The Use Of Hormone Replacement Therapy In Rural Southern Women

Angela Whitehead Campbell

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THE USE OF HORMONE REPLACEMENT THERAPY

IN RURAL SOUTHERN WOMEN

by

ANGELA WHITEHEAD CAMPBELL

A Thesis
Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Nursing
in the Division of Nursing
Mississippi University for Women

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The Use of Hormone Replacement Therapy

in Rural Southern Women

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Abstract

In the United States over 40 million women have experienced or have undergone menopause (Scharbo-Dehaan, 1996). With a decrease in estrogen levels associated with menopause, women encounter a number of increased health risks, such as osteoporosis, heart disease, cancer, and Alzheimer’s disease (Howell & Brodman-Grimm, 1999). The event of menopause varies for all women. The typical experience will include mood swings and sleep disturbance, skin alterations, urogenital atrophy, and or hot flashes and night sweats (Mayer & Linscott, 1995). Hormone replacement therapy (HRT) has been shown to improve the negative effects of menopause. With all the benefits of HRT, there are also controversies related to the risk such as endometrial and breast cancer (Scharbo-Dehaan, 1996). Moreover, only 20% of postmenopausal women receive HRT, and many of those women are noncompliant (Cumming & Cumming, 1998a). Therefore, this study examined the use or nonuse of HRT in rural southern women. Parse’s Human Becoming Theory was used as the conceptual framework for this
study. A researcher-designed questionnaire was the instrument used. The research questions were designed to assess the use and nonuse of HRT and the reasons for use or nonuse. The setting consisted of a beauty shop and a church in northeast Mississippi. Data analysis was done by descriptive statistics. The findings revealed that an almost equal amount of women were using HRT compared to those not using HRT. The major reason for use was health care provider instructed the women to use HRT and the reason for nonuse was that they did not think they needed the medication. Nurse practitioners should recognize the issue of nonuse of HRT and educate these women on the effects of menopause and associated long-term complications. Recommendations include using a more diverse sample to include a larger cultural population.
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Thank you, Mike, the love of my life, for your support, encouragement, and for making me laugh in the darkest moments.

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Success in the end eclipses the mistakes along the way.
# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>ix</td>
</tr>
</tbody>
</table>

## Chapter I. The Research Problem

- Establishment of the Problem ........................................ 2
- Significance to Nursing .................................................. 9
  - Practice .......................................................................... 9
  - Research .......................................................................... 9
  - Theory ............................................................................ 10
  - Education ......................................................................... 11
- Theoretical Framework ....................................................... 12
- Assumptions ........................................................................ 15
- Statement of the Problem ................................................... 15
- Research Questions ............................................................ 16
- Definition of Terms ............................................................ 16
- Summary ............................................................................ 17

## Chapter II. Review of the Literature

...................................................... 18

## Chapter III. The Method

- Design of the Study ........................................................... 49
- Setting, Population, and Design ......................................... 50
- Method of Data Collection ................................................ 51
  - Instrumentation ............................................................... 51
- Data Collection Procedure ................................................ 52
- Method of Data Analysis .................................................... 54
- Summary ............................................................................ 54
IV. The Findings ........................................... 55
   Description of Sample ............................... 55
   Results of Data Analysis .......................... 57
   Additional Findings ................................. 61
   Summary .............................................. 62
V. The Outcomes ........................................... 63
   Summary of Findings ................................ 63
   Discussion ........................................... 67
   Conclusions .......................................... 71
   Implications for Nursing ............................ 72
      Practice ........................................... 72
      Research .......................................... 73
      Theory ............................................. 73
      Education .......................................... 74
   Recommendations for Future Research ............ 74
References ................................................ 76
Appendix
   A. Campbell Hormone Replacement Therapy
      Questionnaire ...................................... 80
   B. Approval of Mississippi University for
      Women’s Committee on Use of Human
      Subjects in Experimentation ..................... 85
   C. Permission to Conduct Study .................... 87
   D. Informed Consent .................................. 92
List of Tables

Table  | Page
--- | ---
1. Demographic Ages of Women Respondents Expressed in Frequency and Percentage | 56
2. Menopausal Symptoms Experienced by Women Respondents Expressed in Frequency and Percentage | 58
3. The Use of Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage | 59
4. Reasons for Using Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage | 60
5. Reasons for Not Using Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage | 60
6. Reasons for Stopping Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage | 61
Chapter I
The Research Problem

Menopause has been defined as "a time in a woman's life when menstruation ceases to exist—along with her capability to bear children" (Howell & Brodman-Grimm, 1999, p. 3). It occurs at an average age of 51 years, can transpire anytime between the ages of 45 and 55, and has been reported to occur before the age of 40 years in 8% of women (Howell & Brodman-Grimm, 1999). In the United States over 40 million women have experienced or have undergone menopause (Scharbo-Dehaan, 1996).

Hormone replacement therapy (HRT) has been shown to improve the negative effects of menopause (Scharbo-Dehaan, 1996). Some of these effects are physical and emotional changes, hot flashes, night sweats, a decrease in libido, vaginal dryness, and depression. With a decrease in estrogen levels due to menopause, women encounter a number of increased health risks, such as osteoporosis, heart disease, cancer, and Alzheimer's disease, which may be diminished by HRT (Howell & Brodman-Grimm, 1999).
Only 20% of postmenopausal women receive HRT, and many of those women are noncompliant (Cumming & Cumming, 1998a). Newton et al. (1997) published a study in which 1,082 women were asked why they chose not to take or stopped taking HRT. The reasons most cited were that hormones were not needed and that menopause was a naturally occurring event. Side effects, physician's advice, fear of cancer, and not wanting to have any bleeding were also mentioned. A greater understanding of women's beliefs, culture, and decision-making process is needed related to the use or nonuse of HRT (Sarrel, 1999). Therefore, the focus of this study was to examine the use or nonuse of HRT in rural southern menopausal women.

Establishment of the Problem

Life expectancy for American women is 84 years of age. Three and a half million women will reach midlife in this decade. Due to the increasing number of women going through menopause, more research and understanding need to be done on the use of HRT by menopausal women (Scharbo-Dehaan, 1996).

Women experiencing menopause have the potential for major health problems as a result of the decrease in
estrogen. These difficulties include osteoporosis, heart
disease, colo-rectal cancer, and Alzheimer’s disease
(Howell & Brodman-Grimm, 1999). Twenty-five million
Americans have osteoporosis with 80% of those being women.
Furthermore, $10 million is being spent on complications
from osteoporosis yearly. Hip fractures will occur in
250,000 Americans this year. Of those, 20% will die and
another 60% will have to be institutionalized (Grisanti,
Willington, & Marrale, 1998).

Caucasian menopausal women lose between 2% and 5% of
bone mass per year. Forty to 50% of women over 55 years of
age suffer at least one fracture in their lifetime
(Grisanti et al., 1998). Of women ages 45 and older, 1.3
million fractures will occur due to osteoarthritis,
consequently nearly 20% of hip fracture clients do not
survive for more than a year (Howell & Brodman-Grimm,
1999).

The use of estrogen therapy has been shown to be the
most helpful practice to reduce the incidence and
progression of osteoporosis (Smith & Hughes, 1998). In the
Postmenopausal Estrogen Progestin Intervention Trial
(Grisanti et al., 1998), 875 postmenopausal women were
studied who utilized estrogen therapy. Bone mass at the
spine increased from 3.5 to 5% and hip bone mass by 1.7% with bone mineral density increasing in 95% of the participants in the first 3 years of estrogen therapy. Estrogen therapy initiated in early menopause has shown to have the greatest impact on increased bone density.

Moore and Noonman (1996) found that "cardiovascular disease is the leading cause of death in women in the United States, accounting for approximately 50% of all deaths in women older than 50" (p. 17). Low high-density lipoprotein and high low-density lipoprotein levels are risk factors of coronary artery disease and stroke. Estrogen replacement therapy has shown to account for a 40% to 50% reduction in coronary artery disease and a 31% decrease in the incidence of a stroke (Mayeaux & Johnson, 1996). Additionally, estrogen therapy has been shown to increase high-density lipoprotein and decrease low-density lipoprotein, therefore, reducing the risk of cardiovascular disease by one half (Moore & Noonman, 1996).

The second most often diagnosed cancer and the number three cause of cancer death in American women is colorectal cancer. It is projected that 7% of Americans will be diagnosed with this disease this year. The risk of
colo-rectal cancer increases with age. Recent studies have shown that women using HRT have a 20% lower risk of developing this disease than those who do not (Howell & Brodman-Grimm, 1999).

Alzheimer’s disease affects 4 million Americans today. Women are affected three times more than men with the majority of those affected over 65 years of age. Estrogen levels have been shown to be related to memory loss (Howell & Brodman-Grimm, 1999). Data in the Baltimore Longitudinal Study of Aging found that 54% of women using HRT had reduction in the development of Alzheimer’s disease with a higher dose and a longer duration of estrogen use reducing the risk (Grissanti et al., 1998).

When the body no longer manufactures enough hormones to manifest menstruation, menopause transpires. The event of menopause varies for all women. The typical experience will include mood swings and sleep disturbances, skin alterations, urogenital atrophy, and or hot flashes and night sweats (Mayer & Linscott, 1995). For some women, these symptoms are undesirable factors that can interfere with quality of life and activities of daily living. In addition, fluctuating hormones have shown to alternate a woman’s mood. Depression is specifically relevant to
decreased circulating estrogen. Women in menopausal clinics have reported increased mood swings during menopause (Cumming & Cumming, 1998a).

Skin changes occur with increased age due to a decrease in skin collagen. Estrogen therapy has been shown to decrease the appearance of wrinkles by increasing dermal and total skin thickness (Mayeaux & Johnson, 1996).

Vaginal irritation, pruritus, vaginitis, cystitis, urinary incontinence, and dyspareunia are common problems related to a decrease in estrogen. Vaginal lubrication decreases with the vaginal epithelium becoming atrophied. The anterior vagina loses tone related to factors associated with menopause, such as aging, decreased muscle stimulating, and the effects of child bearing. HRT has been shown to relieve urogenital atrophy symptoms (Moore & Noonman, 1996).

