducted a study of 66 low-income, predominantly black, women to determine attitudes toward menopause. They reported a trend toward a somewhat positive attitude in this sample, when compared to a 1986

study of predominantly white women using the same instruments.

Two other studies compared ERT use in groups of black and white women. The 1996 study done by the Duke Established Populations for Epidemiological Studies of the Elderly (EPESE), (Handa, Landerman, Hanlon, Harris, & Cohen, 1996) concluded that ERT is actually taken by a small number of older women, mean age 75, especially blacks.

Socioeconomic determinants were cited, with those having at least five children and rural residence tending not to take ERT, and women using alcohol, calcium supplementation and having higher income tending to take ERT. Jahnige and Fiebach (1997), on the other hand, studied women age 65 and younger and found that overall history of ERT use did not differ significantly between AAW and white women. Current use was higher in the AAW (15.9% vs. 5.7%).

Nelson et al. (1993) recruited 377 skeletally healthy, older women for a longitudinal study of bone loss. The sample included 30.5% AAW. Excluded from the sample were women with disease, or with exposure to drugs including ERT, known to affect the skeleton. Rates for ERT use were found to be greater in white women than in AAW, despite a higher rate of surgical menopause in the AAW (42.5% vs. 33.8%). It was suggested by the authors that physicians might not offer ERT as readily to AAW because of lower incidence of osteoporosis in that population compared to whites (5.6% vs. 15.3%). Miles and Malik (1994), in their review of menopausal research, point out that while osteoporosis may

not be as great an issue in the AAW, osteoarthritis and other skeletal disease cause much disability. They suggest molecular studies of cartilage demonstrate estrogen receptors in this tissue and that ERT could prevent many problems related to the diminution of estrogen levels.

HRT was not addressed when Jackson, Taylor, and Pyngolil (1991) studied 522 AAW to evaluate the relationship between menopause status, physical symptoms and mental health. Jackson et al. (1991) cited motivation for the study because of earlier studies done involving white women and the lack of empirical information on the climacteric experiences of AAW.

Sociodemographics and Menopausal Status

Sociodemographics, particularly income and education, have been used to examine the health experiences of AAW (McGagny, & Jacobson, 1997; Pham, Grisso, & Freeman, 1997; Edwards, 1993). Frey's 1982 study included variables of age, marital status, employment status, education, income and occupation but did not include HRT. Only 4% of the sample was black. Only McGagny and Jacobson's study was found relating these variables to menopause and HRT usage among AAW. Sources of payment for medical prescriptions was indicated by this study through information relating to types of insurance coverage given that most of the participants were on Medicaid. McGagny and Jacobson (1997) found no correlation with use of HRT and insurance coverage and other sociodemographics including level of income and education.

Health background information regarding menopausal status was not found in the current literature except as numbers reported as having had hysterectomies.

Sociodemographic information can be useful in clinical application and provide valuable baseline data about AAW. This study will attempt to profile significant sociodemographics of AAW in relation to their perceptions regarding menopause.

METHODS

Original Study

The original research, entitled "Women's Judgement of Estrogen Replacement Therapy: Low Income African American Women" was conducted in 1994 by Georgia Padonu, Dr.P.H., Michigan State University College of Nursing. The research was funded by the National Institute for Nursing Research (Grant #NR-1245). The purpose of the original research was to identify and systematically assess factors which impact low income African American women's judgments about their likelihood to use hormone replacement therapy.

A total of 197 women between the ages of 40 and 70 years were recruited from a convenience sample, largely from housing developments in a Mid-Michigan city. A key community leader, flyers and radio announcements were major recruitment strategies.

Data collection instruments included a 92-item questionnaire to obtain data on the following: sociodemographics, health background, perceptions of menopause, sources of information and likelihood of taking

HRT. Decision scenarios were presented involving four factors: menopausal symptoms, risk of osteoporosis, coronary heart disease and endometrial cancer. The women were provided information about HRT and were asked to indicate whether HRT would be expected to help in each of the four situations. Chances of (risk) developing these conditions were given based on taking and not taking HRT. Information regarding risks was stated specifically for African American Women.

