

COVERAGE OF HORMONE REPLACEMENT THERAPY
IN POPULAR PERIODICALS AND PROFESSIONAL JOURNALS

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I am submitting herewith a dissertation written by Homa Baher Badie entitled "Coverage of Hormone Replacement Therapy in Popular Periodicals and Professional Journals." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirement for the degree of Doctor of Philosophy with a major in Health Education.

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DEDICATION

This dissertation is dedicated to my parents,
Leghaeyeh and Hedayatollah Baher,
whose endless love, encouragement for excellence and
continuous support have been a major influence
in my life

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Abstract

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Hormone replacement therapy (HRT) associated with menopause has been a major topic of concern among health issues of the 90s. The purpose of this study was to review and compare the coverage of hormone replacement therapy associated with menopause in a selected sample of magazines directed to women, lay health periodicals, and health professional journals. The coding form for the study was developed by the investigator. A total number of 500 issues of professional health journals(PHJ), lay health magazines(LHM) and periodicals directed to women(PDW), for the period of January 1, 1991 through December 31, 1995, were reviewed. A total of 119 articles were identified, coded, and analyzed using descriptive statistics, frequencies, crosstabulation, and chi-square, to determine,

frequency of coverage, sources, documentation, indicated HRT, and estrogen replacement therapy (ERT) benefits and complications, alternative remedies, and the major thrust of the articles.

The results of the study showed significant difference in the frequency of articles on HRT in the professional journals in comparison to PDW. There were also significant differences in the sources and documentations of the articles.

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CHAPTER I

INTRODUCTION

For many centuries, women did not live past the menopause. But as life expectancy increases, more of a woman's life is spent in the years after menopause (Lobo, 1995). It has been estimated that in the next two decades nearly 40 million women will pass through menopause (Hibbard & Hampson, 1993). Menopause represents a biologically determined critical milestone in a woman's life that involves intense endocrine and somatic changes (Cross & Lovett, 1994).

Postmenopausal hormone replacement therapy has had a positive influence on the health of women. Its benefits in areas such as cardiovascular status, osteoporosis, and cholesterol alterations have been identified (Saleh, et al. 1993). Cardiovascular diseases are responsible for approximately half of the total mortality in women (Salomaa, et al. 1995). The incidence of coronary heart disease has been found to be higher in postmenopausal women than in premenopausal women (Gilabert, et al. 1995). The condition

that poses the most significant health hazards associated with reduced estrogen after menopause is osteoporosis, or the reduction of bone mass. Each year about 1.3 million fractures, primarily of the vertebra, hip, and wrist may be attributed to osteoporosis (Roberto, 1993). Estrogen replacement therapy (ERT) has been shown to reduce the risk of cardiovascular disease and osteoporosis in postmenopausal women and improve the quality of life. Studies also indicate a reduced risk of stroke and its consequent mortality among women who use estrogen, and ERT may also have a role in reducing the risk of Alzheimer's disease and increasing a woman's overall quality of life (Lobo, 1995).

In a 1991 study examining consumer attitudes and beliefs about hormone replacement therapy (HRT), Rothert (as cited in Hibbard & Hampson, 1993) noted that women's desire for information about menopause and HRT is high, and this demand is not being met by women's current health care providers (Hibbard & Hampson). The recent spate of popular books, magazine articles, television shows, and videos on the topic of menopause and HRT attest to this need (Hampson & Hibbard, 1996). Becoming an informed consumer is a

challenge that faces the women of this era (Peden & Newman, 1993). Without adequate information about menopause and its management, women patients are at a disadvantage in their encounters with their health care providers (Hampson & Hibbard, 1996). This study applied a content analysis of magazines directed to women, lay health magazines, and professional health journals to examine and compare coverage of climacteric and HRT issues as well as their documentation.

Statement of the Problem

Women approaching, experiencing, or in postmenopausal years and their health care providers need scientifically accurate information about menopause and hormone replacement therapy. Common sources for such information are periodicals directed to women, lay health magazines, and professional health journals.

Purpose of the Study

The purpose of this study was to review and compare the coverage of hormone replacement therapy associated with

menopause in a selected sample of periodicals directed to women, lay health magazines, and professional health journals.

Hypotheses

The following null hypotheses were tested:

1. There is no statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and articles published in lay health magazines.

2. There is no statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and selected professionals health journals.

3. There is no statistically significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected lay health magazines.

4. There is no statistically significant difference in the frequency of documentation in the articles published in

selected periodicals directed to women and selected professional health journals.

5. There is no significant difference in the major thrust of articles published in selected magazines directed to women and selected professional health journals.

6. There is no significant difference in the major thrust of articles published in selected lay health magazines and selected professional health journals.

Definition of Terms

The following terms were defined for the study:

1. Menopause. The natural result of age-related changes in ovarian function. It means, literally, the cessation of uterine menstrual cycles (Cutler, Garcia & Edwards, 1983). Cessation of menstruation in the human female, that occurs usually between the ages of 48 and 50 (Dorland's Illustrated Medical Dictionary, 1981).

2. Climacteric. The syndrome of endocrine, somatic, and psychic changes occurring at the termination of the reproductive period (menopause) in the female (Dorland's)

3. Documentation. The act or an instance of identifying documents, or records.

4. Estrogen. A generic term for estrus-producing steroid compounds: the female sex hormones (Dorland's). Estrogen is produced by the ovaries and was isolated by E. A. Doisy, et al, from the urine of pregnant women, in 1929, and prepared in crystalline form in 1930 (Jern, 1973).

5. Osteoporosis. A disorder characterized by a reduction in the quantity of structural bony material below some arbitrary defined normal adult value (Ryan & Gibson, 1971). Abnormal rarefaction of bone, seen most commonly in the elderly (Dorland's).

6. Estrogen replacement therapy (ERT). A regimen under which a woman's naturally diminishing supply of the female hormone is replenished through pills or other sources of estrogen (Page, 1977).

7. Hormone replacement therapy (HRT). A therapy becoming increasingly popular among providers as the recommended treatment both for the short-term symptoms of menopause and for the prevention of cardiovascular disease and osteoporosis that may be associated in the long term

with decreased levels of ovarian hormones (Hampson & Hibbard, 1996).

8. Alternative postmenopausal remedies. All remedies other than HRT and ERT that were mentioned in the articles.

9. Medical issues. Issues relating to osteoporosis, heart disease, breast cancer and other forms of cancer or complications related to the use of HRT or ERT.

10. Symptomatic issues. Based on menopausal symptoms. About 75% of women experience menopausal discomforts such as hot flashes, sleepless nights, strange skin sensations, mood swings, and palpitations (Nachtigall & Heilman, 1986). Many of these problems will gradually subside as the body adjusts to its new hormonal balance. Other more persistent, symptoms can possibly be treated by HRT or ERT (Page, 1977).

11. Cosmetic issues. The cosmetic effects of HRT and ERT; like better skin, and better hair.

Limitations

The study was subject to the following limitation:

One person identified and coded the articles.

Delimitations

The study was subject to the following delimitations:

1. The analysis was delimited to the articles with relevant titles to menopause, osteoporosis, and hormone replacement therapy associated with menopause.
2. The analysis was delimited to the articles published, in selected periodicals directed to women, lay health magazines, and professional health journals, from January 1, 1991 through December 31, 1995.
3. The Magazines directed to women consisted of: Good Housekeeping, Ladies' Home Journal, and Cosmopolitan which are the three magazines for women in US with the highest circulation (Bowker, 1996).
4. The lay health magazines selected for the study consisted of: Prevention, American Health, and Health.
5. The professional health journals used in the study consisted of: American Journal of Obstetrics and Gynecology, Journal of Endocrinology, and Journal of Women and Aging.

Assumptions

The study was subject to the following assumptions:

1. The articles selected for the purposes of the study would contain relevant material.
2. The selected volumes of the study sample for the period of January 1, 1991 through December 31, 1995 would be accessible.
3. The study sample would generate enough articles to satisfy the statistical requirements of the study.

Background and Significance

American women are enjoying dramatic increases in longevity. In the 1990s the average lifespan for women will possibly surpass the age of 80. Women currently make up about two-thirds of people over 85 years. Climacteric is a natural event of life, a transition that is universally faced by women, and is a significant milestone in the aging process (Hibbard & Hampson, 1993). As a result of longevity, women are more prone to chronic illnesses and conditions associated with aging. Arthritis, cardiovascular

diseases, stroke, breast cancer, and osteoporosis disproportionately affect older women (Garner & Young, 1993). Although the age of onset of menopause remains constant, as a result of substantial increases in life expectancy, a woman can expect to live a third of her life after the menopause, in a state of estrogen deficiency (Lindheim, et al., 1992).

Estrogen replacement therapy has been shown to decrease mortality from all causes in postmenopausal women, and the greatest benefit is believed to be a 50% reduction in cardiovascular disease (Lindheim, et al., 1992). It has also been known for many years that lack of estrogen is the cause of menopausal symptoms. "In 1932 Geist and Spielman first proposed that women be given estrogens to reverse these symptoms. In the 1940s a link was established between estrogen deficiency and osteoporosis, and in the 1950s it was recognized that estrogen inhibited atherosclerosis" (Harlap, 1992, p. 1986). The risk of cardiovascular disease in women is small until menopause but increases considerably afterwards (Salomaa, et al., 1995). The short term benefits of estrogen were recognized early, however, and in the 1960s

and 1970s estrogen replacement therapy became increasingly popular. Between the years of 1966 and 1975 the number of prescriptions for estrogen that were dispensed annually doubled. However, sales of estrogen dropped abruptly when it became clear that unopposed, (estrogen alone), estrogen replacement therapy was associated with an increased risk of endometrial hyperplasia and cancer (Harlap).