One of the most common complaints of menopausal women are hot flashes. They are the body’s reaction to decreased estrogen levels. Hot flashes occur in 75% of women experiencing menopause. Hot flashes consist of recurrent transient periods of (a) flushing, (b) sweating, (c) feeling of being hot often followed by chills, (d) palpitations, and (e) anxiety. HRT is the most utilized
solution to alleviate the symptoms of hot flashes (Shaw, 1997).

With all the benefits of HRT, there are also controversies related to the risk, such as endometrial and breast cancer. The use of estrogen without progestin added (unopposed estrogen) has been linked to the risk of endometrial cancer by 1½ to 2½ times in the first 3 years of use and a 10 times greater risk with longer utilization. With today's HRT that combines estrogen with 12 days of progestin therapy a month, the risk no longer exist (Scharbo-Dehaan, 1996).

Approximately 43,500 women died of breast cancer in the United States in 1998. Breast cancer is most common cancer in women and the second leading cause of death (Cummings & Cummings, 1998a). More than 50 studies have been done regarding the use of estrogen therapy related to breast cancer. The results have been controversial in relation to the dose selection and the duration of the therapy. The use of estrogen therapy for less than 10 years is not related to cancer, but with a longer duration of use a 30% to 50% increase incidence has been found (Grisanti et al., 1998). Another study published by the Collaborative Group on Hormonal Factors and Breast Cancer
involving more than 160,000 women worldwide over a 25-year period indicated an increase in the diagnosis of breast cancer for women receiving HRT for over 5 years. Those who criticized the study pointed out that women who used HRT generally also have a mammography yearly; therefore, the breast cancer is found earlier than in women who may not have the cancer detected until a lump is felt. The type or dosage of estrogen was not found to influence the risk of breast cancer. The risk of cancer from taking HRT vanishes after 5 years from stopping the medication (Cumming & Cumming, 1998b). Regardless of the risk, the death of women from heart disease is 10 times greater than the death rate from breast cancer (Howell & Brodman-Grimm, 1999).

Perceptions related to HRT are related to rumor than the facts. Most women are informed about the benefits of reducing the symptoms of menopause but have inaccurate or little knowledge of the long-term benefits related to a decrease in heart disease and osteoporosis. Many women focus on the risk of cancer which may be over exaggerated and do not realize that the benefits of HRT outweigh this risk (Sarrel, 1999).
Significance to Nursing

The significance of this study as related to nursing includes practice, research, theory, and education. A discussion of rural southern women in relation to these aspects of nursing follows:

Practice. This study will enhance the nurse practitioner’s knowledge of the use of HRT in rural southern women. When women are experiencing symptoms of menopause, they typically turn to the health care provider for assistance. The nurse practitioner often assumes the role of counselor, educator, and partner in helping to individualize the management of HRT. The nurse practitioner must also take into consideration the women’s health care beliefs and concerns related to menopause and the use of HRT. This study will broaden the practitioners’ information on the reasons behind the use or nonuse of HRT in the rural southern woman.

Research. Although extensive research exists on HRT, none was found on the use in rural southern women. The literature that exists often has conflicting and confusing data related to the benefit of symptom relief and the risk of cancer. The literature also involves the long-term benefits associated with cardiovascular disease and
Osteoporosis. Conclusions that are made today are challenged many times by new research. Nurse practitioners must be attentive to new developments. This study will enlighten research related to the use of HRT in a rural southern community. All practice is supported by research; therefore, the findings in this study can be utilized in the primary care setting.

Theory. Parse's Human Becoming Theory is pertinent as it relates to the effects of menopause and the use of HRT. The goal in the methodology is the quality of life as defined by the person and the family. What is described as quality of life for one person may be different for another individual (Parse, 1992). To Parse (1995), quality of life is human's living moment to moment as the changing patterns of shifting perspectives weave the fabric of life as it connects with the universe. The nurse practitioner who practices the human becoming theory must center on the significance of the client's hopes and dreams as described by them. The health care provider has the opportunity to co-participate with the client in the "whatness" of life (Daly, Mitchell, & Jonas-Simpson, 1996). When advising a client concerning HRT, the nurse practitioner needs to be in tune with the beliefs of the client.
Education. Research in nursing is the backbone of nursing education. What nurse practitioners learn from research is generated into material that guides what is taught in the primary care setting to the clients. The primary care provider must be equipped with knowledge related to the culture in which he or she is practicing. In this study, data were obtained from rural southern women. These data can educate the practitioner in beliefs and concerns related to this population of women. Other research has shown that only 20% of postmenopausal women receive HRT. Many of those women are noncompliant. Health care providers need to advise women on the risk and benefits and individualize therapy for each person. Ongoing counseling and education may enhance adherence and lessen fears and doubts concerning HRT (Cumming & Cumming, 1998a). Nurse practitioners should use the opportunity associated with education related to HRT to emphasize the promotion of other health behaviors. Yearly mammograms and breast examination to include compliance with self-breast exam, annual pelvic examination that includes a Papanicolaou (Pap) test are a few of the educational aspects of a nurse practitioner’s role (Moore & Noonman, 1996).
Theoretical Framework

Parse's (1995) Theory of Human Becoming was used to guide this research study. The Human Becoming Theory consists of three themes: meaning, rhythmicity, and contransendence. Each theme includes three principles, referred to as assumptions. Nine assumptions make up the major concepts and definitions of the Human Becoming Theory (Parse, 1995).

The first principle, meaning, consists of the concepts of imaging, valuing, and languaging. Individuals gain meaning of what is real for them through experiences and choices that they make daily. People use language at every moment, from speaking to body language when they are silent. Valuing is what the individual cherishes, meaning changes as life is experienced (Parse, 1995).

The second principle, rhythmicity, consists of the concepts of revealing-concealing, enabling-limiting, and connecting-separating. Humans live in a paradox of opposites, each unable to exist without the other. Individuals reveal and are thereby concealing. Humans are enabled and limited in the same breath by choices. Each choice has limitations and opportunities. In the universe
humans connect and separate in moving apart and coming together all at one time in the rhythm of the universe (Parse, 1995).

The third principle, contransendence, has three concepts consisting of powering, originating, and transforming. People are unique human beings, wanting to be different but at the same time striving to be the same. Paths that are chosen shed a different light on how one processes the familiar (Parse, 1995).

Parse’s (1995) Theory of Human Becoming is important in relation to the experience a woman encounters regarding menopause. The central phenomenon is the relationships among the human, the universe, and health. Health is defined as the quality of life experienced. The individual defines quality of life. The human, himself or herself, describes what is meaningful in life. The quality of one’s becoming represents how the person represents his or her priorities (Parse, 1995). Research studies have shown that the utilization of HRT in relation to menopause increases quality of life. The assessment of quality of life has become frequently used when measuring the outcome of treatment (Limouzin-Lamothe, Mairon, Joyce, & Le Gal, 1994).
Many women who realize that menopause is on the horizon feel the need to reevaluate their entire lives. Attitude toward the inevitable makes a great difference in how menopause will be experienced. Women look back on their accomplishments and realize that a part of lives has come to an end. Looking forward to the future is the best way to minimize the difficulties that may later develop (Howell & Brodman-Grimm, 1999). Humans freely choose ways to react to changes in situations. While illuminating, the woman will look at who she was prior to menopause, who she is presently, and who she will be in the future (Parse, 1995).

The goal of the nurse’s practice, as described by Parse, is to participate in cocreating quality of life. Life is full of changes such as menopause. Some women will look at this as a positive aspect while others will find this to be a challenging time in their life. The health care provider must focus on what this situation means to each individual. Quality of life can be enhanced when health care providers put into practice Parse’s Human Becoming Theory (Parse, 1995).
Assumptions

For the purpose of this study, the following assumptions were made:

1. Menopause symptoms impact women’s quality of life.
2. Humans freely choose ways to react to changes in situations.
3. Health practices can be identified.
4. Environmental factors can impact health practices.

Statement of the Problem

Menopause has been shown to have a significant present and future impact on women. Each woman reacts differently to menopause. Women’s quality of life can be affected by the number and degree of the symptoms. Many studies have focused on the utilization of HRT for the relief of symptoms and the long-term benefits related to osteoporosis and heart disease (Mayer & Linscott, 1995).

Much research has been reported on estimates of HRT use. Despite the potential for protection against osteoporosis and cardiovascular disease, noncompliance has been documented in the United States and elsewhere (Salamone, Pressman, Seeley, & Cauley, 1996). Data to date on the use of HRT have been derived from specific
communities or occupational groups and may not be generalizable (Brett & Madans, 1997). The existing research studies have looked at women based on race, ethnicity, or culture when examining the practice of HRT. Rural southern women’s HRT practices have not been identified. For the purpose of this study, the use of HRT in southern rural menopausal women will be explored.

Research Questions

This study was guided by three questions:

1. What is the prevalence of hormone replacement therapy in rural southern menopausal women?
2. What reasons do rural southern menopausal women cite for using hormone replacement therapy?
3. What reasons do rural southern menopausal women cite for not using hormone replacement therapy?

Definition of Terms

For the purpose of this study, the following terms were identified:

Hormone replacement therapy (HRT): Theoretical: the use of exogenous synthetic estrogen and progestin in combination. Operational: the ingestion of estrogen (ERT) or HRT by rural menopausal women.
A review of the literature revealed many studies on the incidence of menopause and the use of hormone replacement therapy (HRT). Many studies explored the risk and benefits associated with the utilization of the medication. Other studies revealed women's beliefs and decisions related to HRT. Studies were conducted in a variety of geographic areas. However, little research was found which addressed the utilization of HRT in the rural South. Therefore, the focus of this selected review of the literature was studies related to the risk, benefits, and utilization of HRT.

In a study by Utian and Boggs (1999), perceptions of menopause were examined. The purpose of the study was to determine the effects of menopause on women. The research question that guided the study was as follows: How does menopause affect women?

The researchers used a descriptive longitudinal design with a convenience sample of 752 American women.
between the ages of 50 and 65 years in 1993, 1997, and 1998. Since the results of the 1993 and 1997 surveys were previously reported, this review includes only the results from the 1998 telephone survey. The survey used both open- and closed-ended questions (Utian & Boggs, 1999).

