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Judith A. Berg

Dedicated to the memory of my mother,

Garnet Down Black.

She shared her love of learning with me, and

I can feel her pride in my achievements, even now.

Thanks, Mom.

Acknowledgments

Many people have made this research possible. The constant support and advice from my husband, Paul, sustained me through the years of doctoral study. He had the dedication to encourage me and the charity to overlook my absence (especially my absence from the kitchen) throughout the program. His countenance, particularly during data collection and dissertation writing, allowed me to complete this project. I will always be thankful for his love, and I look forward to our life together. Paul, I could not have done this without you, and I will always think of my degree as your second PhD.

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research that has utility in practice. She has been generous with her time and her resources; she has assisted me with grant writing projects; she has mentored me in teaching graduate students; and she has been a very dear friend. The only way that I can adequately thank her for her advice and help is to offer the same support to a future doctoral student. Diana, I will embrace the opportunity to do that, for in no other way can I demonstrate my gratitude.

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ABSTRACT

The Perimenopausal Transition of Filipino American Midlife Woman

Judith A. Berg, RN, WHNP, MSN

The purpose of this study was to describe the biological, psycho-social, and cultural dimensions of midlife Filipina's perimenopausal experience and to identify their symptom experience and responses. A community-based sample comprised of 165 women who (1) self-identified as Filipino American, (2) were age 35 to 56, and (3) were English language proficient, was recruited from community churches and social groups.

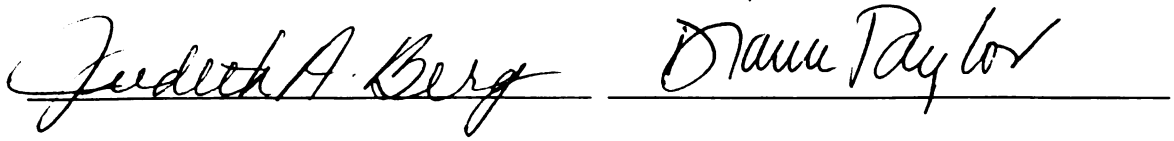
Descriptive statistics were employed to report information about each of the salient variables representing the study domains for four age groups (35-39, 40-44, 45-49, 50-56). Chi-square statistics were employed to determine significant differences among the groups. These measures, plus Pearson's product moment correlations and multiple regressions analyses were utilized to answer five research hypotheses.

Women in the study were born in the Philippines (93.3%) and had lived in the U.S. an average of 18.4 ($\pm$8.7) years. The majority of the women were married or partnered (74.6%), had completed college (62.8%) or a graduate degree (15.9%), and worked (full-time, 77.9%; part-time, 12.9%). More than 58% had total household incomes greater than $50,000. The average age of natural menopause was 48.9 ($\pm$4.9) years, and the average age of surgical menopause was 42.2 ($\pm$5.7) years for

the group. Calcium intake from food sources was generally low and was identified as a potential problem. Although attitudes toward menopause and aging were generally positive and the women appeared to be satisfied with their primary relationship, scores from the Center for Epidemiological Studies Depression Scale (CES-D) revealed a 24.8% depression rate.

The low prevalence of health problems in the present study confirms previous research reports that foreign-born persons have better health than the U.S. population. Unlike previous immigrant groups, Filipinas in the present study did not appear to lose this health advantage after having lived in the U.S. 10 years or more.

Higher parity was not significantly correlated with later age at menopause in these women, but self-reported menopausal status was significantly correlated with FSH levels. Household income, level of education, number of self-care strategies used, visit to a health care provider, and use of pharmacologic or surgical interventions could not explain a statistically significant amount of the variance in estrogen-related menopause symptom severity scores. A better model was one in which income, scores from the CES-D, age categories and the negative affect symptom subscale from the Menstrual Symptom Severity List (MSSL) were entered as the independent variables. This regression model explained 8% of the variance in estrogen-related menopause symptom severity scores.



Judith A. Berg, RN, NP, MSN
Candidate

Diana Taylor, RN, PhD, FAAN
Chairperson

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Chapter 1

THE STUDY PROBLEM

Purpose

The purpose of this study was to describe the biological, psycho-social, and cultural dimensions of midlife Filipina Americans' perimenopausal experience and to identify their symptom experience and responses. The information obtained in this cross-sectional descriptive study serves to establish baseline information on a previously underdescribed group of women.

Throughout this report the term Filipino is used to refer to persons of Philippine ancestry. Though the national language of the Philippines does not have the letter "F" and scholars in the 1980s (Anderson, 1983; Flaskerud & Soldevilla, 1986) promoted the use of a "P" for Pilipino, more recent publications (Zane, Takeuchi & Young, 1994), as well as community publications (*Philippine News* and *Filipina*) use "F" for Filipino. To determine which term to use for reporting purposes, a subset of 20 participants was randomly selected using a random numbers table (Shott, 1990). This subsample was asked if they wished to be referred to as "Filipina" or "Pilipina". Results of the telephone survey conducted by one age and culturally matched research assistant were: 75% ($\underline{n}$ = 15) for "F", 10% ($\underline{n}$ = 2) for "P", 10% ($\underline{n}$ = 2) stated it didn't matter, and 5% ($\underline{n}$ = 1) were out of the country.

Background

Recent attention to women's health and women's health research has highlighted our confusion and lack of knowledge about the normal perimenopausal transition of midlife women. Previous research about women during the

perimenopausal transition, despite methodological flaws, has established that the menstrual cycle has some role to play in age-related health and illness in women, though specific mechanisms have not been established. Substantive progress toward understanding morbidity among women will demand an increased awareness of their biological, as well as their psychological, social, and cultural differences (U.S. Congress, 1991); clinical interventions and advice about life style changes that promote wellness require an understanding of these dimensions.