"During the late 1970s, the pathogenesis of endometrial hyperplasia was elucidated, and the ability of progestins to serve as antagonists was discovered. By 1981 the addition of progestins to estrogen therapy had been shown to reduce the incidence of endometrial abnormalities. The use of hormone replacement therapy by postmenopausal women has increased steadily since then" (Harlap, 1992, p. 1986). However, the vast majority of postmenopausal women do not use HRT, despite the well-established potential benefits of therapy.

Of the over 40 million postmenopausal women in the United States, it is estimated that less than 20% use some form of HRT, although many more could benefit from such therapy. Perhaps a more alarming observation is that, of

those postmenopausal women who do begin HRT, less than 50% will remain on therapy beyond 1 year (Stumpf & Trolice, 1994).

The decision to begin HRT therapy, like other therapeutic decisions, depends upon an estimation of the relative benefits and risks of the therapy in each individual case. This in turn is dependent upon understanding the evidence for actual risks of HRT. Unfortunately, it appears that some women are unable or unwilling to discuss postmenopausal HRT with their physician (Stumpf & Trolice, 1994). Therefore, other sources of information could play an important role in supplying the needed knowledge for menopausal women and their decision making process. Mass media transmit health information directly and are a major source of health information for the majority of Americans (Public Health Service[PHS], 1991).

CHAPTER II

REVIEW OF LITERATURE

In this chapter a review of literature describing related research on the topic of Hormone replacement therapy (HRT) will be presented. Its historical background, implications, benefits and complications associated with its use will also be discussed. Considering the controversial position of HRT, the review will not be complete without a presentation of the alternative remedies suggested for relief of symptoms as well as medical problems associated with menopause. The above topics will be reviewed and presented in a systematic order and will be followed by a review of literature on content analysis, the research technique that will be used for this study. Since, menopause seems to have been the creative impetus for HRT and its ensuing controversy, the review of literature will start with a focus on this topic.

Menopause

"The climacteric, or menopause, as it is commonly though mistakenly called, is a normal developmental phase in the life of a woman" (Clay, 1977, p. 1). The word "menopause" is frequently used somewhat improperly to signify a range of time. It actually refers to a single point in time-namely the last menstrual period. "Perimenopause" refers to the time before the menopause. "This is a transitional phase when ovarian function and its hormone production are declining. The climacteric is the years from the onset of premenopausal ovarian decline to the time after menopause, when its symptoms stop. The decline of ovarian function goes on for years, but the cessation of menses is an unmistakable biologic marker for the loss of reproductive function" (Budoff, 1983, p. 16).

"There are three distinct physical changes associated with menopause. The menstrual bleeding ceases, the ovaries stop producing eggs, and the body

decreases the production of the female hormones; estrogen and progestin" (Clay, 1977, p. 5). A woman's ovaries start to decrease the production of estrogen a few years before menopause. When menstruation ceases, a woman's body still continues to produce some estrogen; however, it is not enough to build up the epithelial wall of the uterus and produce bleeding (Clay). In the postmenopausal women the ovaries still synthesize small amounts of estrogen. Also non-estrogenic hormones made in the adrenal glands are converted to estrogen at other nonglandular sites of the body. This extra estrogen may be clinically significant and occasionally cause postmenopausal bleeding (Ryan and Gibson, as cited by Clay, 1977). It is important to understand that this process could take several years and the body has to adapt to a smaller amount of estrogen than that to which it was previously accustomed.

The average age for menopause is about 51 years and most women complete climacteric between the ages of 45 and 55 years. However, certain factors can

result in an earlier transition. Women who have never been pregnant and those who have had their uterus removed, as well as women who have been malnourished or anorexic for extended periods, are apt to go through climacteric one to four years earlier than the average (Barbach, 1993). Some women enter climacteric as a result of an oophorectomy, the removal of the ovaries. This is often called a surgical menopause. When the ovaries are removed, a woman goes through an abrupt menopause. There is a sudden hormonal change imposed on her body and she is likely to experience exaggerated symptoms associated with this change (Barbach).

Symptoms Associated with Menopause

Once the supply of estrogen is diminished and while the body is getting used to doing with less of it, the change in hormonal balance could create effects or "symptoms" in some women (Clay, 1977). "Some women hardly notice the entire phenomenon. They simply stop having menstrual periods. Others find this is one of the most trying times of their lives,

with symptoms that make it impossible for them to function normally" (Nachtigall & Heilman, 1986, p. 58).

About 20% of women experience no symptoms other than irregular periods followed by a complete stoppage of the menses. However, about 60% of women get distinct hot flashes or other vasomotor symptoms (Cherry, 1976). Whatever goes on, it is important to remember that this is all normal and a measurable physical happening, and that these physiological events are not imaginary (Nachtigall & Heilman, 1986).

The climacteric, for most women, is accompanied by many symptoms that women consider to be real handicaps. These symptoms range from vasomotor disorders and skin changes to urogenital and psychic distress, and are directly connected with the endocrine upheaval characteristic of the period (Limouzin-Lamothe, Mairon, Joyce, & Le Gal, 1994). "Hot flushes, night sweats, insomnia, and palpitations are usually referred to as vasomotor symptoms" (Samsioe, 1995, p. 2).

One condition that is known to commonly effect middle-age females is burning mouth syndrome (BMS). A study done by Grushka, 1987, (as cited in Mattana, Zarkowski, Wyche, Zagar, & Luxmore, 1996), found a significantly higher prevalence of BMS in women who reported having severe menopausal symptoms (Mattana, Zarkowski, Wyche, Zagar, & Luxmore, 1996). The climacterical symptoms may be associated with significant sleep disturbance (Purdie, Empson, Crichton, & MacDonald, 1995). The climacteric is also associated with reduced energy expenditure during rest and physical activity, and an accelerated loss of fat-free mass (Poehlman, Toth & Gardner, 1995). Other symptoms may include memory loss, visual deficits, loss of libido, aging of the skin, backache, emotional distress, etc., (Cutler, Garcia, & Edwards, 1983).

Sexual effects of the climacteric are less clear. Even though women attending menopause clinics complain of associated problems, there is a considerable lack of clarity in the evidence concerning possible changes in female sexuality with the climacteric (Pearce,

Hawton, & Blake, 1995). Pfeiffer et al., (as cited by Pearce, Hawton, & Blake) recognized that even though climacteric made a small statistical contribution to the decline in sexual function, age and marital status were more important (Pearce et al., 1995).

Significant differences exist, in premenopausal and postmenopausal women in responses to psychological stress (Lindheim et al., 1992). "Psychological symptoms are sometimes claimed to be secondary manifestations of disabling vasomotor symptoms" (Dennerstein, 1987, p. 37). Researchers also suggest that negative self-perceptions precipitate and perpetuate depression. Lower self-concept and self-esteem are strong predictors of depression. The presence of depressive symptoms may also be a reaction to the loss of valued selfhood and a secondary result of frustration due to the symptoms associated with osteoporosis (Roberto, 1991). Prospective studies indicate little or no difference in psychological symptoms due to menopause, except for depressed mood found in one study. When psychological symptoms are

present, non-menopausal factors such as psychological stresses often appear to be contributing elements (Pearce et al., 1995).

Osteoporosis

As estrogen decreases, certain changes occur in bones. Demineralization occurs at a greater rate than remineralization and, this makes women more susceptible to fractures. This pathologic condition is called osteoporosis and is more prevalent among certain groups of postmenopausal women. The typical woman at risk for osteoporosis is Caucasian or Oriental, and slender (Peden & Newman, 1993).

"Osteoporosis is called the *silent disease* since diagnosis often comes only after an older person sustains a fracture. X-rays are useful for detecting breaks in bones, but they are not sensitive enough to detect osteoporosis until at least 25 to 30 percent of bone mass is depleted. By this time, the disease is in an advanced stage" (Roberto, 1993, p. 47).

"Osteoporosis will cause a broken bone in one out of every two women", according to Dr. Sydney Lou Bonnick,

Research Professor at the Center for Research on Women's Health, at Texas Woman's University (Zonis, 1993). Dr. Bonnick suggests that women approaching menopause should have their bone mass measured using bone densitometry, a type of X ray of selected parts of the body (Zonis, 1993). Loss of bone can be determined by biophysical diagnosis procedures such as DEXA and possibly ultrasound (Samsioe, 1995). Dexa is precise in detecting bone density of as little as 2%. By using this procedure osteoporosis can be diagnosed in its early stages when the treatment is most effective (McCord, 1993).

Both women and men lose bone mass as they get older, but there is a significant gender difference in the amount and rate of loss. Women's bone density is lower at maturity than that of males and, women are also subject to an accelerated rate of bone loss after natural or surgical menopause due to the decreases in estrogen (Kinderknecht, 1992). The most rapid loss of bone happens within the first few years after menopause, with a subsequent slowing of the loss in

elderly women (Fox & Cummings, 1995). A reduction of 1 to 2% in bone mass has been shown to occur, each year, in women over fifty years of age (National Institute on Aging, as cited in Kinderknecht). It has been estimated that by the time women are eighty years old, they have lost about 47% of their trabecular bone (the interior meshwork of bones) whereas men suffer only a 14% loss (Notelwitz & Ware, as cited in Kinderknecht). Osteoporosis imposes physical as well as psychological and social changes in the lives of women who suffer from it. "Changes in physical appearance which result from anatomical alterations can be detrimental to a woman's self-concept and self-esteem. The fear of falling or the thought that simply coughing or sneezing may cause another fracture may foster psychological distress" (Roberto, 1990, p. 35).