The women were asked how old they were when they experienced their last natural period. In women ages 50 to 65, the average age at last period was 49 years. When asked if they had a surgical removal of the uterus (hysterectomy), 45% of the women ages 50 to 65 responded that they had a hysterectomy. The women were asked if specific areas of their lives had changed since experiencing menopause. More than half stated they had not noted changes in work, home life, sexual relations, friendships, or ability to focus on hobbies. Approximately 50% reported no change in their present activities of daily living although 26% experienced deterioration.

Twenty-four percent described their health as better since experiencing menopause. The majority (51%) showed no change in sexual relations. In regard to quality of life, those women who experienced a hysterectomy expressed a better quality of life than those who did not. Seventy percent of those women who had the hysterectomy were
taking HRT, and 41% of the women who had natural menopause were taking HRT. Fifty-one percent of the women had modified their diet. Fourteen percent stated they thought there was more information available to them than the previous generation. Sixteen percent of the women reported that they would talk to the next generation along long-term effects of menopause. A majority of the women (60%) did not feel their mother prepared them for menopause (Utian & Boggs, 1999).

In summary, the majority of women did not find menopause to be a negative aspect of their life. They felt they had a better understanding of menopause in respect to earlier generations but were not educated by their mothers. A majority were using HRT but did talk about HRT use to others. Many did not discuss the long-term effects but wanted to acknowledge this concern with the future generation (Utian & Boggs, 1999). This study is germane to the current researcher’s endeavor in that menopausal women have a better understanding than previous generations and with more education and communication the long-term complications of menopause can be examined and rectified with the use of HRT.
Menopause is regarded by many women as neither good nor bad but as a naturally occurring phenomenon. Studies have shown that women have optimistic or impartial reactions to the event of menopause. Daly et al. (1993) uncovered a different reflection of the menopausal experience. The purpose of the research was to evaluate the quality of life of menopausal women. The research question was as follows: Do menopausal symptoms impact quality of life?

Menopausal symptoms were defined as mild and severe. Daly et al. (1993) defined mild menopausal symptoms as (a) having occasional hot flashes once or twice daily with occasional night sweats, (b) concentration, confidence, and coping skills decreasing with feelings of tiredness increasing, or (c) painful dry vagina. Severe symptoms were defined as (a) severe hot flashes hourly with nightly sweating causing the need to change nightgown, (b) lack of concentration, confidence, and coping skills causing problems at home, or (c) complete disinterest in sex.

The design used was a cross-sectional nonexperimental method. The researchers used a convenience sample and recruited 63 women between the ages of 45 and 60 years from three clinics. Data were collected from the women
either before or after a medical appointment. Two methods were used to determine quality of life. The first method was referred to as the rating scale for which the subject picked a point on a scale that expressed the quality of life identified with the particular health state that was in question. The second method, known as the time tradeoff method, asked the subjects to determine the tradeoff between life lived with reduced health or less years lived with normal health. The women listened to a description of symptoms of mild menopause, then rated quality of life as if they were experiencing these symptoms from a scale of 0 to 10 with 0 as normal health and 10 being dead. Subjects then listened to a description of the severe symptoms and rated quality of life. Finally, subjects again heard the mild symptoms and were asked to determine if they would choose between 5 years with these symptoms or a lesser number of years with a normal life and the same action with severe symptoms. The last part of the questionnaire included some general questions pertaining to the subject’s own history of menopausal symptoms and their use or nonuse of HRT (Daly et al., 1993).

To analyze the data the researchers divided the sample (N = 63) into three subgroups. The first group
(nonusers) were women who had not used HRT (n = 21). Of these 21, 16 had mild symptoms, 4 had severe symptoms, and one had no symptoms. The second subgroup (users-mild) consisted of women who had taken hormone replacement and experienced mild symptoms (n = 17). The last group (users-severe) was women with severe symptoms who had taken HRT (n = 25) (Daly et al., 1993).

Daly et al. (1993) determined the mean age of the sample was 52 years. The women who experienced menopausal symptoms stated that the description read to them coincided with their own symptoms. In the ratings scale the subjects' scores indicated a low quality of life associated with menopausal symptoms. Subjects who had used HRT indicated they would be willing to trade off years for a better quality of life. For those women who suffered severe symptoms, quality of life improved after taking HRT. Daly et al. (1993) stated "the time trade off approach may be a truer reflection of the perceived reduction in quality of life associated with menopausal symptoms" (p. 837).

Daly et al. (1993) used a table to signify quality-of-life values related to HRT and severity of symptoms. A 95% confidence level was used. The table indicated that
quality-of-life ratings improved, especially with women who had experienced severe symptoms. The mean increase was 0.56 for the utility value. For the women with milder symptoms, the mean increase was 0.18. Two out of 42 reported a decrease in quality of life, but they had been on the treatment for less than 6 months.

In summary, a greater number of women experienced positive quality-of-life results from the utilization of HRT. Women felt that quality of life is diminished by the onset of menopausal symptoms (Daly et al., 1993). The study was germane to the current researcher's endeavors in that menopausal symptoms have been found to decrease the quality of life for menopausal women. Also, HRT can increase quality of life or lessen those symptoms of menopause.

Menopausal symptoms can be treated by two different methods, either symptomatically or by using HRT. Limouzin-Lamothe, Mairon, Joyce, and Le Gal (1994) sought to determine if HRT influenced quality of life of menopausal women. The purpose of the research was to establish the effects of HRT on quality of life. The researcher introduced the need to evaluate how HRT impacted quality of life of menopausal women. The researchers' question was
as follows: Does hormone replacement therapy impact quality of life of menopausal women?

Limouzin-Lamothe et al. (1994) defined quality of life as a variety of psychological and physiological traits and boundaries that portray a person's capacity to endure and enjoy life. HRT was described as either transdermal estradiol in association with chormadinone acetate or the ingestion of veralipride.

The design used was descriptive longitudinal. The researchers used convenience sampling to enroll 101 practicing physicians with 499 women who were assigned to two groups in the randomized, open trial study. The women had experienced menopause either naturally or surgically and had amenorrhea ≥ 3 months but < 3 years. Additional criteria for inclusion were symptoms of hot flashes and night sweats. None of the subjects had been treated with estrogen or HRT in the past. Four-hundred seventy-nine of the 499 subjects completed the study. Two-hundred forty received the HRT, and 239 received the symptomatic treatment (Limouzin-Lamothe et al., 1994).

Data were collected from the women on four separate occasions. The four sessions included (a) before treatment to verify criteria to participate in the study, physical
examination, and mammography, (b) 3 weeks after the first visit to start treatment for the subjects participating in the study, (c) 3 months after treatment started for monitoring, and (d) 6 months after treatment for the final assessment. The subjects were either given a continuous dosage of Estraderm TTS 50 plus Chlormadinone acetate 10 mg daily for the first 12 days of every month or veralipride 100 mg daily for the first 20 days of each month. The dosage of Estraderm was individualized as the physician saw necessary (Limouzin-Lamothe et al., 1994).

The women completed questionnaires after visits two, three, and four and mailed them to the coordinating center. The questionnaire, the Menopausal Global Health Status Indicator, incorporated 112 questions. Ten symptoms were rated on a 4-point scale from 10 as no menopausal symptoms to 40 having all 10 menopausal symptoms. The t test was utilized for the between-group comparison. Quality of life before the treatment and after the treatment was analyzed by covariance analysis. Chi square was used to assess for global efficacy and global tolerance. Clinical efficacy was analyzed with the 5% level, and the 1% level was used to assess quality of life (Limouzin-Lamothe et al., 1994).
Limouzin-Lamothe et al. (1994) determined at the end of the treatment, HRT ($p < .0001$) was favored. An overall increase in satisfaction ($p < .001$) also was noted on the Sexual Behavior Questionnaire as the global score was higher with the use of HRT ($p = .04$) on the inclusion visit. Quality of life improved at 3 months for both groups with a further increase in 6 months. Global differences were higher after 6 months with the use of HRT. Hot flash symptoms decreased in 81% of the women receiving HRT and 44% in the women receiving the symptomatic treatment.

Limouzin-Lamothe et al. (1994) stated that "the results of this multicenter, open randomized trial showed that HRT improves the quality of life of menopausal women and also showed the superiority of Estraderm TTS over symptomatic treatment in regard to clinical efficacy" (p. 621). The researchers determined that quality of life improved after 6 months regardless of the method used although enhancement of quality of life was greater with HRT. The reviewed study is germane to the current researcher's endeavor in that HRT has been found to increase quality of life for menopausal women. Menopause affects women's lives in varying degrees and its utility
may differ from woman to woman. The current study was conducted in an effort to determine the use or nonuse of HRT.

Researchers have asserted that menopausal symptoms affect quality of life. Wiklund, Karlberg, and Mattsson (1993) hypothesized that HRT had considerable effect on quality of life of menopausal women. The researchers introduced the study problem as having to evaluate how HRT impacted quality of life of menopausal women. The research question was as follows: Does estradiol therapy affect quality of life of menopausal women? Quality of life was defined as the ability to function in activities of daily living with feelings of general well-being. Estradiol therapy was defined as estrogen therapy given in transdermal form.

The design used was a randomized clinical trial method. The researchers used a convenience sampling design and recruited 242 women between the ages of 45 and 65 years from 15 clinics. Data were collected from the women who volunteered during a visit to the gynecologist or answered an advertisement in the local newspaper. The women had amenorrhea for at least 6 months. Women were excluded who were menopausal due to surgery, had current
life-threatening diseases, certain medical conditions, or had a history of psychological disorders (Wiklund et al., 1993).

The women were randomly and blindly placed in two groups. The women \( N = 223 \) were divided as \( n = 112 \) receiving transdermal estradiol therapy of 50 mg/24 hours or \( n = 111 \) receiving the placebo patches twice weekly. The study was continued over a 12-week period. Women were assessed at baseline and at 6 and 12 weeks. The Psychological General Well-Being Index was utilized as the questionnaire. The stringent alpha level of 0.01 was chosen (Wiklund et al., 1993).