Significance

Every woman who lives long enough will experience the menopausal transition (Logothetis, 1991). In the United States, the average age of menopause remains stable at about 50 (Greendale & Judd, 1993). At the turn of the century, fewer than five million American women were over age 50 (U.S. Congress, 1991). By 2000, about 58 million will be midlife women between the ages of 40 and 60 (U.S. Dept. of Commerce, 1989); by the year 2010, 44% of all women will be over 45. Since the average life expectancy of females in the United States is 78, U.S. women will spend about one-third of their life in the postmenopausal phase (Greendale & Judd, 1993). This increasing longevity underscores the need to deliver health care that is aimed at reducing the morbidity that threatens independence in this rapidly-growing population of women.

Despite the universality of the menopausal event in human female aging, much is unknown about it. Biomedical researchers have become increasingly convinced that the loss of ovarian hormone production plays a key role in subsequent age-related pathology in women (U.S. Congress, 1991); however, the specific mechanisms are

not well understood. More information is needed to assist clinicians to differentiate those disorders related to the loss of ovarian hormone production from those that are not. Additionally, specific information about the experience of other ethnicities is needed for clinicians to provide culturally appropriate care and to understand ethnic responses to perimenopausal transition issues.

The Surgeon General of the United States established priorities for national health in Healthy People 2000: National Health Promotion and Disease Prevention Objectives (U.S. Dept. of Health and Human Services, 1990) to include socio-cultural factors. For midlife women, socio-cultural factors are particularly relevant, for it is known that women learn to respond to menopause within the context of their family and culture; the perception of menopause and the experience of menopausal symptoms vary across cultures (Beyene, 1986). Most of what is known about the menopause experiences of women in the United States is based on data collected from middle-class European Americans and may not apply to other cultural groups. Indeed, there appear to be considerable cultural differences in the reporting of vasomotor symptoms associated with menopause and in the use of health care services (Mutchler & Burr, 1991; Wright, 1983). While all cultural groups should be included in perimenopausal research, priority must be given to Asian and Pacific Island women, of which Filipinos are a subgroup, as they are less likely than others to appear in national data sets, resulting in less knowledge about their health care practices (Yu & Liu, 1992). More compelling is the fact that the Filipino American population increased by 81% from 1980 to 1990 (Zane, Takeuchi & Young, 1994).

It is apparent that Filipino Americans have been neglected in the literature;

they have been characterized as the "forgotten Asian Americans" (Espiritu, 1995, pp. 1). This neglect in the literature may stem from a cultural perspective that asserts Filipinos lack an authentic indigenous culture and have been "too Westernized" (Expiritu, 1995, pp. 1). Their status as one-time colonial subjects of the United States, their rapid and recent rise to prominence as a specific ethnic group, and their relatively smooth integration into U.S. society might also explain why little is written about them (Anderson, 1983).

The state of California, and particularly the San Francisco Bay Area, has a significant Filipino American population. In 1990, the Filipino population in California was 731,685 (U.S. Dept. of Commerce, 1990). The San Francisco Bay Area five county (Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara) total of Filipino Americans in 1990 was 226,100 (State of California, 1990), which represents approximately 31% of the 1990 total Filipino population in California. Approximately 50.3% (113,728) are Filipino women living in the five Bay Area counties.

In summary, the purpose of this study was to describe the perimenopausal transition experience of midlife Filipina Americans in order to obtain baseline information about this specific cultural group. The information obtained adds to a beginning body of knowledge about the perimenopausal transition of diverse women in the United States and will lead to more culturally appropriate health care and intervention strategies aimed at reducing morbidity in aging women.

Chapter 2

THE THEORETICAL FRAMEWORK

and

THE LITERATURE REVIEW

Introduction

This chapter is divided into two related sections. In the first section, the theoretical framework for the study is discussed in order to place the study in the appropriate context. This discussion is followed by a literature review of selected studies that provide information about biological, psychological, social, or cultural (bio-psycho-social-cultural) dimensions of the perimenopausal transition. Included in the literature review section is identification of gaps in our knowledge base, which provided the basis for the design and focus of the present study.

Theoretical Framework

Since the perimenopausal transition is multi-dimensional, a theory base that encompasses a traditional biomedical perspective in concert with a psychosocial one is necessary. These perspectives combine to create a bio-psycho-social-cultural view. Together with transition theory, which has become a central concept in nursing (Schumacher & Meleis, 1994), these paradigms provide a strong basis for study of the perimenopausal transition of a specific cultural group. For the purpose of this discussion, the perimenopausal transition is defined as that time in a midlife woman's life that is marked by menstrual disregulation and/or vasomotor symptomatology. The perimenopausal transition ultimately leads to menopause which is defined as the absence of menses for twelve consecutive months.

Biomedical view of menopause

The biomedical view of menopause embraces the belief that menopause is a deficiency state (Kaufert & Gilbert, 1986; Koeske, 1982) which is measured by estrogen levels. From this view, menopausal symptoms result from lowered estrogen levels and psychological symptoms that occur during the perimenopausal transition are indirectly related to estrogen levels. Using the definition of menopause as a deficiency state, this deficit can be remedied by replacement of the hormone in question. This estrogen deficiency definition of menopause determines not only the symptoms of menopause, but also its temporal boundaries, providing the basis for determining when the perimenopausal transition begins and when it ends. The tidiness of the model is appealing, for it provides the parameters for diagnosis of menopause (lowered levels of estrogen or elevations in other sex steroids, such as FSH and LH), explains symptomatology, and allows for medical intervention that is aimed at replacing the deficient hormone. However, social, behavioral, feminist, and nursing scientists have all pointed out that an explanation of menopause as a deficiency state in no way approximates the complex relationships that exist between physiological, social, psychological and cultural manifestations that have been identified during the perimenopausal transition. Nor does estrogen therapy necessarily relieve all of the symptoms that have been attributed to low estrogen levels.