To better understand the impact of the different symptoms and problems associated with menopause and estrogen deficiency, Michell (1992) has categorized them as follows: early problems (hot flashes,

insomnia, depression, and other psychological symptoms); intermediate consequences, which occur approximately five years after the menopause (atrophy of the vagina, uterine prolapse, urgency and stress incontinence, and thinning of the skin); and the most severe consequences of estrogen deficiency, which begins about ten years after menopause. These include; the development of osteoporotic fractures, which can cause immobilization and death, and the acceleration of atherosclerosis in the coronary arteries and cerebral vessel, which leads to increased incidences of heart attacks and stroke, the number one cause of death in women (Mishell, 1992).

HRT/ERT

History and Background

"Two hundred years ago, fewer than 30% of women lived long enough to experience menopause; now 90% reach this milestone. Hormone replacement therapy (HRT) is currently prescribed to relieve the effects

of estrogen deficiency" (Cooper, & Whitehead, 1995, P. 214). "Estrogen was isolated by E. A. Doisy, et al., from the urine of pregnant women, in 1929, and prepared in crystalline form in 1930. Progesterone was discovered in 1929 by W. M. Allen, having been isolated from corpus luteum. Crystalline progesterone was produced in 1934. The isolation of both hormones in crystalline form led to the discovery of numerous synthetic preparations which are in use today" (Zern, 1973, p. 29).

Estrogen and progesterone are produced by the ovaries, and the ovaries are under the supreme command of the anterior lobe of the pituitary gland.

Estrogen is a collective term for steroid compounds of a similar chemical structure. The most important of these are estradiol B, estrone, and estriol (Zern, 1973). Estrogens play an important role in bone metabolism and preserve bone mass after menopause. The role of progesterone is less clear (Slootweg, Ederveen, Schot, Schoonen, & Kloosterboer, 1992).

Hormone replacement therapy (HRT) should be a highly individual therapeutic or preventive regimen, designed according to the specific conditions and needs of the patient. Most gynecologists are experienced in prescribing HRT and provide a high standard of counseling and treatment. However, a significant proportion of doctors still have incomplete knowledge of the area, are inexperienced in prescribing HRT, and are consequently unsure about prescribing it (Lauritzen, 1996). This could lead to either reluctance to prescribe HRT to women who could potentially benefit from it, or to unsatisfactory treatment resulting in poor compliance and withdrawal from therapy (Lauritzen).

Most clinicians recognize the effect of HRT/ERT in reducing the chances of heart disease and stroke for women. And, very few clinicians would dispute the role of HRT/ERT in the treatment of vasomotor symptoms and urogenital atrophy, and in the prevention of osteoporosis (Cooper, & Whitehead, 1995).

HRT/ERT Benefits

The benefits of hormone replacement therapy in preventing osteoporosis, postponing the onset of ischemic heart disease, maintaining a favorable lipid profile, relieving distressing vasomotor symptoms, and improving quality of life are well documented (Disaia, et al., 1996). HRT is accepted as a major form of preventive health care and is supported by a variety of epidemiological data that show the benefits of HRT on osteoporosis and the cardiovascular systems (Gangar & Penny, 1995). HRT and ERT are also associated with several other beneficial effects, like their effect on the skin, which will be presented in the following sections.

Osteoporosis and HRT

"There is little argument that the best documented benefit of ERT is reducing the rate of postmenopausal bone loss, thereby reducing the risk of fracture in later years" (Barret-Connor, 1987, p. 62). "It has been reported that 1.2 million new fractures due to

osteoporosis occur annually in the United States. About two thirds of these fractures occur in women. These fractures cost more than \$7 billion in health care dollars annually for acute and long-term care" (ACOG Technical Bulletin, 1992, p. 194).

Several studies indicate that estrogen therapy can arrest bone loss in postmenopausal women and reduce the incidence of fractures, even if treatment is begun in later life (i.e.; after age 65) or after an interruption of the treatment (ACOG). Also, women with rheumatoid arthritis (RA) represent a group with increased risk of osteoporotic fracture, and while the causes of systemic osteoporosis in RA are unclear, postmenopausal status has been recognized as a contributing factor. It has been suggested that HRT may protect against the development and progression of RA (MacDonald, Murphy, Capell, Bankowska & Ralston, 1994). Millions of menopausal women in the United States are using hormone supplements (hormone replacement therapy), and some authorities have

suggested that they use these drugs for the rest of their lives to prevent a variety of ills.

HRT and the Heart

"Cardiovascular disease is the most common cause of death in developed countries" (Gilabert, 1995, p. 1849). Premenopausal women have a lower cardiovascular morbidity and mortality than do men of the similar age. However, after menopause the incidence of cardiovascular disease increases, and the prevalence of cardiovascular disease in men and women is similar during the eighth decade of life (Gilabert, 1995).

The climacteric is an important cardiovascular risk factor, and the incidence of cardiovascular disease is two to three times greater in postmenopausal than in premenopausal women (Lip, Beevers & Zarifis, 1995). Ischemic heart disease is very rare in premenopausal women but the incidence rises after the onset of the menopause. "Many studies have suggested a significant reduction (about 35%) in cardiovascular risk in postmenopausal women taking

estrogen as hormone replacement therapy" (Lip, et al. 1995, p. 389). Sinclair, Bond and Taylor (1993), suggest that according to the recent studies, the administration of unopposed estrogen to postmenopausal women results in up to a 50% reduction in cardiovascular disease and mortality.

There is a substantial increase in the incidence of myocardial infarctions in postmenopausal women, but women receiving estrogen therapy show a decrease in the risk of coronary artery disease (Giraud, Morton, Wilson, Burry and Speroff, 1996). There are several mechanisms that contribute to this reduction in risk of coronary heart disease. Lipid profile and stiffening of the aorta and its branches with age, which may progress more rapidly after menopause are among those factors. Acceleration of atherosclerosis and decreased aortic compliance after menopause may also contribute to the development of hypertension (Giraud, et al. 1996). Studies have shown that HRT contributes in several ways in the reduction of heart problems; estrogen and progesterone increase blood

volume and red blood cell mass, estrogen increases vascular capacity and vascular compliance and left ventricular chamber size, and progesterone increases left ventricular mass (Giraud, et al. 1996).

Lipids and Lipoprotein Cholesterol Levels and HRT

Recent studies have shown that estrogen replacement therapy in postmenopausal women protects them against coronary heart disease and stroke. This effect may be due to changes in the serum lipoprotein levels among estrogen users. These changes include an increased high-density lipoprotein (HDL) cholesterol and a decreased low-density lipoprotein (LDL) cholesterol level (Paganini-Hill, Dworsky, & Krauss, 1996). Until recently, it was not very clear how the addition of a progestational agent to the replacement regimen would effect the HRT process. However, the Paganini-Hill, Dworsky, and Krauss study as well as a study by the Postmenopausal Estrogen/Progestin Interventions (PEPI) published in the January 18, 1995, issue of the Journal of the American Medical Association (as cited in Hormones help a woman's

heart, 1996), support the positive effects of the combination therapy. The PEPI investigators reported that estrogen taken alone, or in combination with any of the progestins that they used in the study, increased the levels of protective high-density lipoprotein (HDL) cholesterol, and lowered levels of harmful low-density lipoprotein (LDL), and fibrinogen (which contributes to clot formation) (Hormones help a woman's heart, 1996).

Stroke and HRT

PEPI has offered strong evidence that HRT reduces the risk of stroke and does not raise the blood pressure. This is also supported by a major recent study involving more than 23,000 women in Sweden (HRT: Frequently asked questions, 1995).

HRT and Alzheimer's Disease

Very recent data showing an additional benefit of estrogen in its effects on the central nervous system may have an important impact on the overall process of decision making about HRT. It has been suggested that the relative risk of developing Alzheimer's disease is

reduced by 30 to 40% among estrogen users and that risk decreases with duration of use. After seven or more years of estrogen use, relative risk of developing Alzheimer's disease is possibly lowered by about 50% (Lobo, 1995). The severity of the disease is also apparently reduced. Two studies by researchers at the University of Southern California, also report similar findings on Alzheimer's disease. The hormone appears to inhibit mental deterioration by preserving brain cells involved in both learning and memory. Among the 8,879 women in one of the studies, those who were treated with ERT were 40% less likely to develop Alzheimer's or related dementia's than those who were not treated (Chrebet, 1994). These findings, if corroborated by future work, would have a major impact in the quality of life and function of older women and would clearly tip the scales further in favor of ERT for post-menopausal women (Lobo).

Skin and HRT

Estrogens play a special role in the metabolism of connective tissues. The postmenopausal estrogen

deficiency leads to the gradual atrophy of connective tissues, manifested as the thinning of the skin and mucous (Gniadecki, Wyrwas, Kabala & Matecka, 1996).

Skin collagen content and bone mass density deteriorate to the same degree during aging (Cortes-Gallegos, Villanueva, Sojo-Aranda & Santa Cruz, 1996).

"HRT has a beneficial effect on some mechanical properties of skin and thus may slow the progress of intrinsic cutaneous aging" (Pierard, Letawe, Dowlati & Pierard-Franchimont, 1995, p. 662).

Vasomotor Problems and HRT

Vasomotor changes are probably the first discomfort noted by many women who are menopausal and is experienced by 68% to 92% of perimenopausal women. It is described as a sudden feeling of warmth in the upper body and often followed by perspiration and sometimes palpitations (Peden & Newman, 1993). The symptoms are disturbing even though they are not pathological. They are often accompanied by night sweats which interfere with the sleep (Peden & Newman). "Hormone replacement therapy can

successfully treat menopausal symptoms" (Sinclair, Bond & Taylor, 1993,p. 365).