Five women receiving the placebo and an equal number of women receiving estradiol experienced symptoms of menopause related to the therapy. There was no difference in the women in the aspect of breakthrough bleeding. Wiklund et al. (1993), using the Nottingham Health Profile, indicated that sleep and emotions improved with both groups of women, but the women using estradiol therapy had a greater increase. Those women using estradiol therapy had a better score concerning anxiety, well-being, vitality, and self-control than those women on the placebo. Women using estradiol also had significant
improvements on the Women’s Health Questionnaire. Sexual enhancement improved as measured by the McCoy Sex Scale among those women using the transdermal estradiol patch (p < .0001).

Wiklund et al. (1993) found that “the effect of transdermal estradiol therapy was considerably more pronounced, as assessed both objectively and subjectively, compared with that of placebo” (p. 829). Health problems identified as menopausal symptoms that interfere with daily activities were modified with the use of transdermal estradiol therapy. Despite the contraindications of HRT, the utilization of these medications has the potential to nullify those menopausal symptoms that decrease a woman’s quality of life. This study was germane to the current researcher’s endeavor in that HRT has been found to increase the quality of life of menopausal women, yet little is known about the utility and outcomes of HRT among southern rural menopausal women.

Newton et al. (1997) sought to explain the decision-making process of women related to the use of HRT. The purpose of the study was to investigate reasons why women initiate, discontinue, or do not use HRT. The following research questions guided this study:
1. What were the reasons for taking HRT?
2. What were the reasons for discontinuing HRT?

Newton et al. (1997) defined HRT as estrogen replacement therapy with or without progestins. Reasons for taking or not taking HRT were defined as (a) menopausal symptoms, (b) osteoporosis prevention, (c) physician advice, (d) fear of cancer, (e) not wanting menstrual periods or bleeding, (f) hormones not being needed, and (g) belief that menopause was a natural event.

The design used was a cross-sectional nonexperimental method. The researchers used a convenience sampling design and recruited 1,083 postmenopausal women 50 years of age or older obtained from a medical care facility in a western state. A telephone survey was conducted. The participants were asked questions regarding demographics, menopausal status, HRT practices, reasons for use or nonuse of HRT, changes in the utilization of HRT, and if HRT had been stopped (Newton et al., 1997).

Data analysis was conducted using chi-square tests. Age-adjusted proportions were used to determine the differences in the reasons for initiating or not initiating HRT or for changing or stopping HRT. Logistic regression was then conducted to compare the likelihood of
being a current or past user of HRT to never having used HRT (Newton et al., 1997).

Participants were categorized as follows: (a) current users (42.5%), (b) past users (20.9%), and (c) never having taken HRT (36.6%). Top reasons given by current users and past users for initiating HRT were menopause-related symptoms (48.7%), prevention of osteoporosis (32.6%) and recommended by physician (29.6%). One hundred forty-five (31.5%) of the current users reported a need to alter the use of HRT due to no improvement of menopausal symptoms (29.0%), physician advice (13.1%), or side effects (26.9%). Of the past users, 53.8% stopped on their own, and 46.2% stopped with the advice of a physician. Reasons cited for discontinuation ranged from 39% because of or feared side effects, 15.2% because of withdrawal bleeding, 22.9% upon a physician’s advice, and 15.4% due to the fear of cancer. Among women who had never started HRT, 33.1% had considered utilization, 46.6% had discussed usage with a health care provider, and 5.0% had not gotten the prescription filled. Reasons cited for never starting HRT were thinking hormones were not needed (49.9%) and considering menopause a natural event (17.9%). Age did not
Newton et al. (1997) concluded that menopausal symptoms, osteoporosis, and a physician’s advice were associated with the use of HRT. The benefit related to cardiovasculature was not noted by the women. Therefore, the researchers recommended more education and counseling by health care providers to emphasize the risks and benefits of HRT in order for clients to have a better understanding before decisions are made. The study was germane to the current research as it illuminated the variances in knowledge and risk factors associated with HRT.

Salamone et al. (1996) sought to understand the low utilization of HRT in older menopausal women and to determine the reason for use or nonuse. The research question was as follows: Why do older menopausal women not take HRT? Menopausal women was defined as women ages 65 and older. HRT was defined as oral estrogen.

The design used was descriptive longitudinal. The researchers used convenience sampling including 7,667 post-menopausal women ages 65 and older who had participated in a previous estrogen questionnaire from
1986 to 1988 in four clinics located in the northern United States. This particular survey took place on the third visit to clinic between 1990 and 1992. The questionnaire included demographics, medical history, family and personal fracture history, activity, and alcohol consumption. Three closed-ended questions related to estrogen therapy also were listed on the questionnaire (Salamone et al., 1996).

When answering questions requiring multiple responses, dichotomous variables (yes or no) were created to compare percentages of positive responses. For single-response questions, frequency distributions were used. Data were analyzed using percentage distributions and chi-square tests and the Student t tests (Salamone et al., 1996).

Findings revealed that 17.2% of the sample was composed of current estrogen users. Primary reasons for initiating estrogen therapy among current users were hysterectomy (43.5%), menopausal symptoms (37.3%), physician recommendation (38.7%), and prevention of osteoporosis (33.6%). Heart disease prevention was a reason for 1.5% of estrogen users. Among previous users (27.2%) of the sample, the same reasons were given for the
initiation of estrogen therapy. Reasons for discontinuing estrogen were 30.5% from thinking they did not need it, 16.4% did not understand the side effects, and 15.3% thought the medication might be harmful. For those women who had never taken estrogen (55.6% of the sample), their reasons included believing the medication might be harmful (38.1%) and thinking they need it (29.5%). Physicians had counseled only 4.1% of these nonusers on the need for estrogen replacement therapy (Salamone et al., 1996).

In summary, Salamone et al. (1996) found that women who were currently on estrogen replacement therapy were more aware of the long-term benefits of estrogen therapy with the past users and nonusers being afraid of the risk. Continual education of not only the clients but also health care providers is necessary to accomplish the goal of long-term benefits that are needed for menopausal women. The study was germane to the current research as it demonstrated that all menopausal women regardless of age need education on the risk and benefits of HRT. Information related to the use and education variables is scarce regarding southern rural menopausal women.

Postmenopausal estrogen deficiency increases cardiovascular risk, and heart disease is the leading
cause of death among postmenopausal women. Menopausal women who are treated with HRT have a lower rate of coronary heart disease (CHD). HRT has been shown to alter women’s lipid profiles but effects on cardiac structure and function are still uncertain. Therefore, the purpose of Kamali, Muller, Lang, and Clapp’s (2000) study was to evaluate cardiovascular function in perimenopausal women before and during the first 21 weeks of combined HRT. The hypothesis for the study was combined HRT alters both central and peripheral cardiovascular aspects during the first months of therapy.

Kamali et al. (2000) designed an experimental cohort study using convenience sampling and recruited 6 women between the ages of 50 and 55 from a newspaper solicitation. Initial heart rate, systemic blood pressure, left ventricular volumes, venous capacitance and compliance, and hormonal levels were obtained. These measurements were obtained for 3 weeks prior to initiation of HRT. After 3 weeks the women were given estradiol 2 mg on days 1-21 and 1 mg on days 23-28 of the cycle. Additional measurements were obtained during the time when the women were only receiving 2 mg’s of estradiol on weeks 1, 5, 9, and 21.
Data were analyzed by repeated-measures analysis of variance to determine if any changes occurred. Comparison tests to examine within-group differences were conducted post hoc. Tukey's exact t tests were used for pairwise comparisons, and the Dunnett test was performed for the multiple comparison values against the control values. The Friedman repeated-measures analysis was used if the distribution was not normal. Linear regression, with an alpha of < .05 and all data presented as mean plus or minus standard error of the mean, was used to determine significant relationships between the cardiovascular aspects and hormonal parameters (Kamali et al., 2000).

Findings revealed that no changes occurred in the 3 weeks prior to initiation of HRT. Heart rate, blood pressure, venous capacitance, or venous compliance did not alter during the 21-week treatment. By the ninth week end-diastolic volume had risen 18%, and stroke volume had risen by 19%. Because of these increases cardiac output rose 18% in the ninth week, and 57% of that was during the first 5 weeks of therapy. Total peripheral resistance fell from 1293 ± 64 kg/m to 1097 ± 53 dyne (cm. sec -5) (p < .01) during 9 weeks of therapy. Serum estradiol levels rose three times as much (p < .001). Correlations were
significant between estradiol concentration and end-diastolic volume ($r^2 = 0.49$), stroke volume ($r^2 = 0.63$), and mean arterial pressure ($r^2 = 0.87$) after 9 weeks of HRT. Correlations between estradiol concentration and cardiac output ($r^2 = 0.14$) and total peripheral resistance ($r^2 = -0.23$) were significant (Kamali et al., 2000).

Kamali et al. (2000) determined that structural and functional changes begin in the first month of HRT and continue to increase in the second month. This study is germane to the current research study in that HRT has been shown to enhance the cardiovascular system in menopausal women, yet it remains unknown if southern rural menopausal women know or use this information when deciding to institute HRT.

Following menopause rapid bone loss is accelerated from a deficiency in estrogen from ovarian failure. Among women ages 50 and older, 20% have osteoporosis in both the hip and spine. Estrogen therapy protects women from bone loss and fracture. HRT is the single best prevention of osteoporosis, but questions still remain related to the effects of HRT on bone mineral density (BMD). Bush et al. (1996) examined the effects of HRT on BMD in the hip and
spine of postmenopausal women. How does HRT affect BMD was the researchers' question.

The design used was an experimental cross-sequential method. The researchers used convenience sampling to recruit 875 women between the ages of 45 and 64 years from seven clinical centers. The women were randomly divided into 5 groups. The groups were as follows with a 28-day medication regimen: (a) placebo, (b) conjugated equine estrogen 0.625 mg daily, (c) estrogen 0.625 mg daily with medroxyprogesterone acetate 10 mg daily for days 1-12, (d) estrogen 0.625 mg daily with medroxyprogesterone 2.5 mg daily, and (e) estrogen 0.625 mg daily with micronized progesterone 200 mg for days 1-12. The women returned to the clinic three times the first year and twice yearly for the next 2 years. Menopausal symptoms, vaginal bleeding, medication used and adherence to the assigned medications, side effects, and fractures were assessed at each visit. A questionnaire including demographics, lifestyle, and prior use of HRT was given at each visit. Lifestyle characteristics included alcohol consumption, exercise, smoking, and calcium intake (Bush et al., 1996).