Current Study

This study is a secondary analysis of selected questionnaire data from the original research. The major purpose of this study was to determine the relationships between perceptions of menopause as a problem, perceived control of menopause symptoms and the likelihood of taking HRT. The relationship between select sociodemographics (income, education, sources of payment for medication), menopausal status, degree of bothersomeness of menopausal symptoms and likelihood of taking HRT was also examined.

Sample for Current Study

The sample for the current study is the same as was used in the original study. The total sample of 197 women was used in this study. A profile of select characteristics of the sample is presented in Table 1.

Operational Definitions

Perception of menopause as a problem. This variable was operationalized utilizing the Menopause Problem Scale (Appendix D) portion of the instrument which asks

Table 1.

Select characteristics of the sample of African-American Women (N=197)

Characteristic	n	%
<u>Age Range (years)</u>		
40-50	130	66
51-55	59	30
56-70	8	4
<u>Marital Status</u>		
Married	47	24
Not married	127	64
Missing data	22	11
<u>Employment Status</u>		
Employed	69	35
Unemployed	128	65
<u>Annual Income</u>		
<\$15,000	122	62
\$15,000-\$25,000	36	18
Missing data	39	20
<u>Education</u>		
<High School	59	30
High School	55	28
>High School	67	34
Missing data	16	8

participants to rate their perceptions of menopause. Ten concepts of menopause are presented; 9 are negative and 1, Question 35, is positive. The respondents were asked to rank these concepts on a 5-point Likert scale ranging from 1=Strongly Agree to 5=Strongly Disagree. Points were given for each answer based on its' ordinal ranking. Question 35 was transformed and recoded to have the same connotation as the other questions. A value of 5 was recoded as a 1, a 4 recoded as a 2, a 3 remained a 3, a 2 was recoded to a 4 and a 1 became a 5. These points were summed and the sum divided by the number of participants to obtain the mean score. The highest possible score per concept was 5 (Strongly Disagree), indicating the perception of that concept of menopause as not very problematic. The very lowest score per concept was 1) Strongly Agree, indicating the perception of that concept of menopause as a problem. Total scores ranged from 10 to 50 with 10 indicating overall perceptions that menopause is very problematic. A score of 50 indicates the perception of menopause as not problematic.

Perception of control of menopause symptoms. This variable was operationalized using the Control Scale portion of the instrument (Appendix E) which asks participants to rank their perceptions, or subjective judgments, regarding menopause symptoms. Nine concepts comprise the control scale. Six of the nine items are positive statements and the remaining 3 are negative (See concepts 43, 46 and 49). They range from "Menopause symptoms that I might have can be helped" to "Women can do very little on their own to control

the symptoms of menopause". The subjects responded on a 5-point Likert scale. The scale ranged from 1=Strongly Agree to 5=Strongly Disagree. Total score ranged from 9 to 45. The negative concepts (43, 46 and 49) were transformed and recoded as in variable number 1. Because agreement with positive statements has lower ordinal ranking, a mean score that was low indicated feelings of control of symptoms. The scores were summed and divided by the number of participants to obtain the mean.

Menopause symptoms and degree of bothersomeness. This variable was operationalized utilizing the Menopausal Symptoms Instrument (Appendix F) to identify which of 12 menopausal symptoms the individual participant was experiencing and to rate on a Likert scale how bothersome she found these symptoms to be. The Likert scale ranged in response from 1, "I am NOT EXPERIENCING this symptom or I don't believe that it is related to menopause" to 5, "BOTHERS ME A GREAT DEAL". Total scores ranged from 12 to 60. The responses were summed and divided by the number of participants to determine the mean score. A high score indicated the symptoms to be very bothersome.