HRT/ERT Risks and Complications

Endometrial Cancer

Estrogen supplements were widely used until the mid-1970s, but its use declined after it was discovered that they increase the incidence of endometrial cancer (Rosenberg, 1993). A number of articles have appeared in the medical literature since 1975 linking unopposed estrogen administration to the development of endometrial carcinoma, with the relative risk between 1.7 and 20-fold. The consensus is that users have about a fourfold risk compared with that for nonusers. The risk is increased with increasing doses and durations of use (Thorneycroft, 1996).

Breast Cancer

"Epidemiological studies have shown that the incidence of breast cancer increases at 2.1% per year in postmenopausal women. It seems that this risk, if

attributed to endogenous estrogen, can be predicted by comparing serum estrogen levels in women on estrogen therapy" (Shibata, 1995, p. 410). Although the epidemiology of breast cancer suggests that endogenous estrogens are important in its genesis or promotion, the effect of exogenous hormones has not been clearly demonstrated. So, despite extensive study, concerns remain about a possible association between long-term postmenopausal hormone treatment, particularly use of combination preparations, and the risk of breast cancer (Newcomb, et al. 1995).

Hypertension

Oral contraceptives could affect an increase in blood pressure, but the same is not true with HRT. To date, no link has been established between hypertension and HRT. "Hypertensive patients treated with estrogen had a lower risk of myocardial infarction than did those not treated with ERT." (Thorneycroft, 1995, p. 252).

HRT Contraindications and Precautions (ACOG, 1992).

HRT should not be prescribed for patients with the following conditions:

1. Unexplained vaginal bleeding.
2. Active liver disease.
3. Chronic impaired liver function.
4. Recent vascular thrombosis.
5. Carcinoma of the breast.
6. Endometrial carcinoma, except in certain circumstances.

There are conditions which may constitute relative contraindication and caution and they include: seizure disorders, migraine headaches, thrombophlebitis, endometriosis, and gallbladder disease (ACOG, 1992). Also women with elevated triglyceride levels are cautioned to take transdermal estrogen, since oral ERT raises triglyceride levels (Thorneycroft, 1995).

Alternative Treatments

A variety of remedies are suggested in books written on the topic of menopause or similar articles

in different periodicals as being effective to relieve the symptoms of menopause. However, there are not scientific accounts available or cited for most of these claims. These alternative remedies can be categorized as follows:

1. Non-medical treatments
2. Exercise
3. Vitamins and herbs
4. Diet

Non-medical Treatments

Lonnie Barbach, in her book *The Pause*, 1993, talks about acupuncture and homeopathy as alternative forms of therapy for the symptoms of the menopause. Germaine Greer suggests hydrotherapy and hypnosis as alternative remedies for the symptoms of menopause, in her book, *The Change*, 1992.

Exercise

There are studies that support the importance of exercise in dealing with menopausal symptoms. However, it appears unlikely that exercise and

training after menopause can maintain skeletal integrity in lieu of estrogen replacement. Studies on bone density in amenorrheic athletes suggest that exercise cannot compensate for estrogen deficiency (Clapp & Little, 1995).

Vitamins & Herbs

The importance of Vitamin D for calcium metabolism is well documented. Rosetta Reitz (1977), in her book, *Menopause, a Positive Approach*, recognizes the importance of a wide variety of vitamins in women's daily diets. Lonnie Barbach (1993), recognizes several herbs, like, sepia, nux vomica, and pulsatilla which could help some women with their symptoms but might have an adverse effect on others.

Diet

Different food and diets could affect the menopausal symptoms. Vegetarian diets, yogurt therapy, soy bean products, super foods (Reitz, 1977), like milk, brewers yeast, and brown rice are some of the foods that are believed to have a positive effect on the menopausal symptoms. Coffee, alcohol, salt,

tea, sugar, red meat and cider are among the few believed to have a negative effect on the climacteric symptoms (Reitz).

Content Analysis

Content analysis is the research method selected for this study. It is one of the most important research techniques in the social sciences according to Klaus Krippendorff (1980). Content analysis is an analytic procedure that resolves the issue under study into specific parts for more precise understanding of the composition of the subject (Thomas, 1994).

"Content analysis is a technique which lies at the crossroads of qualitative and quantitative methods" (Duncan, 1989, p. 27). It can provide lots of qualitative information and speculations, except that it is limited to identifying and speculating only on what has been systematically collected and objectified (Thomas). Fisher, Gandy, and Janus recognize it as a research technique that more health educators should be familiar with (Duncan).

Health educators are often interested in trends in media content and there have been many applications of content analysis in health education research since Bobit (1925) examined the health content of newspapers, magazines, and textbooks as a means of identifying objectives for health education (Duncan, 1989). In 1979, Miller conducted a content analysis of the health-related articles appearing in the six leading women's magazines over a three year period (Duncan).

The unit of analysis in content analysis research is a document or some element of mass communications. Units of analysis could be words, phrases, sentences, paragraphs, sections, chapters, articles, magazines, books, or the entire body of work by a given author. In some cases the units of analysis could be the title of documents or reference citations (Duncan, 1989). The referents of "source" may range from individual authors to a whole culture (Krippendorff, 1969).

The unit of analysis could also be an overall theme, or simply the existence or nonexistence of some event or claim (Kassarjian, 1977). The universe of

documents, or the whole body of documents that a researcher wants to use for a content analysis is similar to the population of other statistical studies.

Since, the total number of documents in most given categories would be quite large, the researcher may wish to limit the scope of the study to a specific group of documents. For instance, if a researcher wishes to examine the coverage of health issues in Women's magazines, the researcher may wish to limit the scope of the study to a specific set of magazines (Duncan, 1989). This selection may be guided by the personal interests of the researcher or it may be systematically determined. Miller (as cited in Duncan, 1989) used a popularity sample in his 1979 study of the six women's magazines with the largest circulation (Duncan).

"Content analysis procedures create quantitative indicators that assess the degree of attention or concern devoted to cultural units such as themes,

categories, or issues. The investigator then interprets and explains the results using relevant theories" (Webber, 1990, p. 70).

CHAPTER III

METHODOLOGY

A content analysis was used for the purposes of this research. The methodology designed and followed for the study is presented in the systematic sequence of the stages. The research process consisted of the following steps: selection of the professional health journals, lay health magazines, and periodicals directed to women, selection of the size of the sample for collection of the data, locating the articles, instrumentation, data collection, and treatment of the data.

Selection of the Sample

For the purposes of the study three distinctly different groups of publications were selected, including professional health journals, lay health magazines, and periodicals directed to women. Due to the recent widespread media coverage of new studies about menopause, hormone replacement therapy, and

osteoporosis, the period starting at January 1, 1991 and ending at December 31, 1995 was selected for the study.

Professional Health Journals

A preliminary review of the professional health journals was conducted to locate journals with relevance to the topic of this study. The result of this preliminary research was presented to the research committee which approved selection of one journal from each of the following categories:

1. A journal of gynecology and obstetrics to cover the medical issues of concern.
2. A journal of endocrinology to cover the hormonal aspects.
3. A journal about women's health.

The following journals were selected:

American Journal of Obstetrics and Gynecology, a monthly publication of the American Gynecological and Obstetrical Society. The journal is an academic, scholarly publication devoted to original research

articles on obstetrics, gynecology, fetuses, the placenta, and the newborn (Bowker, 1997).

Journal of Endocrinology, a monthly publication of the Society for Endocrinology, devoted to academic and scholarly publication of original articles about endocrinology (Bowker, 1997).

Journal of Women and Aging, a quarterly publication of original articles aiming to enhance the knowledge of a variety of professionals concerned with meeting the social, psychological, and health care needs of women as they mature (Bowker, 1997).

Lay Health Periodicals

Lay health periodicals were selected on the basis of their likelihood of including articles on women's health as well as coverage of general health. The three periodicals selected were:

American Health, a Reader's Digest Association publication which publishes ten issues per year. American Health is a research-based consumer magazine with articles on health, fitness, medicine, and

nutrition, with a focus on fitness of body and mind (Bowker, 1997).

Health, a publication of Health Publishing Group, a subsidiary of Time-Warner, Inc., which publishes seven issues a year and features a wide range of articles on how to maintain good health, including nutrition and physical fitness (Bowker, 1997).

Prevention, a publication by Rodale Press, is a magazine for better health. It is a monthly consumer publication with reports on new developments in nutrition, preventive medicine, fitness, natural living, and drugless therapies, with emphasis on practicality and self improvement (Bowker, 1997).

Periodicals Directed to Women

It was decided that the periodicals directed to women would be selected from the three highest selling periodicals (Bowker, 1997), for women. The three periodicals that were selected include the following:

Cosmopolitan, a monthly consumer publication of the Hearst Corporation directed at the contemporary woman, featuring articles on beauty, health, fashion,

career, and, social issues affecting today's woman (Bowker, 1997).

Good Housekeeping, a monthly consumer publication of Hearst Corporation, covering women's issues with emphasis on home, family life, food, health, beauty, personalities, and social life (Bowker, 1997).

Ladies' Home Journal, a monthly consumer publication of Meredith Corporation which contains women's issues, cooking recipes, consumer tips, and features about family life (Bowker, 1997).