Psychosocial View of Menopause

In contrast to the biomedical model, psychosocial models view women in terms of roles and functions or as a composite of reactions to the society and

environment (Voda & George, 1986). Menopausal symptomatology, then, is nearly always related to women's personalities and previous adjustment which represent stable characteristics of the self. These, then, are the determinants of whether the menopause is symptomatic or "normal" (Koeske, 1982). These approaches have contributed information about social and psychological aspects of the perimenopausal phase but do not incorporate physiological components. The focus on nonbiological factors as causal agents of menopausal change, and the sole dependency on sociocultural determinants of menopausal symptomatology make psychosocial models as deficient as biological models (Voda & George, 1986).

Feminist scholars, on the other hand, downplay the possibility that the experience of the perimenopause and menopausal symptomatology might require medical intervention. Instead, menopause is viewed as a "normal" phase of women's development. Physicians are considered to have done women a disservice by convincing them otherwise. From the feminist perspective, hormone therapy is not needed, is not advisable, and should not be offered to women. And though their research methodology is reflective of a psychosocial model, these scholars take a political position about the meaning of the experience. This latter perspective negates the research reports on the benefits of hormone therapy and devalues a biomedical perspective. Conversely, a great strength of the feminist perspective on menopause is its insistence upon listening to each woman's own voice. In this way, women are looked to for their own interpretation of the significance of the event, as well as to their symptom experience and response.

Cultural view of menopause

Culture exerts important influences on human development in that it provides a way to recognize stages in the continuum of individual development throughout the lifespan (Boyle, 1995). The perimenopausal transition is one of the developmental markers for midlife women; the meaning and expectations of this transitional phase are culturally learned (Beyene, 1986). Cultures can be viewed as dynamically reshaping themselves over time through interaction of individuals. Acculturation, defined as second culture acquisition, occurs on a continuum that can be expressed unevenly within the different domains of the home, the neighborhood, or the workplace. Moreover, culture can be seen as a set of guidelines, both explicit and implicit, which individuals are expected to inherit as members of a particular society. These cultural guidelines tells members of a given culture how to view the world, how to experience it emotionally, and how to behave in relation to other people, supernatural forces or gods, and to the natural environment (Helman, 1990).

Transition Theory as it Relates to Midlife Women

Transition theory has been developed out of the realization that transitions have commonalities that include process, direction and change in fundamental life patterns (Schumacher & Meleis, 1994), and this theory describes conditions that may influence the quality of the transition experience and the consequences of transitions. The purpose of this discussion is not to focus on transition theory, but to identify changes that might occur in the perimenopausal transition within the context of each of the bio-psycho-social-cultural dimensions.

Biological dimension. The most commonly identified change during the

perimenopausal transition is the movement from reproductive to non-reproductive ability. This change in ability may very well be welcomed by women and should not necessarily be thought of in negative terms. However, this change does demonstrate the appropriate application of transition theory to the perimenopausal transition experience as it requires that women redefine themselves in relation to their reproductive functioning.

Psycho-social dimension. Changes that occur in women in midlife that relate to the psycho-social dimension might best be viewed as variable and person specific. Researchers have reported wide variability in mood across women during the perimenopausal transition, though depression in these women does not appear to vary by menopausal phase. Instead, feelings of well-being that are profoundly influenced by socioeconomic, educational, and employment factors appear to be negatively correlated with menopausal distress (Woods, 1982; Glazer & Rozman, 1991; Hunter, 1993). Some women experience feelings of loss related to the menopause; these feelings can be attributed to role changes, as well as to the loss of reproductive functioning or to losses related to aging in a society that values youth. Even role transitions that are interpreted positively, such as the return to a career after childrearing, require that women make adjustments or reassess themselves. Just as with the biological dimension, changes that pertain to the psycho-social dimension require that women define or redefine themselves in relation to their environment.

Cultural dimension. Changes that occur in women that are relevant to the cultural dimension of the perimenopausal transition may reflect acculturation and assimilation processes. Immigrant women, especially those who interface with the

dominant culture in their homes, communities or work settings, are more likely to exhibit changes related to second culture acquisition. These changes affect not only their interpretation of menopausal symptomatology, but also their response to the total process. Good and Good (1982) described the relationship between symptom recognition and emphasis as being culture-specific; culture defines which symptoms represent illnesses and which do not. Not all women interpret menopausal symptomatology as indication of illness and many do not even recognize that symptoms occur. These variations may be culturally derived. When changes occur during the perimenopausal transition due to acculturation or assimilation, they reflect a process of health and illness redefinition that may evolve from a change in cultural perspective. This redefinition fits with the bio-psycho-social-cultural model approach to a transitional phase.

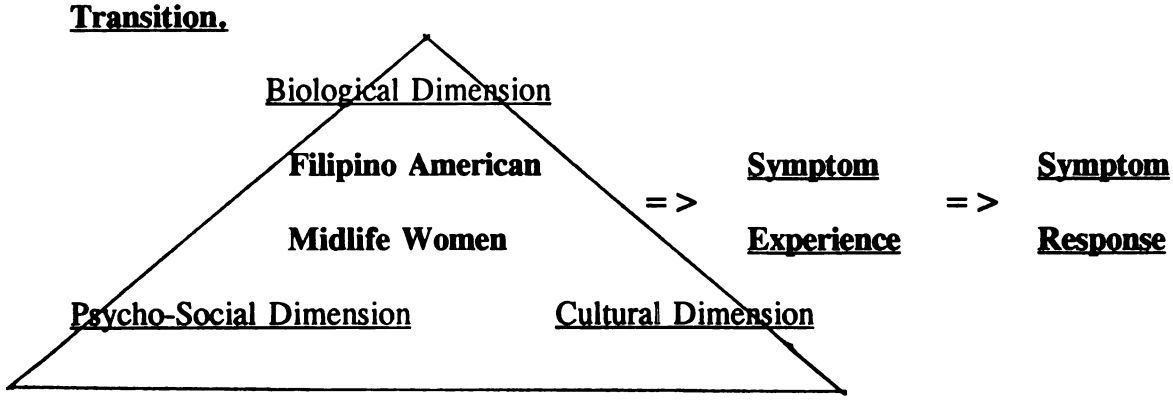
Menopause: A Bio-Psycho-Social-Cultural View of Women in Transition