Statistical analysis included observational measures to calculate the percentile change from baseline of each
woman. In the first stage unadjusted mean BMD was
determined for all the women. Unadjusted percentile
changes in the mean BMD at the hip and spine were examined
graphically at each visit for all women. In the second
stage, both average and annual percentile changes were
analyzed in a repeated measures model using PROC MIXED to
test pairwise differences between treatment regimes for
all women. With multiple comparisons, significance levels
were not adjusted. In the third stage, which included only
those women who adhered to the entire length of the
treatment, unadjusted mean percentile changes from
baseline to the 36-month visit were assessed. This change
was compared with factors, such as age, ethnicity,
smoking, alcohol consumption, calcium intake, exercise,
body size, and prior HRT use. The factors were added to a
general linear model with the treatment regimen, clinic
center, hysterectomy status, and baseline BMD to determine
if the factors accounted for any variation in the change
of BMD from baseline (Bush et al., 1996).

Bush et al. (1996) found that at the end of the study
78% of the women were using the combination treatment, 74%
of the women were using the placebo, and 56% of the women
using only estrogen were adherent to the therapy. For all
participants, women given any type of therapy had a mean total increase in BMD in their spine of 3.5 to 5.0% as compared to the women receiving the placebo who lost BMD with a mean total decrease of 1.8% at the end of the 3 years. Women who were taking the combined hormone therapy had an increase of 5.0% as compared to the women who took other active treatments (3.8%). Women using the placebo lost 1.7% BMD compared to the active treatment women who increased their hip BMD by 1.7%. For those women who adhered to entire length of the treatment, women using an active treatment had an increase in spinal BMD of 5.1% and a hip BMD increase of 2.3%. Those women taking the placebo had a decrease in spinal BMD of 2.8% and hip BMD decrease of 2.2%.

In summary, Bush et al. (1996) determined that regardless of factors that may influence bone loss, HRT increased BMD in the spine and hip over a 3-year period. Women who took only the placebo were noted to lose BMD in both the hip and spine. This research is germane to the current research in that HRT has been shown to be of benefit for all postmenopausal women. However, little is known about the utility of HRT in the population of rural southern menopausal women examined in the current study.
Many studies have been conducted regarding the use of HRT and breast cancer. The Collaborative Group on Hormonal Factors in Breast Cancer (1997) brought together many studies on this subject. The purpose of the meta-analysis was to evaluate data related to the risk of breast cancer and the use of HRT. The researchers introduced the problem as the need to evaluate if there was a higher risk of breast cancer when using HRT. Does the utilization of HRT increase the risk of breast cancer was the researchers' question.

The Collaborative Group on Hormonal Factors in Breast Cancer (1997) used a cohort design to compare the use of HRT against the risk of breast cancer. A convenience sample from 51 prior studies, including 161,116 women from 21 countries were utilized. Data collected in the studies from 1976 to 1992 included demographics, reproductive history, use of HRT, age of cessation of menstruation and reason for cessation, gynecological surgery, height, weight, and age at menarche. The women were placed in two groups, women with breast cancer \( (n = 52,705) \) and women without breast cancer \( (n = 108,411) \). Women also were classified into groups according to whether or not their
ovaries were likely to be producing hormones around the time the breast cancer was diagnosed.

Mantel-Haenszel stratification techniques were conducted to analyze the risk of breast cancer in relation to HRT use. The stratum-specific quantities calculated were the standard observed minus expected number of women with breast cancer and their variances and covariances. These values yielded both statistical descriptions and statistical probabilities. Risk estimates also were obtained by the one-step method, along with standard errors and confidence intervals (Collaborative Group on Hormonal Factors in Breast Cancer, 1997).

The Collaborative Group on Hormonal Factors in Breast Cancer (1997) found that 41% of the women were premenopausal, 3% were perimenopausal, and 42% were postmenopausal. Of the postmenopausal women, 84% had natural menopause and 16% had surgical menopause. The median age of natural menopause was 50. The median age of surgical menopause was 44. Among women who had never used HRT, the risk of breast cancer was lower in postmenopausal women than premenopausal women, but the relative risk increased with increasing age at menopause. Breast cancer risk was similar among those with natural menopause (2.9%)
and surgical menopause (2.4%). Women who had experienced menopause 1 to 4 years prior to the diagnosis of breast cancer had a lower risk than premenopausal women. The risk of breast cancer among postmenopausal women decreased 2.7% each year after menopause. The trend was similar in relation to surgical versus natural menopause. Thus, in this analysis, the risk of breast cancer for those women who had never used HRT is related to menopausal status and the time of menopause, whether it was natural or surgically induced.

Of the women who had a diagnosis of breast cancer, 34% had used HRT at some time. The median age at diagnosis of breast cancer was 59. In all the combined studies a risk of breast cancer was noted with the use of HRT. Time duration of use ranged from less than one year (26%) to 10 years or longer (15%). The length of time utilized corresponded with a greater risk. In contrast, for women who had stopped using HRT for 5 years, the risk decreased (Collaborative Group on Hormonal Factors in Breast Cancer, 1997).

In summary, the Collaborative Group on Hormonal Factors in Breast Cancer (1997) found that the risk of breast cancer was higher in women who had used HRT as
compared to those who had not. The risk increased with a longer duration of usage but was reduced when HRT was stopped. Postmenopausal women had a lower risk of breast cancer than premenopausal women. There was strong evidence to suggest a link between the time of menopause and breast cancer diagnosis. Women who used HRT were more likely to have their breasts examined than those who did not take HRT; therefore, cancer may have been detected earlier among those women. This study was germane to the current research in that a risk of breast cancer is one of the reasons women express as a reason for not taking HRT.

Johannes, Crawford, Posner, and McKinlay (1994) sought to investigate the use of HRT in middle-aged women, noting that estrogen and progestin therapy had been increasing since the 1980s. Trends had been influenced related to the risk of endometrial and breast cancer and the benefits associated with cardiovascular disease and osteoporosis. The researchers had three objectives. The first was to calculate the prevalence and incidence of HRT utilization related to menopausal status. The second objective was to determine patterns of HRT utilization related to menopausal status, and the final objective was to examine reasons for initiating or discontinuing HRT.
Menopausal status was identified in three categories. Naturally menopausal women were those who had experienced at least 12 months of amenorrhea. Surgically menopausal women were those who had experienced cessation of menses by removal of the uterus or ovaries. Those women who had menses in the last 12 months, but not in the last 3 months, or had cycle irregularity were classified as perimenopausal, and women who had periods in the 3 months prior to the study were premenopausal. HRT was defined as hormonal pill use for menopausal or aging symptoms.

Johannes et al. (1994) used a longitudinal cohort method. Convenience sampling was used to recruit 2,424 women ages 45 to 55 in an eastern state. Six telephone interviews were conducted 9 months apart from 1981 to 1987. Descriptive analyses were used to compare trends. Univariate comparisons were used when a woman initiated HRT during the study. Proportions were compared in two groups by chi-square analysis. Logistic regression models examined factors related to a change in HRT.

Use or nonuse of HRT was analyzed on 2,224 of the 2,425 women in the study. Two hundred seventy-four (12.3%) reported using HRT, whereas 1,950 (87.7%) did not use HRT during the study. Prevalence of HRT was higher among those
with surgical menopause than with natural menopause. An increase in the combination of estrogen and progestin was seen over the course of the study. Prevalence was low in premenopausal women. An increase from 33.3% to 52.4% was seen in women who just had surgery and declined with older surgical menopause from 21.4% to 6.9%. Continual patterns of use was seen in surgically menopausal women (62%). Hot flashes were related to initiation of HRT among those with natural menopause. Sixty-two percent of the reasoning for initiating HRT was hot flashes. Only 3.7% began therapy for prevention of osteoporosis. The most common reason for stopping therapy was related to bleeding (Johannes et al., 1994).

In summary, Johannes et al. (1994) found that overall use of HRT was 12.3%. Women who had surgical menopause were more likely to use HRT than those with natural menopause. Those women who had surgical menopause were likely to initiate therapy quickly or not at all. Surgically menopausal women tended to take unopposed estrogen (84%). Speaking with a health care provider and symptoms of menopause were the determining factors in initiating HRT in natural occurring menopause. Discontinuation of HRT also was related to contact with a
health care provider. HRT in perimenopausal women is important for long-term prevention of cardiovascular disease and osteoporosis. The Johannes et al. (1994) study was germane to the current research in that HRT was found to be used in only a small percentage of women and not for the long-term benefits. Use of HRT was further investigated by the current researcher and the large meta-analysis provided rich grounds for comparison findings.

In summary, many studies have been conducted on the risk and benefits of HRT. Studies have shown that women have optimistic or impartial reactions to the event of menopause (Daly et al., 1993). Increase in quality of life has been found in the use of HRT (Limouzin-Lamothe et al., 1994). Women use HRT in relation to symptoms and long-term benefits (Newton et al., 1997). But overall only 12.3% of the women in a study consisting of over 2,000 women used HRT (Johannes et al., 1994). The aim at increasing the long-term effects of HRT depends on education and communication. Further research is needed to evaluate all sections of the United States on the utilization of HRT.
Chapter III

The Method

Over 40 million women in the United States have experienced menopause (Scharbo-Dehaan, 1996). Only 20% of those postmenopausal women are using hormone replacement therapy (Cumming & Cumming, 1998a). Women experiencing menopause may experience health problems and symptoms related to menopause. These symptoms and health problems may be alleviated by the use of human replacement therapy (HRT) (Howell & Brodman-Grimm, 1999). Therefore, the focus of this study was to determine the use of HRT in rural southern menopausal women. In this chapter, the method, sample, and data analysis used in this study will be described.