Likelihood of utilizing HRT. This variable was operationalized based on the question "How likely are you to take HRT in the form of estrogen/progestogen combined?" The participant's responded on a 5-point Likert scale ranging from 1 or low probability, to 5 or very high probability (Appendix C). This study focused only on the combination

therapy of estrogen and progestogen. The responses were gathered and the mean likelihood analyzed.

Sociodemographics. This variable was operationalized utilizing information provided by participants on the sociodemographic portion of the instrument which was comprised of 6 questions (Appendix A). The 6 questions asked include age, marital status, employment status, highest grade completed in school and source of payment for medications which a physician prescribed. In this study, only 3 of the variables were used: income, education and source of payment for medications.

Menopausal status. This was operationalized utilizing a nominal "yes/no" answer to the question "Do you currently consider yourself to be experiencing menopausal symptoms?" (Appendix B).

Protection of Human Subjects

The rights of the individuals who participated in this study were protected according to the guidelines developed by the University Committee on Research Involving Human Subjects (UCRIHS) at Michigan State University. Approval to conduct this investigation was received from UCRIHS prior to data analysis (Appendix G).

Confidentiality was safeguarded through assignment of an identification (ID) code number to each participant. This number was used to match data from each person. Participants signed an informed consent form on which the ID number appeared in the original study. The responses of all study participants remain confidential. Codes were not

provided to this researcher. All study results are reported in aggregate form only.

Research Design

The present study is a descriptive correlational design using secondary analysis of data from the original study. This study focuses on 36 questions and responses taken from the original 92 questions completed by the AAW.

Reliability testing was conducted to assess the importance of each question in regard to the overall score for each scale. Reliability alpha were as follows:
Menopause problem scale: .8460; Control scale: .5697;
Menopausal symptom scale: .8718.

DATA ANALYSIS AND RESULTS

Data were analyzed by each research question.

Question 1. What are AAW perceptions of menopause as a problem?

The AAW's perceptions of the ten concepts I the Menopause as a Problem Scale (see Appendix D) resulted in a mean score of 25.73 (sd=7.417) with a range from 10 to 50. The median or midpoint of response was 26 (see Table 2). The median indicated a midrange ranking on the Likert scale of response of Agree, tending toward Neither Agree Nor Disagree, with the concepts. Descriptive statistics showed the majority of the responses (58%) agreed with the perception that menopause was/would be an unpleasant experience, while 16% of respondents indicated agreement with the concept that menopause would bring/has brought positive changes to their lives.

Table 2.

Summary Description of Perception of Menopause as a Problem (N=174, 23 Missing)

Mean	Median	Mode	Range	sd	n
25.73	26.00	26	10-50	7.417	174

Question 2. What are AAW perceptions of control of
menopause symptoms?

The AAW's perception of control of menopause symptoms resulted in a mean score of 22.513 (sd 4.519) with a range from 9 to 45 (see Appendix E). The median or midpoint score was 23 (see Table 3). The median indicates a midrange ranking on the Likert scale above Agree tending toward Neither Agree nor Disagree in response to the predominantly positive concepts of the control scale. Descriptive statistics showed that 94% of the women reported bothersome menopausal symptoms but 68% of the women disagreed with the concept that menopause was something that had to be "put up with".

Table 3.

Summary Description of Perception of Control of Menopause Symptoms (N=187, 10 Missing)

Mean	Median	Mode	Range	sd	n
22.513	23.00	24	9-45	4.519	187

Question 3. What is the relationship among AAW perceptions of menopause as a problem, perceptions of control of menopause symptoms and their likelihood to take HRT?

Spearman's Correlational Coefficient indicated a very weak negative correlation between likelihood to take HRT and perceptions of menopause as a problem ($\rho=.0506$ at $p=.507$). A somewhat stronger, but still statistically insignificant, correlation was found between likelihood to take HRT and perceptions of control of menopause symptoms ($\rho=.0775$ at $p=.292$) (see Table 4). The AAW did not demonstrate a likelihood to take HRT as evidenced by correlation and in their answers to Question 25, "How likely are you to take HRT in the form of estrogen/progestogen" (see Appendix C). Over 45% indicated they "may or may not" take HRT while only 16.5% replied that they "may or would" take HRT.