Biomedical, as well as psycho-social models attempt to explain women's experience of the perimenopausal transition. From a social scientist's view, psychological and social issues present in a woman's life impact her symptom experience; from a biomedical perspective, biological or physiological variables directly cause physical symptoms and indirectly cause psychological symptomatology. But it is culture that provides guidelines by which women interpret the perimenopausal experience. Therefore, the model that best represents these many dimensions of the perimenopausal experience and examines the interplay of these dimensions is one that incorporates biological, psychological, social and cultural parameters. Figure 2-1 (Lee et al., 1994) provides a schematic view of this model.

Although much disagreement exists about the type and degree of interdependence between physical, psychological, and socio-cultural variables in accounting for the manifestations described during the perimenopausal transition, most would agree that some relationship does exist (Galloway, 1975; Frey, 1981). The complex notion of body-behavior relationships does not lend itself to separation into social environment and physiology.

Figure 1

The Perimenopausal Transition: A Bio-Psycho-Social-Cultural View of Women in Transition.



Instead, it should be recognized that reports of symptoms suggest an interaction between physiology and social environment and are not best thought of as simple reflections of underlying biological processes, although they are influenced by such processes in complex ways. Social and cultural factors influence the quality and characteristics of the social environment which becomes attached to any bodily experience. Thus, such biological phenomena as bodily experiences during the perimenopausal transition, explanations of health and illness, and the formal and informal systems of medical care are all influenced by social and cultural factors which condition and set boundaries on their features (Koeske, 1982). To treat all

self-reported symptoms as either wholly physiological or wholly sociocultural is to radically distort the complexity and variability of bodily functioning (Koeske, 1982). The only way to adequately and more accurately portray the perimenopausal transition is to describe physiological (biological), psychological, social, and cultural dimensions together. By explicitly including variables from all these dimensions in the same study, a greater number of questions about the perimenopausal transition can be answered. Interrelationships between these variables and dimensions can be established as well.

Literature Review

The literature identifies a number of indicators for each of the dimensions of the perimenopausal experience. The major findings relevant to these indicators have been highlighted followed by a discussion of major gaps in this literature. Information about Filipina Americans is included when known.

Biological Dimension

Aspects of the biological dimension of the perimenopausal experience noted in the research-based literature include measures of hypothalamic-pituitary function, age, parity, and menstrual cyclicity. Calcium requirements for women are included along with available information about bone density in Filipinas. In subsequent chapters, calcium from food sources is discussed within the context of health and risk behaviors.

Hypothalamic-pituitary function. Follicle-stimulating hormone (FSH) level is a reliable indicator of the perimenopause and seems to be the best single test to identify menopause (Richardson, 1993). The rise in FSH levels is interpreted as a

hypothalamic-pituitary response to the lack of ovarian estrogen secretion (Greendale & Judd, 1993).

Age, parity, and menstrual cyclicity. Researchers have established that chronologic age of about 50-51 is predictive of menopause (defined as 12 months past the last menstrual period) in European American (McKinlay, Brambilla & Posner, 1992), Norwegian (Holte, 1992), Japanese (Lock, Kaufert & Gilbert, 1988), and Greek (Beyene, 1992) women. Chompootweep et al. (1993) found 50-51 to be the average age of menopause in a group of Thai women, yet Sukwatana et al. (1991) found the average age in a similar group to be 47.9. Mean age of menopause in a group of Mayan women was 44.3 $\pm$4.4 years (Martin et al., 1993). In a study of 500 Filipinas in Metropolitan Manila in the Philippines, the estimated age at menopause was 48 years (Ramoso-Jalbuena, 1994b); in a mail survey of 1015 Filipinas in Metro Manila, Ramoso-Jalbuena (1994a) found the average age at menopause to be 47.2 years. The age at which women of other ethnicities experience menopause is thought to be earlier or unknown (Beyene, 1992). There appears to be no association of age at menopause with age at menarche (Jaszmann, van Lith & Zaat, 1969; Whelen et al., 1990). High parity correlated significantly with delayed menopause in a large sample of women (Chompootweep et al., 1993; McKinlay et al., 1992); and nulliparous women have fewer menopause symptom complaints (Jaszmann, van Lith & Zaat, 1969).

Current smoking is reported to have a toxic impact on ovarian function causing an earlier menopause by an average of 1½ years (New England Research Institute, 1993). The smoking prevalence rates for Filipinos in California were found to be

20% for men and 6.3% for women (Zane et al., 1994). Menstrual cyclicity has been widely studied in relation to the perimenopausal transition and will not be focused upon in this discussion. However, earlier work by Corson and Upton (1982) outline the cycle irregularities that are harbingers of the end of reproductive life for women. Other researchers have summarized the relationship between menstrual cyclicity and the perimenopausal transition (Henrik, 1982; Ruble & Brooks-Gunn, 1982).