Procedures

Collection of the Articles

The nine publications were located in the libraries of Texas Woman's University, the Science and Main library at the University of North Texas, the Denton Public Library, the Library of the Southwestern Medical School in Dallas, The Lewisville Public Library, the Hockaday School Library, The Dallas Public Library, and the Richardson Public Library. Actual copies of eight of the publications were

located. Cosmopolitan was the only group that was located in microfiche form. Locating and reviewing of the publications involved a three month process, from late August through early November. A total of 500 journal and periodical issues were reviewed. Sixty issues were reviewed in the microfiche form. A total of 128 articles were located. Each of these articles were reviewed for their suitability for this study. Nine articles were disqualified from the study. These articles were disqualified based on the following criteria: book review (n=1), personal story (n=1), growth hormone (n=1), focus on clinical treatment (n=2), letters to the editor (n=2), and focus on animal research (n=2). A total of 119 articles constituted the sample.

Instrumentation

A one page coding form (Appendix B) was developed specifically for the purposes of this research. Holsti acknowledges the need for specific design of the coding categories and writes; "...many of the most

interesting and significant content analysis studies will continue to depend on categories developed specifically for the data and problem at hand."

(Gerbner, Holsti, Krippendoef, Paisley & Stone, 1969). The main variables of interest in this study were: authors' sources, authors' credentials, HRT/ERT benefits and complications indicated, alternative remedies, and the major thrust of the articles.

Author's Credentials

This variable consisted of seven categories that identified the credentials of the author of the article which included: physician, doctoral health professional, master and bachelor's level health professional, health reporter/editor, unknown, and other, which would encompass any other category not mentioned above. This variable was used to identify the credentials of the author and their relevant credibility in regard to the presented information.

Author's Sources

This variable identified sources and their frequency and further ascertained the credibility of

the information presented in the article. The categories included in this variable consisted of the following: Health and medical research papers (research groups mentioned were also coded in this category), health and medical journal articles, health and medical professionals (this would include individual professionals cited), health and medical books, lay health periodicals, health reporter, and other. The last one would include all the other sources not stated in the above categories.

HRT/ERT Benefits and Complications Indicated

This variable indicated the HRT/ERT benefits and complications addressed in the article. The benefits stated included some of the possible benefits of the hormone replacement therapy, including reduction of chances of osteoporosis, reduction of chances of heart disease, reduction of hot flashes and sweating, prevention of excess weight gain, healthier skin, better hair, more vitality, and other. The last category would include all the other benefits

indicated in the article which were not stated in the above categories.

The indicated complications of HRT/ERT included the two major categories of complications that generate most of the controversy surrounding the issue of hormone replacement therapy. These are increased incidence of breast cancer and the increased incidence of endometrial cancer. The other complications, if indicated, would fall under the "other" category.

Alternative Postmenopausal Remedies

The categories in this variable were identical to benefits and complications recognized for the HRT/ERT variable, and corresponded to alternative remedies indicated in the article. The investigator felt it is important to include this unit of analysis for the purpose of comparison of the frequencies of featured remedies in this category.

Major Thrust of the Article

This variable determined the major thrust or theme of the article in relation to the three categories of

medical issues, symptomatic issues, and cosmetic issues.

Pretesting of the Coding Form

A training session of the investigator and the chair of the research committee was arranged to be followed with pilot testing of the instrument. An extra sample of ten articles were selected for this purpose. However, after coding of a few articles it was noted that there was a need for more clarity in some of the categories. Therefore the coding form was modified for further ease and accuracy of the coding process. At this point the investigator did some further study of several articles not included in the sample to modify the coding categories so that it would facilitate precise coding of the articles. The changes were discussed in consultation with the chair of the research committee as well as another member of the committee for feasibility of analysis of the listed categories in the revised coding form. The pre-established coefficients of reliability of 85% or above (kassarjian, 1977) was adopted.

The revised coding form was then pretested with a new group of 10 articles separately by the chair of the research committee and the investigator. For purposes of reliability of the research, the ten articles used for the pretest were selected from the sample publications of the years 1990 and before as well as 1996 issues. Nine of the articles in the pretest sample were selected, one each from the nine respective journals and periodicals and the tenth was selected from a collection of articles by random.

Inter-coder Reliability

After the coding of the ten articles, inter-coder reliability was calculated as the ratio of coding agreement to the total number of coding decisions (Kassarjian, 1977), and a reliability coefficient of 90% was achieved.

Intra-coder Reliability

This was also assessed to ensure reliability. A week after the pretest and prior to collection of the data, the pre-test sample of 10 articles were coded again by the

investigator to ascertain intra-coder reliability. A reliability coefficient of 94% was achieved.

Data Collection

The investigator began the coding of the sample articles in chronological order in November and the collection of the data continued through December for a total of about five weeks. The average time spent for studying and coding of each article was about one hour. Additional pertinent information was recorded on the form as well to provide opportunities for further qualitative and descriptive analysis of the data. Completed data were manually typed into the SPSS PC computer software program (SPSS.X Inc., 1988), for computation and analysis.

Treatment of the Data

Descriptive statistics were used to report the results of the study. Frequency counts for each category of analysis were tabulated. Crosstabulation and chi-square analysis were used to test the

hypotheses 1 through 6. The level of significance for testing the hypotheses was set at $p=.05$.

FINDINGS

CHAPTER IV

FINDINGS

Descriptive statistics were used to analyze and interpret the data collected from the research sample of articles. The findings are presented in the following sequence: (a) descriptive statistics of the sample articles, (b) descriptive statistics of the coded data, and (c) results of the testing of hypotheses 1 through 6.

Descriptive Characteristics of the Sample Articles

A total of 119 articles were selected to be included in this study. The American Journal of Obstetrics & Gynecology had the greatest number of articles qualified for the study (n=50, 42.0%). The second highest number of articles were selected from the lay health group. Prevention had 18 qualified articles (n=18, 15.1%). Good Housekeeping magazine from the periodicals directed to women was the source of the third largest volume of articles (n=15, 12.6%).

Table 1 displays a complete list of the frequency distribution of the articles studied.

Table 1

Frequency and Percentage of Coded Articles in the Sample Publications

Publication	Frequency	Percent
(PHJ): <u>Journal of Endocrinology</u>	3	2.5
<u>Journal of Women & Aging</u>	6	5.0
<u>American Journal of Obstetrics & Gynecology</u>	50	42.0
(LHM): <u>American Health</u>	9	7.6
<u>Health</u>	8	6.7
<u>Prevention</u>	18	15.1
(PDW): <u>Cosmopolitan</u>	3	2.5
<u>Ladies' Home Journal</u>	15	12.6
<u>Good Housekeeping</u>	7	5.9
Totals	119	100.0

Note. PHJ: Professional Health Journals, n=59.

LHM: Lay Health Magazines, n=35. PDW: Periodicals

Directed to Women, n=25.

All articles in the sample were selected from the issues published from January 1, 1991 through December 31, 1995. The American Journal of Obstetrics and Gynecology had a marked increase in the number of relevant articles in the 1995 issues (n=17). Prevention had a marked increase in 1994 with 8 issues (n=8). This was followed by five issues for 1995. This represents a rather high total of 13 for the two year period (n=13, 61.1% of the total selected prevention articles in the sample).

Author's Credentials

In this unit of analysis, the credentials of authors of the sample articles were examined. The findings in this unit are of special importance. As Kassarian stated, "A measurement of the extent of emphasis or omission of any given analytic category is what content analysis is all about" (1977, p. 9).

As shown in table 2, the data indicates that 68 articles did not have any physicians as an author (57.1 %), and 93 articles (78.2 %) did not have a

doctoral health professional as an author. A total of thirty articles (25.2 %) were written by unidentified sources and 28 (23.6%) more were written by lay reporters, health reporters, and others.

Of the 25 articles generated by the periodicals directed to women only two articles were prepared by the Osteoporosis Foundation, one had a physician as an author, and the rest were produced by unknown and lay writers. Of the 35 articles generated by the lay health magazines, only 2 were written by registered dietitians. Fifteen were authored by lay reporters or health reporters and 18 by authors with unknown credentials.

Of the 59 articles generated by the professional health journals, all 59 articles (100%) were authored by one or more authors who were physicians, doctoral health professionals, or had degrees at the master or bachelor level of health professions. Twelve articles had one author, twelve had two authors, and the rest of the articles had three to nine authors.

Table 2

Frequency Distribution of Author's Credentials

frequency of cited credentials	0	1	2	3	4	5	6	7	8	9
Author's Credentials	Frequency									
Physician	68	16	12	8	5	5	3	0	0	0
Doctoral health professional	93	14	10	2	0	0	0	0	0	0
Master & bachelor's level health professional	99	16	3	0	0	0	1	0	0	0
Health reporter/ editor	105	14	0	0	0	0	0	0	0	0
Lay reporter/ editor	108	10	0	1	0	0	0	0	0	0
Unknown	89	30	0	0	0	0	0	0	0	0
Other	115	4	0	0	0	0	0	0	0	0

Note. Frequency=0: articles with 0 physician as author. Frequency=1: articles with 1 physician as author, etc.

Author's sources

Documentation adds credibility to all forms of printed media. Women's health is no exception, and for sensitive issues of health and well being documentation needs to be an integral part of such printed forms. This is the reasoning behind the design of the author's source unit of analysis in this study. The findings of the analysis show a wide range of data located in this unit. The results are reported in separate tables, starting with table 3.