Design of the Study

The design of the study was a cross-sectional, descriptive study. Polit and Hungler (1999) have defined cross-sectional design as a research design in which data are collected at one point in time.
Setting, Population, and Sample

The setting was a church and a beauty shop in rural northeast Mississippi. The pastor and the beauty shop owner agreed to allow women who visited these places to participate in the study. The population of this rural southern community was approximately 900 people. The main industry was manufacturing. The church members and patrons of the beauty shop were mostly rural Caucasians. There were approximately 150 active members of the church, and of those 150 members approximately 50 were women with 20 of those being 45 years old or older. The beauty shop is open 6 days a week. Approximately 200 customers visit the beauty shop regularly, averaging 15 patrons daily. One half of those 200 customers were women with 50% of them being 45 years or older. This made the accessible population for the study equal to approximately 120.

Rural southern women ages 45 and older were the target population for this study. The actual body consisted of premenopausal and postmenopausal women. Fifty-five women signed consent forms to participate in the study. A nonprobability convenience sampling method
was utilized related to the availability of the subjects and convenience.

Method of Data Collection

Instrumentation. The Campbell Hormone Replacement Questionnaire, a 16-item researcher-designed instrument, was used for data collection (see Appendix A). The demographic section of the Campbell Hormone Replacement Questionnaire included four questions pertaining to age, race, education, and method of payment for health care. Questions 5 through 16 were related to menopause, menopausal symptoms, and the use of hormone replacement therapy (HRT). Questions 3, 4, 8, 11, 12, 14, and 15 allowed the participant to mark all answers that applied. All questions excluding question 16 were answered by marking the appropriate box. Question 16 allowed the participant to add to any additional comments related to HRT. Total time for completion of the questionnaire was approximately 10 minutes.

The Campbell Hormone Replacement Questionnaire was reviewed by a panel of experts in order to test its readability and face validity. Revisions were made based on the comments and concerns of the panel.
Data Collection Procedure

Permission was obtained to conduct the study from Mississippi University for Women's Committee on Use of Human Subjects in Experimentation (see Appendix B). Written permission was obtained from the pastor of the church and the owner of the beauty shop (see Appendix C). Individuals in the women's classes at the church were asked to participate in the study pertaining to HRT. The Campbell Hormone Replacement Questionnaire and the consent form (see Appendix D), enclosed in an envelope, were given to women ages 45 and older in the classes by the researcher. Twenty women agreed to participate in the study. The classes were instructed that confidentiality would be maintained by the researcher by separation of the signed consent form from the questionnaire after completion. The researcher would, therefore, not know who had filled out the questionnaire. After signing the consent form, the researcher retrieved the forms from the participants and placed them in an envelope. When completed, the participants inserted the questionnaire into their original envelope. After having sealed the envelope, the participant then handed it to the researcher.
The consent forms and questionnaires were left at the beauty shop for 2 weeks. The researcher instructed the owner of the shop regarding how to distribute the questionnaire to those women 45 years old and greater who agreed to participate in the study. The researcher informed the shop owner that a questionnaire and a consent form would be in a packet. The packet would be given to each woman 45 years and older. If the woman agreed to participate in the study, she was to sign the consent form and hand it back to the shop owner, who was to place all the consent forms in an envelope. After completion of the questionnaire, the participant was to insert the questionnaire into the initial envelope, seal it, and hand the envelope back to the shop owner who would then give all the answered questionnaires and the signed consent forms to the researcher. The shop owner was not to look at or discuss the questionnaire. Confidentiality would be maintained with no one knowing who filled out the questionnaire. Thirty-five women participated in the study. The beauty shop owner followed the directions given by the researcher; therefore, confidentiality was maintained.
Method of Data Analysis

Descriptive statistics were used to describe and synthesize the data. Descriptive statistics were used to describe sample characteristics and to describe information about the variables (Polit & Hungler, 1999). Frequencies and percentages were calculated to provide a description of the sample.

Summary

The goal of this research study was to elicit information regarding the use of HRT in menopausal women. Rural southern menopausal women were the target population. The instrument consisted of demographics and menopausal and HRT data. The methodology was described including procedure for consent and maintaining confidentiality of the participants. Descriptive statistics comprised the data analysis.
Chapter IV

The Findings

The purpose of this study was to assess the use of hormone replacement therapy (HRT) in southern rural menopausal women. A descriptive design was employed to examine the variables. Parse’s (1995) Human Becoming Theory was used as the theoretical framework. Data were collected using the Campbell Hormone Replacement Questionnaire. Descriptive statistics were used for data analysis. In this chapter, the sample is described and data analysis is presented.

Description of Sample

The study population included women who met the following criteria: (a) at least 45 years of age, (b) pre- or postmenopausal, (c) lived in a rural community in northeast Mississippi, and (d) visited the church or beauty shop where data were collected. Data were collected between May 14, 2000, and May 27, 2000. Fifty-five women
completed the questionnaire and all met the criteria to be included in the study. All subjects were Caucasian.

The age of respondents ranged from 45 to 84 years, with a mean age of 58.15 years (SD = 10.22), indicating a large variation in the ages of the subjects. Distribution of sample by age can be found in Table 1.

Table 1
Demographic Ages of Women Respondents Expressed in Frequency and Percentage

<table>
<thead>
<tr>
<th>Ages (years)</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 to 54</td>
<td>23</td>
<td>41.8</td>
</tr>
<tr>
<td>55 to 64</td>
<td>16</td>
<td>29.1</td>
</tr>
<tr>
<td>65 to 74</td>
<td>12</td>
<td>21.8</td>
</tr>
<tr>
<td>75 to 84</td>
<td>4</td>
<td>7.3</td>
</tr>
</tbody>
</table>

*N = 55.

Education ranged from 20% having completed grade school, 49.1% completed high school, while 21.8% had some college credits and 9.1% having completed college. Of the respondents, 32.7% indicated they paid for their health care by Medicare. A total of 3.6% use Medicaid, and 80%
had private insurance. A total of 12.7% paid cash for their health care, and 1.8% of the respondents were unable to pay. A total of 7.3% used a combination of private insurance and cash, while 20% used a combination of Medicare and private insurance. A total of 3.6% of the respondents used a combination of Medicare and Medicaid.

Results of Data Analysis

In regard to menopausal status, 70.9% of the women had experienced menopause with 41.8% having occurred naturally and 43.6% surgically. A total of 14.5% of the women were experiencing menopausal with 10.9% having not gone through menopause. A total of 62.5% of the women had their ovaries and uterus removed with 33.3% having only the uterus removed. A total of 4.2% of the respondents did not know what type of hysterectomy they had.

Menopausal symptoms varied with the respondents. Distribution of the symptoms can be found in Table 2.
Table 2

Menopausal Symptoms Experienced by Women Respondents
Expressed in Frequency and Percentage

<table>
<thead>
<tr>
<th>Menopausal symptoms</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot flashes</td>
<td>32</td>
<td>58.2</td>
</tr>
<tr>
<td>Night sweats</td>
<td>21</td>
<td>38.2</td>
</tr>
<tr>
<td>Vaginal itching</td>
<td>7</td>
<td>12.7</td>
</tr>
<tr>
<td>Vaginal dryness</td>
<td>18</td>
<td>32.7</td>
</tr>
<tr>
<td>Skin changes</td>
<td>8</td>
<td>14.5</td>
</tr>
<tr>
<td>Sex drive changes</td>
<td>17</td>
<td>30.9</td>
</tr>
<tr>
<td>Sleep disturbances</td>
<td>17</td>
<td>30.9</td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td>8</td>
<td>14.5</td>
</tr>
<tr>
<td>Mood swings</td>
<td>21</td>
<td>38.2</td>
</tr>
<tr>
<td>No symptoms</td>
<td>11</td>
<td>20.0</td>
</tr>
</tbody>
</table>

*N = 55.

It should be noted that all women responded to this question regarding menopausal symptoms regardless of whether they had experienced menopause or not. Twelve point five percent of the non-menopausal respondents experienced sex drive changes. Also 12.5% of these women
reported sleep disturbances, and 27.7% reported mood swings.

Three questions guided this study. The first question was what is the prevalence of HRT in rural southern menopausal women? Distribution of HRT use can be found in Table 3.

Table 3

<table>
<thead>
<tr>
<th>HRT use</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, use HRT</td>
<td>27</td>
<td>57.4</td>
</tr>
<tr>
<td>No, do not use HRT</td>
<td>20</td>
<td>42.6</td>
</tr>
</tbody>
</table>

*n = 47.

The second question was what reasons do rural southern menopausal women cite for using HRT? Distribution of reasons for use can be found in Table 4.
Table 4

Reasons for Using Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage

<table>
<thead>
<tr>
<th>Reason for taking HRT</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care provider told them to</td>
<td>24</td>
<td>96.0</td>
</tr>
<tr>
<td>I know it is good for me</td>
<td>8</td>
<td>32.0</td>
</tr>
<tr>
<td>I asked HCP to prescribe it to me</td>
<td>2</td>
<td>8.0</td>
</tr>
</tbody>
</table>

*n = 25.

The third question guiding the study was what reasons do rural southern menopausal women cite for not using HRT? See Table 5 for distribution of reasons for nonuse.

Table 5

Reasons for Not Using Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage

<table>
<thead>
<tr>
<th>Reason for not using HRT</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scared of side effects</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Has not been discussed with me</td>
<td>5</td>
<td>29.4</td>
</tr>
<tr>
<td>Don't know enough about it</td>
<td>2</td>
<td>11.8</td>
</tr>
<tr>
<td>Don't think I need it</td>
<td>10</td>
<td>58.8</td>
</tr>
</tbody>
</table>

*n = 18.
Additional Findings

Of the 28 women currently not taking HRT, 32.1% indicated that they had taken it in the past and had stopped. Reasons cited for stopping the HRT can be found in Table 6.