Calcium intake. To reduce the risk of osteoporosis (porous bone), all women need to build and maintain their calcium stores (American Society for Bone and Mineral Research, 1986). Daily calcium requirements for women aged 18-50 are 1000 mg/day; women over 50 years of age who are taking estrogen also require 1000 mg/day. Women over age 50 or who are postmenopausal and not taking estrogen require a daily intake of 1500 mg of calcium (American Society for Bone and Mineral Research, 1986). Lam, Baker, Seeman, and Pepperell (1988) reported that the perimenopausal acceleration of bone loss occurs before the last menstrual period and continues for 8-10 years. Although it is known that bone demineralization occurs more rapidly during this phase, it is not known if bone loss occurs at the same rate and with the same risk factors in all ethnic groups (New England Research Institute, 1993). Davis, Novotny, Ross & Wasnich (1994) found that bone mass varied among the four ethnic groups of women (Hawaiian, Filipino, Japanese, and Caucasian women) aged 25 to 34 years, but that these differences were reduced or eliminated following adjustment for height and weight. Lee and colleagues (1994) found that the first 75 Caucasian women in their study had an average daily calcium intake of 667 mg with a median of 616.5 mg (K. Lee, personal communication, December 9,

1996). There is a relatively high incidence of lactose intolerance and malabsorption in Filipinos (Anderson, 1983); in combination with a diet that is not rich in green leafy vegetables, which are alternate sources of calcium, Filipinas may not have sufficient calcium intake.

Gaps Identified

Although the biological dimension of the perimenopausal transition has been the most widely researched, there continue to be major gaps in our knowledge base. Age of onset of menopause and the perimenopausal transition in diverse ethnic women, both within the U.S. and in other countries, have not been well established. There is a lack of information on surgical menopause; no reliable estimates of racial or socioeconomic differences in obtaining this surgery are available, and we do not know the impact of this procedure on women's subsequent health (New England Research Institute, 1993). Moreover, the current recommendation by physician groups to leave healthy ovaries intact during hysterectomy needs to be investigated to determine if this is actually carried out in current practice. There are no reliable data on the normal changes in sex hormones from pre- to post-menopause in general populations (New England Research Institute, 1993), though this information will be available when several of the large cohort prospective studies, such as the Massachusetts Women's Health Study (MWHS) and the National Health and Nutrition Examination Survey III (NHANES III) that are now in progress have been reported (New England Research Institute, 1993). A major issue that is not addressed in the literature is the extent to which physiological changes and disease processes evident in middle-aged women are directly related to the sex hormone changes of menopause

rather than the result of aging. Bone density changes, vaginal changes and changes in sexual function, changes in body weight, and changes in cholesterol and lipid fractions are key areas in which this issue of aging versus menopause has not been definitively addressed (New England Research Institute, 1993). Moreover, there is a need for cardiovascular risk reduction trials which focus on women and their major risk factors (including smoking). This information is needed to compare with results from the large clinical trials, such as the Postmenopausal Estrogen/Progestin Interventions (PEPI) on hormone therapy regimens. Currently, there are no evidence-based alternatives to hormone therapy for alleviating hot flashes. A coordinated effort to test exercise interventions or other promising drug therapies (such as parathyroid hormone) as alternatives to estrogen therapy for preventing pathological bone loss is also needed.

Psychosocial Dimension

Psychosocial aspects of the perimenopausal experience of European American midlife women have been fairly well studied (Hunter, 1990; Hunter, Battersby & Whitehead, 1986; Polit & LaRocco, 1980), and include health status, well-being, depressed mood, socioeconomic status, level of education, family structure, and relationship satisfaction.

Health and risk behaviors. Health and risk behaviors may influence health status. In perimenopausal research, health status has been determined by a number of these health and risk measures. Exercise, smoking, alcohol use, and caffeine use are the indicators selected to estimate health status in the present study. Calcium from food sources, discussed in the biological dimension, will be reported as a health and

risk indicator in subsequent chapters. Several studies support the efficacy of weight-bearing exercise as prophylaxis against postmenopausal osteoporosis (Krolner, Toft, Nielson, & Tondevold, 1983; White, Martin, Yeater, Butcher & Radin, 1984). The incidence of lung cancer and chronic pulmonary disease is rapidly rising in women as more begin to smoke (Piscitelli & Parker, 1986). Ascertaining the frequency and quantity of alcohol use is an important way to assess this substance abuse as a potential problem (Piscitelli & Parker, 1986). It is not known whether midlife women's health problems are directly related to the sex hormone changes of menopause, risk behaviors, or the result of aging (New England Research Institute, 1993).

Level of well-being. To date, most researchers find no differences in psychological symptoms in women of differing menopausal status (Glazer & Rozman, 1991); menopause does not appear to cause depression (Hunter, 1993). Hunter (1990) found that in some cases, depressed mood can be explained by psychosocial factors, such as reactions to being menopausal, role transitions, and life stresses. This research adds to the growing body of literature that points to psychosocial factors such as life events, stress and socioeconomic factors rather than menopause as having an impact on mood.

Family income level and level of education. Polit and LaRocco (1980) found no relationship between symptom experience and marital status, religion, or family income; though others report that it is mainly underprivileged women with low family income, low educational level and with limited employment opportunities who suffer most during the climacteric (Greene & Visser, 1992). Hunter (1993) noted that

women with low family income are more likely to have depressed mood; women with depressed mood report more symptoms with higher severity ratings. In a study by Jaszmann, van Lith, and Zaat (1969), women with only primary education had more perimenopausal symptom complaints than women who had more education; higher income was associated with fewer symptom complaints. Educated, professional women have been shown to be more wellness-oriented toward menopause than blue-collar women (Frey, 1981).