Table 3

Frequency Distribution of Author's Sources

Author's Sources	Citation	No Citation
Health & medical research papers	38	81
Health & medical journal articles	72	47
Health & medical professionals	46	73
Health & medical books	43	76

(Table continues)

Author's Sources	Citation	No Citation
Lay health periodicals	0	119
Lay periodicals	1	118
Health reporter	0	119
Other	58	69

Table 4

Frequency of Source Citations in the Three Categories of Publications

Publication categories	Sources							
	1	2	3	4	5	6	7	8
Professional health journals (PHJ)	3	1410	0	150	0	1	0	113
Lay health magazines (LHM)	21	1	45	12	0	0	0	11
Periodicals directed to women (PDW)	39	16	124	2	0	0	0	20

Note. PHJ, total resources cited: 1677

LHM, total resources cited: 90

PDW, total resources cited: 291

Table 5

Frequency Distribution of Author's Sources

Author's Sources	Value	Frequency	percent
Health & medical	0	81	68.1
research papers	1	24	20.2
(groups)	2	7	5.9
	3	4	3.4
	4	2	1.7
	5	1	.8
Total		119	100.0

Note. Value: The number of health and medical research papers(groups) indicated in an article (i.e., the value of 1 shows that 24 articles had only one citation of a health and medical research paper or group).

This table shows the frequency of cited health and research papers or groups in the sample articles.

Table 6

Frequency Distribution of Author's Sources

Author's Source	Value	Frequency	Percent
Health & medical journal articles	0	47	39.5
	1	10	8.4
	2	3	2.5
	3	1	.8
	6	1	.8
	7	1	.8
	8	2	1.7
	10	1	.8
	11	1	.8
	12	1	.8
	13	1	.8
	14	2	1.7
	15	1	.8
	16	4	3.4
	17	2	1.7
	18	3	2.5
	19	3	2.5
	20	3	2.5
	21	5	4.2
	22	3	2.5
	23	4	3.4
	24	3	2.5
	25	4	3.4
	26	1	.8
	27	2	1.7
	29	1	.8
	30	1	.8
	32	1	.8
	33	1	.8
	37	1	.8
	46	1	.8
	55	1	.8

(Table continues)

Author's Source	Value	Frequency	Percent
Health and medical	74	1	.8
journal articles	80	1	.8
	99	1	.8
Total		119	100.0

Value: the number of health & medical journal articles citations in each coded article.

Table 7

Frequency Distribution of Author's Sources

Author's Source	Value	Frequency	Percent
health and	0	73	61.3
medical	1	18	15.1
professionals	2	7	5.9
	3	2	1.7
	4	6	5.0
	5	3	2.5
	6	1	.8
	7	2	1.7

(Table continues)

Author's Source	Value	Frequency	Percent
Health and	8	2	1.7
medical	9	2	1.7
professionals	11	1	.8
	12	1	.8
	15	1	.8
Totals		119	100.0

Note. Value: The total number of citations of health and medical professionals in each coded article.

Table 8

Frequency of Distribution of Author's Sources

Author's Source	Value	Frequency	Percent
Health and medical	0	76	63.9
books	1	9	7.6
	2	9	7.6
	3	9	7.4
	4	6	5.0
	5	2	1.7

(Table continues)

Author's Source	Value	Frequency	Percent
	6	1	1.7
	8	2	1.7
	9	1	.8
	10	2	1.7
	12	1	.8
	13	1	.8
Totals		119	100.0

Note. Value: the total number of health and medical books cited in each article.

There were (0) citations from lay health periodicals, only one citation from lay periodicals and (0) citations from health reporters. The sources listed as "other", generated a variety of information. About 50 articles had sources other than or in addition to the specific sources listed. Half of these articles had only one "other" source listed. Another 24 had between 2 to 10 "other" sources listed, and one article had 25 "other" sources listed.

The sources listed as "other", in the periodicals directed to women included three NIH publications, one Chinese medical doctor and seven woman patients. The sources listed as "Other" in the lay health periodicals included eleven women, one congress women, two newsletter editors, a chairman of a company, one director of a NIH program and four lay health books. There was not a statistically significant difference in the sources listed as "other" in periodicals directed at women and lay health periodicals. However, there seemed to be a statistically significant difference in the sources listed as "other" in the professional journal category and the other two periodical categories. The sources listed in this category included 16 abstracts, 15 reports of the proceedings of conferences, nine year books, eight journal supplements, six NIH publications, and four DHHS publications (Table 9) .

HRT/ERT Benefits and Complications

The third unit of analysis of the study was the indicated benefits and complications of HRT and ERT.

Reduction of osteoporosis had the highest number of benefit indications (n=70), followed by the reduction in chances of heart disease (n=58), and reduction of hot flashes and sweating (n=44). The analyzed frequencies of HRT/ERT benefits are presented in Table 10.

Table 9

Frequency Distribution of Sources Listed as "Other"

Author's Sources Listed as "Other"	Frequency
A cassette tape on health	1
Abstracts	5
Abstracts from journal supplements	16
ACOG Technical Bulletin	1
Annual review	1
Book on statistics	1
Cancer statistics	1
CDC vital statistics	1
Conference reports	5
Continuing education	2
DHEW publication	3
DHHS publications	4
Federal trade report	1
Journal supplements	8
Microfilm	1
Monographs	4
National Center for Health Statistics	1
National osteoporosis Foundation publication	1
NCH Health Statistics	1

(Table continues)

Author's Sources: Listed as "Other"		Frequency
NIH publications		6
NIH monograph		1
Okla. Dept. of Commerce		
Operational manual		1
Proceedings of Conferences		1
Proceedings of symposium		15
Reference book		1
SAS Ins. Statistical		1
publication & user's guide		3
Thesis		1
Technical bulletin		1
University publication		2
US HHS statistics		1
US Congress H & ERT		1
Yearbooks		9
Total		102

Table 10

Frequency Distribution of HRT/ERT Benefits

HRT/ERT Benefits	Indication	No Indication
Reduces chances of osteoporosis	70	49
Reduces chances of heart disease	58	61
Reduces hot flashes and sweating	44	75

(Table continues)

HRT/ERT Benefits	Indication	No Indication
Prevents excess weight gain	0	119
Better skin	6	113
Better hair	3	116
More vitality	12	107
Other	48	71

The category listed as "other" got 48 indications which is a combination of other benefits and will be presented in table 11.

Table 11

Frequency Distribution of "Other" HRT/ERT Benefits

Benefits Indicated	Frequency n=# of articles
Decreased chances of stroke	2
Decreased endometrial cancer (P.*)	3
Decreased platelet adhesiveness	2
Decreased vaginal dryness	11
Dilation of coronary arteries	2
Improvement in the HDL/LDL ratio	7
Improvement of bladder function	3
Improvement of cerebral circulation	1

(Table continues)

Benefits Indicated	Frequency <u>n</u> =# of articles
Improvement of psychological functions	5
Improvement of quality of life	6
Improvement of short term memory loss	5
Improvement of sleep disturbances	5
Improvement of vascular blood flow	4
Increase of sexual desires	1
Reduced gall bladder problems (T.*)	1
Reduced liver problems (T*)	2
Reduces cerebro vascular morbidity	1
Reduces chances of Alzheimer's disease	5
Reduces chances of cataract	1
Reduces chances of colon cancer (50%)	1
Reduces depression	3
Reduced stress	1
Reduced upset stomach (T*)	2
Reduces urinary tract infections	1
Reduced urugenital atrophy	3
Reduction of total mortality	7
Regulation of monthly cycles	2
Retardation or arrest of osteoporosis	1
Stabilizing mood swings	12

Note. P.*=HRT with Progesterone. T.*=Using
transcendental estrogen.

Stabilizing mood swings had the most indications (n=12) among the benefits indicated in the "other" category, followed by the indication of reduction in vaginal dryness (n=11). Reduction of total mortality

(n=7), improvement in the HDL/LDL ratio (n=7), and improvement of quality of life (n=6) were other highly noted benefits in this category.

Table 12

Frequency Distribution of HRT/ERT Complications

HRT/ERT Complications	Indicated	Not Indicated
Increases incidence of breast cancer	29	90
Increases incidence of endometrial cancer	40	79
other	37	82

The most indicated specific complication of HRT/ERT was the increase in the incidence of endometrial cancer (n=40). Increases in the incidence of breast cancer was the second specific complication with 29 indications. In the "other" category there was a total of 37 indications of a combination of complications and risks which is presented in Table 13.

Table 13

Frequency Distribution of "Other" HRT Complications

Complications Indicated	Frequency <u>n</u> =# of Articles
Abdominal cramps	4
Alteration of clotting factors	1
Anxiety	2
Bloating	5
Breast cancer	2
Breast swelling and pain	3
Breast tenderness	6
Contraindications with blood clotting	2
Contraindications with liver problems	1
Contraindications with gall bladder problems	1
Contraindications with history of cancer	2
Contraindications with uterine fibroids	2
Contraindications with smokers	1
Contraindications with fibrocystic breast disease	1
Contraindications with Lupus	1
Contraindications with pregnancy	1
Depression	4
Diabetes	4
Dryness of eyes	1
Endometrial hyperplasia	1
Excessive bleeding	1
Fatigue	1
Fluid retention	4
Gall bladder disorder	4
Hypertension	7
Irritability	1
Liver disorder	1
Migraine headaches	8
Mood changes	2
Nausea	2

(Table continues)

Complications Indicated	Frequency <u>n</u> =# of Articles
<hr/>	
Non-compliance	1
Ovarian cancer	1
Related cancer	1
Thromboembolic disease	3
Topical side effects, rash (T.*)	3
Triglyceride level increase	5
Spotting	1
Vaginitis	1
Weight gain	5
Withdrawal & irregular bleeding	11

Note. T.*=Using transdermal estrogen

Withdrawal bleeding(resumed monthly bleeding as a result of HRT or ERT), and irregular bleeding which is a complication of combination estrogen and progesterone hormone replacement therapy had the most indication in this category. It should be mentioned that renewal of monthly cycles is possibly the reason for most cases of non compliance with HRT.