Question 4. What is the relationship between select sociodemographics (income, education, sources of payment for medication), menopausal status, degree or bothersomeness of menopausal symptoms and likelihood of taking HRT?

There was no indication that the likelihood of the AAW taking HRT had any relationship to these variables. Spearman's Correlational coefficient showed no significant correlation between the likelihood to take and menopausal status ($r=-.0025$ at $p=.973$), nor with degree of

Table 4.

Correlation Coefficients for Likelihood to Take HRT and Perception of Menopause as a Problem and Perception of Control of Menopausal Symptoms (N=197)

	rho	p-value	N	Missing
Perception of Menopause as a Problem	-.0506	.507	174	23
Perception of Control of Symptoms	.0775	.292	187	10

Table 5.

Summary Description of Degree of Bothersomeness of Menopausal Symptoms (N=177, 20 Missing)

Mean	Median	Mode	Range	SD	N
32.877	33	35	12-60	10.728	177

Table 6.

Correlation Coefficients for Likelihood to Take HRT and Select Sociodemographics, Symptom Bothersomeness and Menopausal Status (N=197)

	rho	P-value	N	Missing
Sociodemographics				
Income	-.0063	.931	191	6
Education	-.0427	.557	192	5
Payment	-.0333	.645	193	4
Symptom Bothersomeness	.0645	.394	177	20
Menopausal Status (Experiencing now)	-.0025	.973	191	6

bothersomeness of menopausal status ($r=.0645$ at $p=.394$) (see Table 6). In the demographic data, 40% of the 197 women reported on menses within 12 months but 94% responded that they had experienced bothersome menopausal symptoms.

The likelihood to take HRT was also not significantly correlated with the sociodemographic variables of income ($\rho=-.0063$ at $p=.931$), education ($\rho=-.0427$ at $p=.557$), or sources of payment ($\rho=-.0333$ at $p=.645$) (see Table 6). Although 62% of the women had incomes of less than \$15,000, 85% had prescription payment coverage through insurance or government, diminishing the influence of financial concerns. Education also was not an influencing factor as the women in this analysis were fairly evenly distributed in categories of education ranging from less than high school, high school and more than high school levels. Despite the correlation between higher likelihood to take HRT and education, than likelihood to take HRT and the other sociodemographics, it was not statistically significant.

Question 5. Is there a predictor variable in the relationship of select sociodemographics (income, education, sources of payment for medication), menopausal status, degree of bothersomeness of menopausal symptoms and the likelihood of taking HRT?

Because of the weakness of correlation between variables, it is not possible to determine a predictor variable.

Interpretations of Findings and Existing Literature

An overview of the findings with relevance to Nola Pender's Health Promotion Model and literature review will be presented in this section.

Perception of Menopause as a Problem. Menopause was perceived by this sample of AAW to be problematic, as evidenced by their midrange median responses to the Likert scale tending to neither agree nor disagree with concepts of Menopause as a Problem. The resulting data indicates ambivalence regarding the depth of problems to be experienced by the individual. This finding is not surprising since many women approach menopause not knowing what to expect (Holmes-Rovner et al., 1994; LaRocco & Polit, 1980; Padonu et al., 1996). It was noted in studies by Standing and Glazer (1992) and Edwards (1993) that low income AAW had more critical problems of daily life which would take precedence over health problems. Edwards reported that coping with the stressors related to poverty and frequently being a single parent took all of the women's time and energy. Standing and Glazer cited needs for food, shelter and safety as being more significant than "discomforts of menopause". Holmes-Rovner et al. found that the AAW expected menopause to be somewhat problematic.