Table 6

Reasons for Stopping Hormone Replacement Therapy of Women Respondents Expressed in Frequency and Percentage

<table>
<thead>
<tr>
<th>Reason for stopping HRT</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side effects</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Not doing me any good</td>
<td>5</td>
<td>50.0</td>
</tr>
<tr>
<td>Health care provider told me to</td>
<td>3</td>
<td>30.0</td>
</tr>
<tr>
<td>Withdrawal bleeding</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Scared of breast cancer</td>
<td>1</td>
<td>10.0</td>
</tr>
</tbody>
</table>

\(n = 11.\)

One hundred percent of the women taking HRT indicated they were taking it orally. Of the 55 women in the sample, 11 (20%) indicated their mother was taking HRT. Ten (18.2%) stated their sister was taking it while one (1.8%) had a daughter taking HRT. Twenty (40%) of the women did
not have family members using HRT, and 6 (10.9%) did not know if family members were using HRT. Additional comments made by the women varied. One woman stated that she had problems if the pills were not taken. Another lady stated she would lose her mind without them. One of the ladies who had stopped taking HRT and started back stated she did so due to the symptoms of menopause, such as hot flashes, vaginal dryness, and sex drive changes, started to occur. Several of the women commented they knew that HRT helped with bones, skin, hair, and heart disease.

Summary

In this chapter the sample of respondents who volunteered to participate in the study was described. The purpose of the study was to determine the use of HRT in rural southern menopausal women. The Campbell Hormone Replacement Therapy Questionnaire was utilized for data collection. Responses provided data that answered the research questions regarding the use of HRT and the reasons for use or nonuse.
Chapter V

The Outcomes

The purpose of this study was to determine the use of hormone replacement therapy (HRT) and reasons for its use or nonuse in rural southern menopausal women. Summary and discussion of the findings, conclusions, implications for nursing, and recommendations for future research are presented in this chapter.

Summary of Findings

Fifty-five Caucasian women ages 45 and older comprised the convenience sample for this study. The mean age of the respondents was 58.2 years (SD = 10.2 years). The minimum age was 45 years, and the maximum age was 84 years. The median age was 57 years.

Almost half, or 49%, of the respondents had at least a high school education while 20% had only completed grade school. Another 21.8% indicated they had completed some college, while 9.1% were college graduates.
The vast majority of the women (80%) paid for their health care by private insurance while 32.7% had Medicare and 3.6% used Medicaid. Health care was paid for with cash by 12.7% of the women, and 1.8% indicated they were unable to pay for their health care. A combination of private insurance and cash was used by 7.3% while 20% had a combination of Medicare and private insurance and 3.6% had a combination of Medicare and Medicaid.

Of the total sample (N = 55), 70.9% had experienced menopause, 14.5% were currently going through menopause, and 10.9% indicated they had not yet experienced symptoms of menopause. The reported cause of menopause was almost evenly divided with 48.9% having experienced menopause naturally and 51.1% having had menopause due to surgery. Of the 24 women who indicated that their menopause was due to surgery, 33.3% reported only their uterus was removed while 62.5% had both uterus and ovaries removed, and 4.2% were unsure.

Hot flashes (58.2%) led the symptoms the women experienced. Mood swings were identified by 38.2%. Night sweats were experienced by 38.2% of the respondents. Vaginal itching was reported by 12.7%, and 32.7% had vaginal dryness. Skin changes were indicated by 14.5% of
the respondents, and 30.9% had experienced sex drive changes. Sleep disturbances were reported by 30.9% of the 55 respondents, while urinary incontinence was reported by 14.5%. No menopausal symptoms were reported by 20% of the sample.

Of the total sample, 49.1% indicated they were currently taking HRT. This percentage included 27 of the 47 (57.4%) menopausal women. Fifty point one percent of the respondents reported they were not using HRT, including 20 of the 47 (42.6%) menopausal women.

Of the 28 respondents not using HRT, 32.1% indicated they had used the therapy in the past and had stopped, and 67.9% had never used HRT. Of the 10 respondents who indicated they had stopped taking HRT, 10% stopped due to the side effects, 50% stopped because they did not believe it was doing them any good, and 30% discontinued use because their health care provider recommended stopping. Withdrawal bleeding was reported as a reason for stopping HRT by 10% of the respondents, while another 10% stopped due to fear of breast cancer.

Women who had never used HRT were not using it because their health care providers had not discussed it with them (29.4%), and 58.8% were not using HRT because
they did not think they needed it. Fear of side effects was a reason for nonuse for 5.9% of the respondents, while 11.8% indicated they did not know enough about HRT to risk initiating it.

One hundred percent of those taking HRT were taking the pill forms of the therapy. Of the 25 respondents who were taking HRT, 96% were doing so because their health care provider suggested it, and 32% took it because they thought it was good for them. Of the respondents taking HRT, 8% had asked their health care provider to prescribe it for them.

Forty percent of the respondents did not have family members taking HRT, while 20% indicated their mothers used HRT. Other family members of the respondents who used HRT were daughters (1.8%) and sisters (18.2%). Several women (10.9%) did not know if any family members used HRT.

Additional comments made by the respondents were that HRT protects against heart disease and helps with skin and hair. One respondent indicated that her surgeon suggested HRT for her bones, heart, and energy. Others indicated they used HRT for symptoms of menopause, such as hot flashes, vaginal dryness, sex drive changes, and mood swings.
Discussion

Findings from the current study indicated that HRT increased quality of life by decreasing menopausal symptoms. These findings are supported by Daly et al. (1993) who found that a great number of women experienced improved quality of life from the utilization of HRT. Women felt that quality of life was diminished by the beginning of menopausal symptoms. The findings by Limouzin-Lamothe et al. (1994) indicated that menopause affects a woman's life in varying degrees and methods such as HRT are suggested to diminish menopausal symptoms. Wiklund et al. (1993) found that the utilization of HRT had the potential to nullify menopausal symptoms that decreased women's quality of life. Women may believe that menopause decreases the quality of life but that the use of HRT diminishes the symptoms of menopause, therefore, increasing quality of life.

Findings from this study supported the conclusions of Newton et al. (1997) that women chose not to take HRT because they thought they did not need it or that HRT was not doing them any good. Newton et al. (1997) further concluded that physician recommendation was the primary reason women initiated HRT. Finally, Newton et al. (1997)
found that women stopped taking hormones on their own or with the advice of a physician. In the current study 58.8% of the women reported they did not take HRT because they did not think they needed it. Other respondents indicated they stopped using HRT because the medication was not doing them any good (50%) or their physician took them off of HRT (30%). Ten percent feared the development of breast cancer from using HRT. The reason most commonly cited in the current research for using HRT was because the health care provider told them to (96%). Women may assume that HRT is not doing them any good because they cannot see the effects of HRT on osteoporosis. Women may believe that HRT does not lessen the risk of heart disease because they physically see this benefit. Some women may not see menopause as a negative aspect of life and therefore do not think they need HRT because they do not experience negative menopausal symptoms or believe these symptoms to be a natural part of growing older.

The findings in the current study also were supported by a study conducted by Salamone et al. (1996) that revealed the primary reasons for initiating estrogen therapy were due to hysterectomy, menopausal symptoms, physician recommendation, and prevention of osteoporosis.
Reasons given by the women for discontinuing estrogen therapy were not thinking they needed it, not understanding the side effects, or believing the therapy might be harmful. Because women cannot see the positive results of HRT, such as decreasing the risk of heart disease and osteoporosis, they may assume the therapy is not needed. Nurse practitioners should stress the positive effects of HRT regardless of whether such effects can be physically visualized or quickly manifested.

The risk of breast cancer is one of the reasons women expressed as a reason for not taking HRT in this study. In the current research 10% of those women who stopped taking HRT did so due to being scared of breast cancer. The Collaborative Group on Hormonal Factors in Breast Cancer (1997) found that the risk of breast cancer is higher in women who have used HRT compared to those who have not. Fear is a strong motivator in preventing the use of HRT. Education by the nurse practitioner regarding the risk benefit ratio of using HRT may alleviate these fears.

Additional comments made by the respondents reported they took HRT because of the symptoms of menopause, such as hot flashes, vaginal dryness, sex drive changes, and mood swings. The number one symptom reported by the
respondents related to menopause was hot flashes (58.2%) followed by mood swings (38.2%). The reason most commonly cited for stopping HRT was the belief that the therapy had no benefits (50%) followed by health care providers recommending that they stop (30%). These findings were similar to those in a study conducted by Johannes et al. (1994) who found that speaking with a health care provider and symptoms of menopause were major determining factors for taking HRT. Likewise, discontinuation of therapy was related to discussions with their health care providers. The earlier researchers also noted that hot flashes were one of the number one symptoms reported related to menopause. Menopausal symptoms interfere with activities of daily living. These symptoms can also have an impact on personal relationships and intimacy. HRT may diminish these symptoms and place the woman in control of the situation. However, lack of knowledge and encouragement about taking HRT on the part of health care providers apparently poses a threat to quality of life in menopausal women.

In summary, HRT has been shown to improve the negative effects of menopause (Scharbo-Dehaan, 1996). Major health problems can result from a decrease in
estrogen, but HRT can reduce the incidence of these complications (Smith & Hughes, 1998). Yet side effects, physician advice, fear of cancer, and lack of education often prompt women to discontinue the use of HRT (Newton et al., 1997). The current research supported previous studies about the reasons for the use and nonuse of HRT. Menopausal symptoms affect the quality of life of women in various ways and degrees. Many health problems can occur related to menopause. Not all these health threats can be perceived by the woman. The use of HRT can help alleviate the negative effects of menopause and diminish the risk of complications that can develop when a woman experiences menopause.

Conclusions

This researcher explored the use of HRT in a small rural community. The researcher concluded that hot flashes, mood swings, vaginal dryness, sex drive changes, and sleep disturbances were the symptoms that most concerned these menopausal women. Only about half the women in the study were using HRT. Some of the women who were initially taking HRT had stopped, believing the medication was doing them no good. The results of the
findings accentuated the need for more education on the benefits of HRT, as the women who were not using HRT failed to do so because they did not think they needed it. Health care providers were instrumental in initiating the therapy but were not utilizing HRT in the pill form, among this sample as all of the respondents were using the oral form. The prescription should be individualized with the client being aware of all types available. Health care providers, such as nurse practitioners, can motivate and educate women on the benefits of HRT related to decreasing symptoms of menopause and lessen the complications associated with a decrease in estrogen that is experienced by menopause.