Alternative Postmenopausal Remedies

The alternative remedies suggested in the coded articles encompass a wide variety of remedies including medicinal, herbal, minerals, vitamins,

diets, and exercise. However, the most prescribed regimen for prevention and treatment of menopausal problems was a combination of exercise (n=17) and calcium (n=15). Table 13 presents the frequency distribution of the indicated benefits of alternative remedies.

Table 14

Frequency Distribution of Benefits Indicated by
Alternative Postmenopausal Remedies

Alternative Remedies	Indicated	not Indicated
Reduces chances of osteoporosis	25	94
Reduces chances of heart disease	6	113
Reduces hot flashes & sweating	13	106
Prevents excess weight gain	0	119
Better skin	0	119
Better hair	0	119
More vitality	5	114
other	14	105

There were a small number of complications reported in this category (n=8). Most of the complications listed involved variety of supplements and their side effects.

Major Thrust of the Article

The major thrust of 109 articles of the total 119 coded articles was medical issues and in 10 articles the major thrust was symptomatic issues.

Testing of the Hypotheses

The following six null hypotheses were tested at the $p=.05$ level, using the data collected from the articles on the coding forms:

1. There is no statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and articles published in lay health magazines.

2. There is no statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and selected professional health journals.

3. There is no statistically significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected lay health magazines.

4. There is no statistically significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected professional health journals.

5. There is no significant difference in the major thrust of articles published in selected periodicals directed to women and selected professional health journals.

6. There is no significant difference in the major thrust of articles published in selected lay health magazines and selected professional health journals.

Hypothesis 1

Crosstabulation and chi-square test were administered on the collected data to determine if there was a statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected magazines directed at women and articles published in lay health magazines. There were a total of 25 articles

coded from periodicals directed at women. The total number of articles coded from lay health periodicals were 35. The chi-square value was not significant: $X^2 = 1.666$

Table 15

Crosstabulation and Chi-Square of Frequency of Articles by Journal Types

Journal Type	Frequency	Percent
<u>American Health</u>	9	7.6
<u>Health</u>	8	6.7
<u>Prevention</u>	18	15.1
<u>Cosmopolitan</u>	3	2.5
<u>Ladies' Home Journal</u>	15	12.6
<u>Good Housekeeping</u>	7	5.9

Lay Health n=35 $X^2 = 1.667$ df=1 $p \leq 3.841$

Periodicals Directed to Woman n=25

Hypothesis 2

Cross tabulation and chi-square analyses were also used to determine if there was a statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected magazines directed

to women and selected professional health journals. The chi-square value was significant. $X^2 = 13.762$.

Table 16

Crosstabulation and Chi-Square of Frequency of Articles by Journal Types

Journal Type	Frequency	Percent
Endocrinology	3	2.5
Journal of Women and Aging	6	5.0
American Journal of Obstetrics & Gynecology	50	42.0
Cosmopolitan	3	2.5
Ladies' Home Journal	15	12.6
Good Housekeeping	7	5.9

Note. Professional Journals: $n=59$ $X^2 = 13.762$ $df=1$
 Periodicals Directed at Women $n=25$ $p \leq 3.841$

Hypothesis 3

To determine if there is a statistically significant difference in the frequency of documentation in the articles published in selected magazines directed to women and selected lay health magazines, cross tabulation and

chi-square were used for sources and journal types. There were eight categories in the source unit, however, there were no data on categories five (lay health periodicals), six (lay periodicals), and seven (health reporter). The chi-square value was significant. $X^2=42.48$.

Table 17

Frequency of all Cited Sources by Journal Type

Journal Type	Frequency by Source				
	1 ^a	2 ^b	3 ^c	4 ^d	8 ^e
Lay health magazines	21	1	45	12	11
Periodicals directed to women	39	16	124	2	20
<hr/>					
	$X^2=42.48$	$df=4$	$p \leq 9.488$		

Note. There was no data on categories, 5, 6, and 7.

^a =Health and medical research papers.

^b =Health and medical journal articles.

^c =Health and medical professionals.

^d =Health and medical books.

^e =Other.

Hypothesis 4

Crosstabulation and chi-square were used to determine if there is a statistically significant difference in the

frequency of documentation in the articles published in selected magazines directed to women and selected professional health journals. The total number of citations for professional health journals was 1677, and the total number of citations for periodicals directed to women was 207. The chi-square value was significant. $X^2=1160.04$.

Table 18

Frequency of all Cited Sources by Journal Type

Journal Type	Frequency by Source					
	1 ^a	2 ^b	3 ^c	4 ^d	6 ^e	8 ^f
Professional Journals	3	1410	0	150	1	113
Periodicals directed to women	39	16	124	2	0	20
<hr/>						
$X^2=1160.04$		df=5		$p \leq 11.070$		

Note. There were no data on categories, 5, and 7.

- ^a =Health and medical research papers.
- ^b =Health and medical journal articles.
- ^c =Health and medical professionals.
- ^d =Health and medical books.
- ^e =Lay periodicals.
- ^f =Other.

Hypothesis 5

Cross tabulation and chi-square were also used to determine if there was a significant difference in the major thrust of articles published in selected magazines directed at women and selected professional journals. The total number of coded articles from periodicals directed at women were 25. In 23 of them (92%), the major thrust of the article was medical issues and 2 dealt with symptomatic issues. The total number of coded articles from professional journals was 59, and, in 56 of them (94%), the major thrust of the article was medical issues and for three others, it was about symptomatic issues. The chi-square value was not significant $X^2=2.42$.

Table 19

Frequency Distribution of Thrust of the Articles by Journal Type.

Journal Type	Frequency	
	Medical	Symptomatic
Professional journals	56	3
Lay health periodicals	30	5
Periodicals directed at women	23	2
	$X^2=2.42$	$df=2$
		$p \leq 5.99$

Hypothesis 6

The same procedure as for hypothesis 5 was used to determine if there was a significant difference in the major thrust of articles published in selected lay health magazines and selected professional journals. The total number of coded articles for lay health magazines was 35 and 30 of these articles had medical issues as their major thrust while 5 articles dealt with symptomatic issues. Among the professional articles, three of them dealt with symptomatic issues and the other 56 dealt with medical issues. The chi-square value was not significant. $X^2=2.42$.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Menopause is a normal physiologic state of a woman's life. As a result of marked increase in life expectancy, the period of life after menopause has been extended and women can expect to live one-third to half of their lives in this condition. After menopause, estrogen production decreases, and a variety of symptoms effect the woman's quality of life. Estrogen deficiency also enhances several risk factors such as heart disease and osteoporosis that can become a major handicap. Hormone replacement therapy after menopause can effectively improve the quality of women's lives, prevent osteoporosis, reduce chances of heart disease and stroke, and eliminate some of problematic symptoms associated with hormone deficiency of this stage of life. Women need to be informed about issues that will effect the quality of their lives during this important period so that they can make informed decisions.

Media can be a major source of health information for the majority of women. This is a very special responsibility which some of the publications seem to recognize. Periodicals can play an important role in promotion of health education and, disease prevention.

This study was conducted to compare the coverage of hormone replacement therapy in popular and professional journals. A content analysis was conducted on nine groups of publications from three different categories of professional health journals, lay health magazines, and periodicals directed to women. All issues of the nine publications for a period of 5 years beginning on January 1, 1991 and ending on December 31, 1995 were reviewed. A total of 500 issues were reviewed and a total of 119 articles were identified and coded for further analysis. The variables of interest included: authors credentials, author's sources, HRT/ERT benefits and complications indicated, benefits and complications of alternative remedies, and major thrust of the article.

Frequency counts, crosstabulations, and chi-square tests were used to test the following 6 null hypotheses at $p=.05$ level of significance.

1. There is no significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and articles published in lay health magazines. The chi-square value was not statistically significant therefore this hypothesis was not rejected.

2. There is no statistically significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and selected professional health journals. The chi-square value was statistically significant and this hypothesis was rejected.

3. There is no statistically significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected lay health magazines. The chi-square value was statistically significant and this hypothesis was rejected.

4. There is no statistically significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected professional health journals. The chi square value was statistically significant and the null hypothesis was rejected.

5. There is no significant difference in the major thrust of articles published in selected periodicals directed to women and selected professional health journals. The chi-square value was not statistically significant and the null hypothesis was not rejected.

6. There is no significant difference in the major thrust of articles published in selected lay health magazines and selected professional health journals. The chi-square was not statistically significant and the null hypothesis was not rejected.

Discussion

Systematic study of this sample of articles suggests that women's health, specifically climacteric and hormone replacement therapy, has not been a major focus for the

media. There is a significant amount of recent information, scientific findings, and results of new studies available on the topic of menopause and hormone replacement therapy. However, non-professional media had minimal information delivery through educational articles. Most of the authors who produced articles on the issue were not health professionals. With the exception of Prevention magazine, most of the articles that appeared in the lay health and periodicals directed to women were not well documented.

In a 1994 study, on the women's collective meanings of menopause, Cross and Lovett investigated women's sources of information. Printed media (advertising/ articles) was the second highest source of information after formal education, followed by media programming (commercials/TV shows), medical professionals, and self education and research.

Communication through mass media can be an important component of health promotion strategies. The mass media can influence individual behavior and community values necessary for maintaining difficult changes in behavior. Media can provide valuable

information to the consumer about the options that are available to them (Public Health Service (PHS), 1991). However, Mass media are influenced by a variety of economic and political, and other factors, which could possibly reflect in their direction and focus (PHS).

Consumer education could help women to be more selective with the published information in terms of quality, accuracy, sources, and credentials. This in turn will influence the quality of the published articles.