Perception of Control of Menopause Symptoms. Median score for perceived control of menopause symptoms was midrange (23), indicating an agreement with a feeling of control of symptoms. An understanding of the symptoms was positively associated by the women in aiding in their

control. This perception was also apparent in other groups of AAW. Through interviews with 55 AAW in focus groups, Padonu et al. (1996) identified self-care and help-seeking practices related to management of menopause symptoms. Self-care included self-control, reduction of stress and over-the-counter medications. Help-seeking practices involved seeking emotional support and information from other women. Self-control, in the form of stoicism, was noted by Holmes-Rovner et al. (1996) for AAW's management of menopause symptoms. HRT was valued for relief of symptoms but was negatively viewed due to fear of cancer.

Relationship Among AAW Perceptions of Menopause as a Problem. Control of Menopause Symptoms and Likelihood to Take HRT. Spearman's Correlation Coefficient showed no statistically significant relationship between the perceptions of menopause as a problem and likelihood to take HRT ($-.0506$) or perceptions of control of menopause symptoms and likelihood to take HRT ($.0775$). This finding is not surprising as many women are undecided about taking HRT because of their fears of cancer (Grady, Rubinn et al., 1992). In addition, the women in this study did not perceive menopause to be especially problematic, nor did they find the symptoms of menopause to be overly bothersome. Ransom, Guerin's 1995 study of black and white nurses indicated that the black nurses were less accepting of HRT as proven therapy for their personal use with menopause symptoms than were the white nurses.

Relationship between Select Sociodemographics, Menopausal Status, Degree of Bothersomeness of Menopausal Symptoms and the Likelihood of Taking HRT. There is no statistical significance between the relationship of the variables, income, education, sources of payment for medication, menopausal status, degree of bothersomeness of menopausal symptoms and the likelihood to take HRT was the only positive r value ($r=.0645$) and was not statistically significant. The degree of correlation may have been influenced by the number of women (only 40%) reporting having had no menstrual period in the last 12 months, the generally accepted evidence of menopause. Pham, Grisso, and Freeman (1997) found that the AAW viewed menopause more favorably despite reporting menopausal symptoms similar in degree and frequency to the white women in the study. They also cited AAW disinterest in medical interventions in menopause involving discussion with physicians of symptoms of HRT. Similar findings were expressed by Holmes-Rovner et al. (1996) and Padonu et al. (1996) in that prevention issues have not been paramount in the population studied.

Application of Health Promotion Model

Pender's HPM was helpful in guiding the organization of individual characteristics and lived experiences into patterns of beliefs about health promotion and health maintenance. These patterns form perceptions regarding health expectations and influence a course, or plan of action. The intent in using Pender's HPM was to describe the phenomenon by which these patterns influence

perceptions. Instead of being descriptive theory and remaining true to the original study, the adapted model (see Figure 2) took on a prescriptive character as the behavioral outcome had a singular focus. The singular outcome was taking HRT. While use of HRT has been strongly encouraged for reduction of menopause symptoms, other measures can be implemented. Further, the utilization of Pender's model in this analysis ended at the interim step, the plan of action.

Summary

This study addressed the perceptions of 197 AAW regarding the relationships of menopause as a problem, control of menopause symptoms and individual variables involved in their likelihood to take HRT. Examination of the potential relationship of these variables was based on an adaptation of Pender's Health Promotion framework.

The findings revealed that the AAW did not perceive menopause to be very problematic but had uncertainty as to it's implications for them personally. They were positive in their perceptions of control of menopause symptoms and were not certain that they would take HRT. Sociodemographic variables (education, income, source of payment for prescriptions), menopausal status and the degree of bothersomeness of menopausal symptoms did not influence the likelihood of taking HRT.