Implications for Nursing Practice. Findings from this study underscore the importance of educational programs regarding risk factors associated with osteoporosis and heart disease. Nursing education programs at all levels must address the need to utilize HRT for the long range health benefits to their clients. The roles of a nurse practitioner include counselor, advisor, teacher, and researcher. These roles are essential to women in helping individualize management
of menopause and the use of HRT. Nurse practitioners working with rural southern women need to understand the culture and beliefs of these women, particularly concerning the perception that discomforts and quality-of-life changes associated with menopause are inevitable.

Research. No research was found on the use of HRT in rural southern women. Nurse practitioners in these rural areas need further studies to guide them in educating and understanding the norms and beliefs in the region in which they serve. Research is often conflicting, especially concerning this matter and should include southern women and their beliefs about the risks and benefits of using HRT. Findings from the current research expand knowledge of the use or nonuse of HRT and can be utilized as a starting place from which to create empirically based interventions designed to improve the health status and quality of life of menopausal women.

Theory. Parse's Human Becoming Theory describes the human beings as being the captains of their health. As seen in this current research and previous studies, women are taking their health into their own hands by not using or stopping the use of HRT or to a lesser degree, by asking health care providers to prescribe HRT. Nurse
practitioners should guide these women to change and see the familiar in a different light by educating them. With solid and accurate information, women can make an educated decision related to their health care regarding HRT use.

Education. What is learned from research is used in primary care and in nursing education. Educational programs in the community can provide opportunities for women to learn about menopause and HRT. Counseling and individualized care can lessen fears and give women opportunities to relate their experiences of menopause and their concerns related to the use of HRT. Findings from this study may also be incorporated into curricula in graduate programs of nursing to heighten the awareness of prospective health care providers and educators about the issues surrounding use and nonuse of HRT in the rural South.

Recommendations for Future Research

The following recommendations were based on findings of this study:

1. Replication of the study with a larger sample, including various cultures and ethnic backgrounds.
2. Conduction of a qualitative study exploring women's reasons for use or nonuse of HRT.

3. Conduction of further studies refining the Campbell Hormone Replacement Questionnaire pertaining to menopausal symptoms, reasons for use of HRT, and for not using HRT.

4. Conduction of a study exploring health care providers' reasons for failing to prescribe or discontinue HRT in healthy perimenopausal women.

5. Implementation of an education program about HRT in rural cities.
References


APPENDIX A

CAMPBELL HORMONE REPLACEMENT THERAPY QUESTIONNAIRE
Campbell Hormone Replacement Therapy Questionnaire

Thank you for agreeing to participate in my study. All answers are confidential. Please do not place your name on the survey. Mark an “X” or write in an answer in the blank spaces. Please answer all questions.

1. Age: ___________ years

2. Race
   - a. White
   - b. Black
   - c. Asian
   - d. Spanish
   - e. Other. Please specify: __________________________

3. Last grade completed in school (check only one)
   - a. Grade school
   - b. High school
   - c. Completed some college courses
   - d. Graduated from college

4. How do you pay for your health care? (Check all that apply)
   - a. Medicare
   - b. Medicaid
   - c. Private insurance
   - d. Cash
   - e. Charge
   - f. Unable to pay

5. Have you experienced menopause (12 months without periods) or are going through menopause?
   - a. Experienced menopause
   - b. Going through menopause
   - c. Neither
6. If you have experienced menopause, was it
☐ a. Natural: The gradual decreasing of estrogen, resulting in the cessation of ovulation and thus menstruation.
☐ b. Surgical: The surgical removal of the uterus and/or the surgical removal of the ovaries resulting in the abrupt end of menstruation.

7. If menopause was due to surgery, what was removed?
☐ a. Ovaries
☐ b. Uterus
☐ c. Ovaries and uterus
☐ d. Don’t know

8. Which of the following menopausal symptoms do you experience? (Mark all that apply)
☐ a. Hot flashes
☐ b. Night sweats
☐ c. Vaginal itching or burning
☐ d. Vaginal dryness
☐ e. Skin changes
☐ f. Sex drive changes
☐ g. Sleep disturbances
☐ h. Urinary incontinence
☐ i. Mood swings
☐ j. Not having menopausal symptoms
☐ k. Other. Please specify: ________________________

9. Do you currently take hormone replacement therapy?
☐ a. Yes
☐ b. No

10. If you do not currently take hormone replacement therapy, have you taken it in the past and quit?
☐ a. Yes, I stopped taking hormone replacement therapy.
☐ b. No, I have never taken hormone replacement therapy.
11. If you stopped taking hormone replacement therapy, why did you stop? (Mark all that apply.)
   • a. The side effects
   • b. Too expensive
   • c. Didn’t think it was doing me any good
   • d. My health care provider took me off it.
   • e. Withdrawal bleeding
   • f. Scared of breast cancer
   • g. Scared of endometrial cancer
   • h. Other. Please specify: __________________________

12. If you are not taking hormone replacement therapy and have never taken it, what is your reason? (Mark all that apply.)
   • a. I’m scared of the side effects.
   • b. My health care provider has not discussed it with me.
   • c. I don’t know enough about it.
   • d. I don’t think I need it.
   • e. Other. Please specify: __________________________

13. If you are currently using hormone replacement therapy, what kind do you use?
   • a. Oral (pills)
   • b. Patches
   • c. Creams
   • d. Injections
   • e. Other. Please specify: __________________________

14. If you take hormone replacement therapy, what is your reason? (Mark all that apply)
   • a. My health care provider told me to.
   • b. I know it is good for me to take it.
   • c. I asked my health care provider to prescribe it for me.
   • d. Someone other than my health care provider told me I needed it.
   • e. I heard about it on the t.v., newspaper, or radio.
   • f. Don’t know
   • g. Other. Please specify: __________________________
15. What members of your family take hormone replacement therapy? (Mark all that apply)
   □ a. Mother
   □ b. Sister
   □ c. Daughter
   □ d. Grandmother
   □ e. None
   □ f. Don’t know

16. Please make any additional comments about hormone replacement therapy that you would like to in the space provided.
APPENDIX B

APPROVAL OF MISSISSIPPI UNIVERSITY FOR WOMEN’S COMMITTEE ON USE OF HUMAN SUBJECTS IN EXPERIMENTATION
April 26, 2000

Ms. Angela J. Campbell
P. O. Box W-910
Campus

Dear Ms. Campbell:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research with the following stipulation. You must ensure the confidentiality of the questionnaire. The Committee objected to the beauty shop operator passing out the questionnaire and being responsible for its integrity. The committee suggested that one of two methods be employed to assure confidentiality: (1) You could physically be on site at selected times to pass out the questionnaire, or (2) you could prepare packets in sealed envelopes to be passed out by the beauty shop operator. The sealed packets should include a self-addressed, stamped envelope so the questionnaires can be sent directly back to you.

I wish you much success in your research.

Sincerely,

Sheila V. Adams, Ed.D.
Interim Vice President
for Academic Affairs

SA:wr

cc: Mr. Jim Davidson
Dr. Melinda Rush
APPENDIX C

PERMISSION TO CONDUCT STUDY
Dear Reverend Stewart,

My name is Angela Campbell. I am a registered nurse and graduate student at Mississippi University for Women in Columbus, Mississippi. I am conducting a research study concerning the use of hormone replacement therapy by rural southern women. I am requesting permission to conduct this study at your church.

The subjects will be women ages 45 and older who wish to participate. Each participant will have the opportunity to refuse participation, and confidentiality will be maintained. Participants will answer a questionnaire including demographics and questions related to menopause and hormone replacement therapy. No names will be on the questionnaire.

Please indicate your permission to conduct this study about hormone replacement therapy at your church by sending me a permission letter.

I appreciate your assistance in this matter.

Sincerely,

Angela Campbell
May 15, 2000

Ms. Angela Campbell
1602 CR 86
New Albany, MS 38652

Dear Ms. Campbell:

This is to verify that you have permission to conduct a study about hormone replacement therapy at our church.

Wishing you the best in your nursing career.

In Christ,

John Stewart

bs
Dear Mrs. Tutor,

My name is Angela Campbell. I am a registered nurse and graduate student at Mississippi University for Women in Columbus, Mississippi. I am conducting a research study concerning the use of hormone replacement therapy by rural southern women. I am requesting permission to conduct this study at your beauty shop.

The subjects will be women ages 45 and older who wish to participate. Each participant will have the opportunity to refuse participation, and confidentiality will be maintained. Participants will answer a questionnaire including demographics and questions related to menopause and hormone replacement therapy. No names will be on the questionnaire.

Please indicate your permission to conduct this study about hormone replacement therapy at your beauty shop by sending me a permission letter.

I appreciate your assistance in this matter.

Sincerely,

Angela Campbell
Nell’s New Styles
6777 Hwy. 15
Ecrui, MS 38841
662-489-4839

Dear Mrs. Campbell,

I will be happy for you to do your research at my shop. I think the ladies would be honored to help you in your endeavors at school. Please let me know if I can be of any other assistance to you.

Sincerely,

[Signature]

Nell Tutor
Dear Participant,

My name is Angela Campbell. I am a registered nurse enrolled in a master’s degree nursing program at Mississippi University for Women in Columbus, Mississippi. I am conducting a research study concerning the use or nonuse of hormone replacement therapy by rural southern women. I am requesting your participation in this study as findings of this study will provide health care providers information of the utilization of hormone replacement therapy in rural southern women. Your participation will require approximately 15 minutes of your time to complete the questionnaire.

Completion of the questionnaire and your signature on this form will indicate your agreement to participate in this study. Participation is voluntary, and your confidentiality will be maintained as the consent forms and the questionnaire will be placed in an envelope as soon as they are completed and will be viewed only by myself. The questionnaire will not include the names of the participants. You may withdraw from the study any time before the questionnaire is handed in. The information given will be used only in this study.

Sincerely,

Angela Campbell, RNC, BSN

I agree to participate in Angela Campbell’s research study.

Date ___________________________ Signature of Participant ___________________________