The findings of the study shows that of the 25 articles generated by the periodicals directed to women, only three had authors with credentials, and the credentials of the authors of the other 22 articles were unknown. A similar finding of the lay health magazine shows that of the 35 articles generated by this group, only two articles were authored by two dietitians and the other 33 articles were written by lay or health reporters with unknown credentials. In comparison of the 59 articles by the professional journals, all (100%) were authored by one

or more authors who were physicians, doctoral health professionals, or had degrees at the master or bachelor level of health professions.

The findings of the study about the documentations of the articles are somewhat similar to the findings on credentials. Lay health magazines had the lowest number of citations with a total of 90 citations for all the 35 articles. There were 45 (50%) citations of health and medical professionals and the rest was divided among four other groups. It needs to be mentioned that there were no citations from lay periodicals, lay health magazines and health reporters.

The periodicals directed to women had a total of 291 citations with the majority of citations (124) in the health and medical professionals category, as well. The rest of the citations came from four other sources with the exclusion of the three sources of lay health periodicals, lay periodicals, and health reporter.

The professional health journals had a substantially higher number of total citations (1677). Most of the citations for this group (1410), however, came from the health and medical journal articles. There were 150 citations from the medical books, 113 from "other" sources, three came from health and medical research papers, and one from lay periodical.

HRT/ERT benefits and complications was another unit of analysis. The climacteric is associated with estrogen deficiency which can cause different complications. Among these effects, several conditions are the most serious. They include: disabling hot flashes, atrophic vaginitis, acceleration in osteoporosis, and a marked increase in the relative risk of fatal myocardial infarction. The results of HRT in these patients are excellent and there are no other sensible alternatives (Boyd, 1995). Hormone replacement therapy has been also shown to improve the quality of life of women suffering from menopausal symptoms (Griffiths, 1994). The findings of the study

shows that reduction of osteoporosis had the highest indication of benefits followed by the reduction of chances of heart disease. The reduction of vasomotor symptoms was the next benefit that was indicated.

Observational studies indicate that unopposed estrogens protect against cardiovascular disease and osteoporosis-related fractures. "These findings are supported by clinical evidence of favorable effects on serum lipids and bone density, and on arterial tissue in animal models" (Rosenberg, 1993, p. 1670).

In summary, HRT is strongly recommended in the following situations:

- Severe climacteric symptoms that affect the quality of life (i.e.; hot flashes, insomnia, depression or severe atrophic genital changes).
- Premature loss of ovarian function (i.e., before the age of 45-48 years) as a result of early menopause or surgical removal of the ovaries.
- High risk of osteoporosis and established osteoporosis in the premenopause and postmenopause.

The risk is particularly high in women whose mothers had osteoporosis.

-High risk of atherosclerosis and cardiovascular disease. There is strong evidence that HRT protects against cardiovascular disease and this is becoming an indication of great importance (Lauritzen).

"Epidemiological data suggest that postmenopausal women receiving estrogen replacement therapy experience a cardiovascular risk reduction of approximately 40% to 50%. Potential mechanisms for this marked clinical benefit include a favorable reduction in total and LDL cholesterol, and an increase of HDL cholesterol and a decrease in LDL uptake by the arterial wall" (Gebara, et al., 1995, p. 1956). Also early studies have shown that estrogen replacement therapy may be beneficial for the treatment of associated chest pain of syndrome X. disease in women patients (Collins, 1996).

"Contrary to previous belief, cardiovascular risk factors such as smoking, hypertension, diabetes mellitus, hyperlipidemia, or even previous myocardial

infarction are not contra-indications for HRT, and may even be considered as indications. The decision regarding whether or not to treat and also the choice of treatment is conditioned by the severity of symptoms, their impact on quality of life, the wishes of the patient, and the presence of any contra-indications" (Lauritzen, 1996).

In spite of a better understanding of the benefits of hormone replacement therapy, approximately only 15% of postmenopausal women in the United States receive estrogens (Maheux et al., 1994). Physicians and health professionals need to take at least some of the responsibility for this noncompliance and drop-out that occur during the first weeks or months of hormone replacement therapy. Finally, women could take an active role in seeking health care and assuming the role of informed consumer rather than accepting a treatment that they might later drop for lack of enough information (Hibbard & Hampson, 1993).

The findings of the study also indicates that the major trust of the articles were medical issues (109),

and a small number of articles (10) dealt with symptomatic issues.

Conclusions

Quantitative analysis of the collected data from 119 sample articles indicate the following conclusions:

- 1: There is no significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and articles published in lay health magazines.
2. There is a significant difference in the frequency of the articles published on hormone replacement therapy in selected periodicals directed to women and selected professional health journals.
3. There is a significant difference in the frequency of documentation in the articles published in selected periodicals directed to women and selected lay health magazines.
4. There is a significant difference in the frequency of documentation in the articles published in selected

periodicals directed to women and selected professional health journals.

5. There is no significant difference in the major thrust of articles published in selected periodicals directed to women and selected professional health journals.

6. There is no significant difference in the major thrust of articles published in selected lay health magazines and selected professional health journals.

Recommendations

The following recommendations are offered for consideration of health professionals and for future research.

For Future Research:

1. Replication of this study with other groups of publications and publishing the results in current periodicals will help raise public and professional awareness about women's health, climacteric and hormone replacement therapy.
2. Replicating this study to analyze the currency of issues in the articles will promote more accuracy.

3. Creating a similar study to analyze the accuracy of content of health and medical articles would further help to raise the standard of health related articles published in general periodicals.

For Health Professionals:

1. Health professionals need to spend more time with their women patients explaining the benefits, complications, and possible contraindications of HRT and discuss the advisable alternatives available to them.

2. Health professionals need to be sensitive to the diversity of individual needs of women patients and take that into consideration when they prescribe a specific HRT regimen, for better acceptance and compliance.

3. The importance of informed decision making on the part of women where issues of HRT is concerned should be recognized by the health care providers.

4. Creation of educational opportunities for women of all ages to learn about this important issue from a credible source could have a major impact on women's health.

5. Contribution of informational articles to lay health or other periodicals by the health professionals

would create further opportunities for public education on issues of women's health.

6. Creation of comprehensive educational pamphlets on climacteric and HRT, accessible to the general public needs to be considered by the health care providers.

7. Contribution to educational programs in schools for teaching healthy life style with special focus on bone density in the growing years would give women a better starting point when they reach menopause.

8. Creating opportunities to correct misinformation of the media could be a major contribution by the health professionals.

Finally, recognition of the importance of the message and credibility of the author and the source, and its level of acceptance, will help health professionals use different educational tools more effectively.

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APPENDIX A

APPENDICES

Reference List of Coded Articles

REFERENCE LIST OF CODED ARTICLES

1. 1935, November, *British Journal of Obstetrics and Gynaecology*, 73-74.

2. 1935, November, *British Journal of Obstetrics and Gynaecology*, 73-74. The influence of anaesthesia on the response to hyperventilation therapy in body cell.

APPENDIX A

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APPENDIX B

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Appendix B Coding Form

Vol / pgs _____ # Times / yr _____
 Vol / pgs _____ # Times / yr _____
 Vol / pgs _____ # Times / yr _____

Author's Sources

01 _____ Health and medical
 research papers

02 _____ Health and medical
 journal articles

03 _____ Health and medical
 textbooks

APPENDIX B

Coding Form

04 _____ Health and medical
 books

05 _____ Health periodicals

06 _____ Lay periodicals

07 _____ Health newspaper

08 _____ Other

HRT / BRT Compositions Indicated

09 _____ Increases incidence of
 breast cancer

10 _____ Increases incidence of
 endometrial cancer

11 _____ Other

Compositions Indicated

12 _____ Increases incidence of
 breast cancer

13 _____ Increases incidence of
 endometrial cancer

14 _____ Other

Appendix B
Coding Form

Professional journal _____ Vol / pgs _____ # / mo. / yr. _____
Lay health magazine _____ Vol / pgs _____ # / mo. / yr. _____
Periodical _____ Vol / pgs _____ # / mo. / yr. _____
Article title _____
Author(s) _____

Author's Credentials

- 01 _____ Physician
02 _____ Doctoral health professional
03 _____ Master and bachelor's level
health professional
04 _____ Health reporter/editor
05 _____ Lay reporter/editor
06 _____ Unknown
07 _____ Other

Author's Sources

- 01 _____ Health and medical
research papers
02 _____ Health and medical
journal articles
03 _____ Health and medical
professionals
04 _____ Health and medical
books
05 _____ Lay health periodicals
06 _____ Lay periodicals
07 _____ Health reporter
08 _____ Other

HRT / ERT Benefits Indicated

- 01 _____ Reduces chances of osteoporosis
02 _____ Reduces chances of heart disease
03 _____ Reduces hot flashes and sweating
04 _____ Prevents excess weight gain
05 _____ Better skin
06 _____ Better hair
07 _____ More vitality
08 _____ Other

HRT / ERT Complications Indicated

- 09 _____ Increases incidence of
breast cancer
10 _____ Increases incidence of
endometrial cancer
11 _____ Other

Alternative Postmenopausal Remedies

Benefits Indicated

- 01 _____ Reduces chances of osteoporosis
02 _____ Reduces chances of heart disease
03 _____ Reduces hot flashes and sweating
04 _____ Prevents excess weight gain
05 _____ Better skin
06 _____ Better hair
07 _____ More vitality
08 _____ Other

Complications Indicated

- 09 _____ Increases incidence of
breast cancer
10 _____ Increases incidence of
endometrial cancer
11 _____ Other

Major Thrust of the Article

- 01 _____ Medical issues 02 _____ Symptomatic issues 3 _____ Cosmetic issues