Family structure. Changes in midlife women's roles, family relationships, and social support have been associated with perimenopausal symptom experience. However, despite popular beliefs, there is no apparent evidence to support the notion that menopausal women are stressed by children leaving home (Hunter, 1993). Bart (1972) suggested that integration into kin networks should reflect better psychological adjustment and overall good health. Lantican and Corona (1992) found the social support networks of Filipina primigravidas to be large, and that Filipino women shared their concerns and feelings more easily with close women relatives than with their spouses, perhaps because in mainstream Filipino society, mothers and sisters are more likely than spouses to act as confidants (Lantican & Corona, 1992). Similarly, Burr and Mutchler (1993) found that 84.3% of older Filipina Americans co-reside with others in a complex household, probably based on the proximity of relatives and other co-ethnics. Family seems to represent an important factor in the social support of Filipino American midlife women; decisions about health care are greatly influenced by family (Klessig, 1992).

Marital relationship satisfaction. A number of researchers have found that

greater marital satisfaction is related to lower menopausal symptom frequency or to fewer worrisome symptoms (O'Connor, Del Mar, Sheehan, Siskind, Fox-Young & Cragg, 1995; Dinnerstein, Smith & Morse, 1994; Uphold & Susman, 1985); however, Bernhard and Sheppard (1993) did not find this relationship, possibly due to recall bias since the average length of time since the LMP for the 99 women in the sample was 32.9 months, SD = 44.1 months.

Gaps identified

Psychosocial aspects of the perimenopausal transition have been investigated by social and behavioral scientists, including nurse researchers. The major gap in the psycho-social dimension literature is the lack of information on ethnically diverse women in the U.S. More information is needed about how diverse women respond to this transitional phase, how it affects their emotional state, and how they cope. This information is needed in order to provide culturally appropriate care and to find relevant alternative care strategies that may have application to European Americans and other cultural groups.

There is little information from prospective studies of sexuality and sexual behavior of middle-aged women; more work is needed to establish the role that menopausal status plays, if any, in sexuality. There needs to be more uniformity in the reporting of socio-economic status in perimenopausal research in order to compare findings, as assessment varies widely (Hunter, 1993). This strategy would provide both researchers and health care providers greater access to large databases that include diverse groups. In this way, research findings might have greater relevance to practice. Moreover, women and their health care providers could be better

informed about perimenopausal health issues from research findings.

Cultural Dimension

There is considerable variability, both between and within different cultures, in the experience of menopause (New England Research Institute, 1993). Indicators found in the research-based literature of the cultural dimension include acculturation, attitudes toward menopause, and cultural meanings and beliefs related to being a woman, to menstruation and to the end of reproductive capacity.

Acculturation. Acculturation has been successfully measured by language use (Yu & Liu, 1992); increased use of the language of the dominant culture indicates a higher degree of acculturation. A higher degree of acculturation in an ethnic group might bring more liberal attitudes toward women and less emphasis on marriage and childbearing; higher education and work outside the home may result (Marin et al., 1987). No studies have been reported about the use of language by Filipino American women, though Burr and Mutchler (1993) found that English language proficiency among Filipino American women was high in their study, probably due to the long-standing Philippines-United States relationship.

Attitudes toward menopause. Attitudes are part of a woman's lived experience and have been related to menopausal symptom experience (Hunter, 1990). Frey (1981) reported women's attitudes toward menopause from Neugarten's *Attitudes Toward Menopause* (ATM) instrument. In the study, the women had a positive attitude toward menopause; a weak correlation was found between employment and frequency of physical symptoms with employed women reporting fewer physical symptoms (Frey, 1981). Theisen and colleagues (1991) reported that age, perceived

physical health, perceived emotional health, parental status and menopausal state were predictive of attitude toward menopause. However, these variables explained only 5.5% of the variance in symptom frequency. On the whole, women who were younger scored lower on an attitude scale (negative attitude) than did women aged 40-49 who were experiencing perimenopausal symptoms (Theisen et al., 1991). Cultural upbringing, level of education, and family experiences seemed to influence women's expectations and experience of menopausal symptoms (Hunter, 1993).

Cultural meanings and beliefs. Beyene (1986) suggested that response to menopause is conditioned by the cultural context which shapes women's roles, and in a comparison of Mayan and Greek women, found that old age was associated with increased power and respect, especially in married women. In both cultures, older women are believed to possess special healing skills and do not consult village midwives for menopausal symptoms, as these are regarded as natural phenomena (Beyene, 1986). These same Mayan women welcomed menopause as a favorable transition to a new social niche, characterized by relief from childbearing, acceptance as a respected elder, and a surrendering of many household chores to the wives of married sons (Martin et al., 1993).

Gaps Identified

The major gap in the research-based literature related to the cultural dimension of the perimenopausal transition is the paucity of studies. Each cultural or ethnic group must have some baseline information from which to build new knowledge and to assess the applicability of related research to the group. Not all women experience the perimenopausal transition in the same way, and additional research is needed to

pinpoint more closely how women from different cultures describe symptoms and evaluate symptom management. Since the existing body of knowledge is based on such diverse theoretical perspectives (biomedical, psychosocial, cultural, feminist), it is difficult to compare studies to glean the direction for future research. It is known that sufficient knowledge is not available to anticipate or predict symptom experience and response in ethnic groups such as African Americans, Filipino Americans, Mexican Americans, or Chinese Americans. More descriptive research needs to be carried out utilizing a bio-psycho-social-cultural theory base with diverse ethnic women in order to compare and contrast the experience of these groups.

Perimenopausal Symptom Experience

The perimenopausal symptom experience of midlife women cannot be easily categorized by dimension, because the bio-psycho-social-cultural dimensions interrelate in ways that influence the perception of symptoms by these women. Some of the symptoms perceived, for example estrogen-related symptoms, can be conceptualized as belonging to the biological dimension. However, symptoms of fatigue, emotional lability (mood swings), and sleep disruption, are more complex. Since the biomedical view would have us believe that hormone levels cause symptoms and the psycho-social theorists believe that roles and life situations influence symptom perception and distress, it would seem that both of these perspectives are needed to explain symptom experience overall. This discussion does not attempt to assign the symptoms experienced by women during the perimenopausal transition to a particular dimension, rather, the literature review includes a discussion of findings from all of the dimensions.