The variables selected for this study had been shown to have relevance to the taking of HRT in other studies (Frey, 1982; Theisen, Mansfield, Seery, & Vody, 1995). Since the original study was done in 1994, new findings have emerged

through research which may have provided additional variables. This is especially true of the role of HRT in reducing incidence of CHD, the major cause of death for all women. It is possible that much of the reluctance and/or ambivalence shown toward the taking of HRT in this study was based on the perception that AAW were not as prone to long-term risk of diseases associated with menopause. Use of other variables may have yielded greater insight into the perceptions of menopause by AAW. Variables from the original study that might be selected for further analysis include knowledge of the physiological changes of menopause and the health risks associated with these changes. Attitudes toward general health promotion activities such as exercise, diet and taking of vitamins might yield insight into perceptions of health by these women. A major variable might be previous use of HRT.

IMPLICATIONS FOR ADVANCED PRACTICE NURSES AND PRIMARY CARE

No linear relationships were obtained from this secondary analysis of perceptions of menopause by this sample of low income African-American women. Continued research is necessary to insure quality health care based on individual need. The use of the modified HPM applied in this study may lend itself as a tool until this information is available. Keeping in mind that individual characteristics and life experiences influence perceptions of health care can guide the APN in working with the client to develop a plan for the promotion of optimum health for that individual.

Limitations

The use of a convenience sample of sociodemographically homogeneous persons of urban, low income, limited education is a limitation. The findings are not generalizable to a more diverse population sharing the same ethnicity and culture.

Recommendations for Future Research

This analysis was done in an attempt to clarify the perceptions of AAW of menopause as a problem, their perceptions of controlling the symptoms of menopause and their likelihood to take HRT. An actual assessment of HRT usage patterns by AAW would be helpful to determine long term benefits. Further study is needed on the menopausal experiences of AAW and other minority groups to establish the needs, beliefs and perceptions of different socioeconomic, ethnic and cultural groups. Determining the similarities and differences of groups of women experiencing menopause will assist in pursuing the goals of health promotion for all women.

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APPENDIX A

APPENDIX A

Sociodemographic

4. What was your approximate total household income (before taxes) during the past year?

1= Under \$10,000	6=\$30,000-\$34,999
2=\$10,000-\$14,999	7=\$35,000-\$39,999
3=\$15,000-\$19,999	8=\$40,000-\$49,999
4=\$20,000-\$24,999	9=\$50,000-\$99,999
5=\$25,000-\$29,999	10=\$100,000 and above

5. What was the highest grade or class you completed in school?

1=Less than high school graduation
2=High school graduate (includes G.E.D.)
3=Greater than high school, but no degree
4=Technical trade/Community College degree
5=Bachelor's degree
6=Master's degree
7=PhD/Professional degree
8=Other

8. What is your source of payment for medicines you take which are prescribed by a physician?

1=Payment is provided completely out of my pocket.
2=Payment is provided partly out of my pocket and partly by another source (e.g., insurance, government agency).
3=Payment is provided completely by a source other than me or my family (e.g., insurance, government agency).
4=Don't know.

APPENDIX B

APPENDIX B

Health Background

- 11. Do you consider yourself to be experiencing menopausal symptoms?**

1=No, have never experienced menopausal symptoms.

2=Yes, currently experiencing menopausal symptoms.

APPENDIX C

APPENDIX C

25. How likely are you to take HRT in the form of estrogen/progestogen combined?

1=Very certain that you would not take this form of HRT.

2=Probably would not take HRT.

3=May or may not take HRT.

4=Probably would take HRT.

5=Very certain that you would take HRT.

APPENDIX D

APPENDIX D

Use the following scale to answer questions 31-40.

- 1=Strongly Agree
- 2=Agree
- 3=Neither Agree nor Disagree
- 4=Disagree
- 5=Strongly Disagree

MENOPAUSE PROBLEM SCALE

- 31. Menopause has been/will be an unpleasant experience for me.
- 32. The thought of menopause is disturbing to me.
- 33. I expect to (do) experience physical trouble during menopause.
- 34. I expect to (do) experience emotional trouble during menopause.
- 35. Menopause will bring/has brought many positive changes to my life.
- 36. Menopause will/did cause me to be sick a lot.
- 37. Menopause will/did have a negative effect on me.
- 38. Women are more tired than usual during menopause.
- 39. Menopause is associated with mood changes.
- 40. Menopause will bring/has brought more stress to my life.

APPENDIX E

APPENDIX E

Use the following scale to answer questions 41-49.

- 1=Strongly Agree
- 2=Agree
- 3=Neither Agree nor Disagree
- 4=Disagree
- 5=Strongly Disagree

CONTROL SCALE

- 41. Menopause symptoms that I might have can be helped.
- 42. There are things I can do to feel good during the menopause other than going to a health care provider.
- 43. There is little that an individual can do to control the symptoms of menopause.
- 44. I believe that I can control menopausal symptoms.
- 45. Special diets and foods may help control some of the symptoms of menopause.
- 46. Menopause is something I just have to put up with.
- 47. Understanding the symptoms of menopause helps me control the effects of menopause.
- 48. Women can do much to control the symptoms of menopause.
- 49. Women can do very little on their own to control the symptoms of menopause.

APPENDIX F

APPENDIX F

Decision Making in Menopause Study Menopausal Symptoms Instrument

- We would like to know what menopausal symptoms you are experiencing and how bothersome they are to you. Listed on the next few pages are a number of symptoms which sometimes occur in women as they go through menopause. Please read the list and identify which of these symptoms you are experiencing.
- If you are not currently experiencing the symptoms, because you are premenopausal, on hormone therapy, past menopause or have had a hysterectomy, PLEASE ANSWER '1'.
- If you are experiencing the symptom but you do not think it is related to menopause, PLEASE ANSWER '1'.
- We are interested in knowing only about those symptoms which you believe are directly related to menopause. If you are currently experiencing the symptom AND you believe it is due to menopause, please use the following scale to indicate how bothersome the symptoms is.

Use the following scale to respond to items 50-61.

- 1=I am NOT EXPERIENCING this symptom or I don't believe that it is related to menopause.
- 2=DOES NOT BOTHER ME AT ALL.
- 3=BOTHERS ME A LITTLE.
- 4=BOTHERS ME SOMEWHAT.
- 5=BOTHERS ME A GREAT DEAL.

- 50. Hot flashes or flushes
- 51. Weight gain (over 10 lbs.)
- 52. Difficulty sleeping
- 53. Flooding (heavy menstrual flow)

Use the following scale to respond to items 54-61.

- 1=I am NOT EXPERIENCING this symptom or I don't believe that it is related to menopause.
- 2=DOES NOT BOTHER ME AT ALL.
- 3=BOTHERS ME A LITTLE.
- 4=BOTHERS ME SOMEWHAT.
- 5=BOTHERS ME A GREAT DEAL.

- 54. Vaginal dryness

- 55. Irregular periods, bleeding
- 56. Depression
- 57. Swelling or fluid retention
- 58. Mood swings
- 59. Headaches
- 60. Fatigue-Tiredness
- 61. Painful or tender breasts

APPENDIX G

**MICHIGAN STATE
UNIVERSITY**

December 5, 1997

TO: Georgia Padonu
A230 Life Sciences Building

RE: IRB#: 97-729
TITLE: THE RELATIONSHIP BETWEEN THE PERCEPTION OF
MENOPAUSE AS A PROBLEM PERCEIVED CONTROL OF
MENOPAUSE SYMPTOMS; AND THE LIKELIHOOD TO TAKE
HORMONE REPLACEMENT THERAPY AMONG LOW-INCOME
AFRICAN AMERICAN WOMEN
REVISION REQUESTED: N/A
CATEGORY: 1-E
APPROVAL DATE: 11/26/97

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: UCRIHS 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.

**PROBLEMS/
CHANGES:** Should either of the following arise during the course of the work, investigators must notify UCRIHS 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.

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

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Kathryn M. Tripp



**OFFICE OF
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