Research reports vary regarding the perception of symptoms and the experience of symptom severity. Bernhard and Sheppard (1993) reported that women most frequently report tired feelings (91%), hot flashes (87%), and irritability (76%) during the perimenopausal transition. However, Wright (1983) reported that only 17% of Navajo women experienced hot flashes daily compared to European American women (65-70%) studied. Wright (1983) also found that health, economic rating, and menopausal status were more clearly related to symptom experience for "traditional" Navajo women. Polit and LaRocco (1980) found the most reported symptom from their study in a middle-class, medium-sized urban community in Boston to be hot flashes (71.1%) rated by women as mild (33%), or somewhat severe (20%). Beyene (1986) found that Mayan women reported symptoms of headache and dizziness, while Greek women reported hot flashes, cold sweats, headaches, and dizziness.

Goodman, Stewart and Gilbert (1977) studied the differences between Japanese and Caucasian women living in Hawaii to find that 28% of the Caucasian women and 24% of the Japanese women reported traditional menopausal symptoms such as hot flashes and sweats. Flint and Samil (1990) studied Central Javanese and Minangkabau women and reported their symptom experience to be related to their culturally conditioned feelings about menopause.

There are very few studies of the perimenopausal transition of African women. However, Moore (1981) found that women in rural Zimbabwe experienced climacteric complaints of hot flashes and sweating (82%), depression (92%), mental irritability (94%), and memory deterioration (88%). Nigerian women were found to have a high incidence of signs and symptoms of menopause; these women represented

varying social classes (Moore & Kombe, 1991).

Filipinas (N = 413) studied by Ramosa-Jalbuena (1994b) in Metro-Manila reported vasomotor symptoms (63%) and nervous or psychological symptoms (79%). In the study, hot flushes and night sweats were highly correlated (r = .57) among the participants, as were night sweats and palpitations (r = .46), palpitations and dizziness (r = .43), anxiety and depression (r = .49), headaches and depression (r = .35), and depression and insomnia (r = .37). However, these measures were obtained from the same instrument and are expected to have high correlations with each other. In a larger survey (N = 1015), Ramosa-Jalbuena (1994a) reported climacteric symptoms of headache (62%), irritability (57%), nervousness (51%), insomnia (49%), dizziness (46%), palpitations (45%), depression (39%), night sweats (35%), and hot flushes (31%).

Perimenopausal Symptom Response

Few studies focus on perimenopausal symptom responses of diverse women, and of all responses to symptoms, hormone therapy has been the most widely researched. Since unopposed estrogen therapy has been associated with increased prevalence of endometrial carcinoma (Ettinger, Golditch, & Friedman, 1988), fewer health care providers prescribe this therapy. Ramosa-Jalbuena (1994b) reported that 31 % of her sample consulted a physician in response to menopause symptoms. Of those who consulted a physician, 18.7% reported subsequent hormone use, while 40.7% reported tranquilizer use. In a larger survey in Metro Manila (N = 1015), Ramosa-Jalbuena (1994a) reported that 19% of the Filipinas took vitamins, while 4% reported use of herbal medicine.

Hamburger and Anderson (1990) reported that 49% of their menopause clinic sample (N = 134) were using a low-fat/calcium-rich diet, and 49% were regularly exercising. Approximately 80% of this sample used hormones. Talking with friends was an important self-care strategy for these women (58%), while more than 64% kept a health diary.

Gaps Identified

As with the biological, psychosocial, and cultural dimensions, the major gap in the literature regarding perimenopausal symptom experience and responses is the lack of information about diverse cultural groups. Psychometric properties for menopause symptom instruments need to be established for diverse women so that researchers have reliable data collection tools. Symptom reporting instruments should also be factor-analyzed for diverse groups in order to understand symptomatology across cultures. There are insufficient data to predict the symptom experience of Filipinas, Mexican Americans, or Chinese Americans, and there are insufficient data to provide information about coping strategies that might have relevance to their beliefs and lifestyles. Research-based alternatives to hormone therapy for coping with estrogen-related menopause symptoms have not been reported.

Summary

To provide a framework for a study of the perimenopausal transition of Filipina Americans, elements of the biomedical and psycho-social perspectives were combined to approximate the complexity of the phenomenon. Biomedical approaches, as well as psycho-social ones, could not adequately describe the many facets of this transitional life phase; the bio-psycho-social-cultural theory of women in transition

was intended to capture the multiple dimensions and to reflect their interplay. Relevant literature was presented to define research-based knowledge about each of the dimensions plus perimenopausal symptom experience and responses, and to point to some of the gaps in that knowledge base.

Chapter 3

METHODS

Introduction

The purpose of this chapter is to describe the study design, sampling techniques, data collection methods, data management and analysis plan. The rationale for these elements are delineated.

Lee, Taylor, Beyene, Green, Gilliss, and Gutierrez (1994) have embarked upon a five year longitudinal study to compare bio-psycho-social-cultural factors in three ethnic groups of U.S. midlife women: African American, European American, and Mexican American. This study is designed to extend the Lee et al. (1994) study by providing baseline data on bio-psycho-social-cultural factors of the perimenopausal transition of Filipino American midlife women ages 35-56. A cross-sectional, descriptive survey design was employed.

Study Aims

Aim 1

To describe the biological, psycho-social, and cultural dimensions of Filipino midlife women's perimenopausal experience, as measured by (1) age/parity, menstrual cyclicity, calcium sources in the diet, and hypothalamic-pituitary-ovarian activity; (2) level of depression, socio-economic status, level of education, household complexity, and marriage/relationship satisfaction; and (3) cultural identity, attitudes toward menopause and aging, and cultural meanings/beliefs.

Aim 2

To identify the perimenopausal symptom experience and responses of Filipino

American midlife women as measured by symptom perception, severity of symptoms, symptom distress and health behaviors.

Hypotheses

Hypotheses were formulated after careful consideration of literature reports. These hypotheses are guided by information about primarily European American midlife women and may be relevant to Filipinas.

Hypothesis 1

Higher parity will be significantly correlated with later age at menopause.

Hypothesis 2

Self-reported menopausal status will be significantly related to FSH levels above 2.5 IU/DL established by random urine specimen FSH assay.

Hypothesis 3

Current smoking will be correlated with an earlier menopause.

Hypothesis 4

Depression will be positively correlated with estrogen-related menopausal symptom severity scores and well-being will be negatively correlated with estrogen-related menopausal symptom severity scores.

Hypothesis 5

Household income, level of education, number of self-care strategies used, visits to a health care provider, and use of pharmacologic or surgical interventions (independent variables) will explain a significant amount of the variance in estrogen-related menopausal symptom severity scores (dependent variable).

Research Design

Research designs include the elements of (1) a description of participants; (2) observations of the variables; (3) measures of time; (4) selection of the setting; and (5) the role of the investigator (Woods, 1988). Information and decisions pertinent to a study of the perimenopausal transition of Filipino American midlife women will be discussed in terms of these elements.

Description of participants

To study the perimenopausal transition of Filipina Americans, a community-based sample of women who self-identified as Filipino American aged 35 to 56 was recruited. This age range was specified, as previous menopausal research of European Americans indicated that the average age of menopause is 51.4 ± 4 years (New England Research Institute, 1993); however, the age at which women of other ethnicities experience menopause was thought to be earlier (Beyene, 1986). The most frequently studied age range for the perimenopausal transition was 40-60, so to adjust for the possibility that Filipino American midlife women might experience menopause at an earlier age than European Americans, the 35-56 age range was specified. Age 56 was the upper limit, as this provided for the possibility that Filipino women experience menopause at the same age as do European American women. By selecting women for study who self-identify as Filipino American, women who have one parent, or both parents, of Philippine ancestry could be included. The unit of analysis for the study was the individual Filipino American midlife woman. Inclusion criteria were that these women self-identify as Filipino American, be in the specified age range and have the ability to read, speak, and write in English. These criteria

were necessary to avoid the inherent problems of studying women who do not understand English.

Women were not excluded from the study based upon health status. Rather, the prevalence of surgical interventions, such as hysterectomy, oophorectomy, or both, and the prevalence of diagnosed metabolic problems, such as thyroid disease or diabetes, women with cancer, diagnosed heart disease, kidney disease, psychiatric illness (taking psychotropic medications), and women currently taking prescription steroids was calculated. This strategy was selected because prevalence data about Filipino American midlife women are needed.

In planning the sampling strategy for a study of the perimenopausal transition of Filipino American midlife women, consideration was given to a random digit dialing protocol as described by Waksberg (1978) and to nonprobability or convenience sampling. The advantage to random digit dialing is that it more closely approximates the goal of sampling procedures, which is to ensure that the sample represents the population of interest. This bolsters the external validity of the study. However, the disadvantage to random digit dialing is the time and expense for such a sampling scheme. Nonprobability or convenience sampling, though unable to assure that each woman in the source population has the same chance to be included in the sample, offers the advantage of feasibility.

In considering the sampling design for a study of Filipino American midlife women, unique problems were identified. First, the Filipino community is not accustomed to being researched. Yu and Liu (1992) reported that Asian Americans (including Filipinos) are less likely to appear in national data sets, subsequently, there

is less knowledge about their health care practices. Key informants in the Filipino community indicated that Filipino American midlife women might not recognize the importance of identifying health related issues through the research process and might not consent to be included as participants. Similarly, Lipson and Meleis (1989) reported that immigrants may not understand the purpose of research. Secondly, these key informants indicated that Filipino women were not likely to respond to telephone contact by a stranger, even a stranger who is age and culturally matched.

To offset the unique problems of sampling in the Filipino community, a convenience sample design, with a snowball feature was selected. The convenience sample was recruited from media appeals in the Philippine News (Filipino community newspaper), from brochures distributed in shopping malls in areas with a high concentration of Filipino residents, from community churches and social groups, and from contacts made with leaders in the Filipino community. These measures were aimed at including women who best represented the Filipino population and at familiarizing the community with the research; similar techniques have been identified and recommended by experienced researchers conducting epidemiologic surveys of ethnic minority groups (Milburn et al., 1992). In "snowballing", the investigator asks participants to refer friends to the study. The rationale for adding a snowballing feature to the sampling design was based on the perception that Filipinas would be more likely to participate in the study upon the recommendation of women whom they knew.

The use of this nonprobability sampling design reduces the external validity of the findings. However, the study did provide an introduction to the research process

for Filipino women and serves as a model for establishing the relevance of health-related research in the Filipino community. Moreover, this sampling design was more feasible, since a random digit dialing protocol would have been far more expensive in time and cost. Random digit dialing might be utilized in future studies now that the community is more familiar with health-related research.

Sample size estimation. To estimate a sample size that would provide adequate power for statistical significance for Pearson's product moment correlations, assumptions were made; literature reports of significant correlations between demographic variables and symptom distress and symptom severity indicate a weak association (Frey, 1981). Therefore, an effect size of .20, together with a desired power of .80 and α set at .05, required a sample size of 192 (Kraemer & Thiemann, 1987). Sample size for multiple regression is generally set at 10 participants per variable entered into the model (S. Paul, personal communication, 10/4/94). For the present study with eight variables in the model (one dependent variable and seven independent variables), the sample size requirement was 80.

Observation of the Variables

The variables included in the study of the perimenopausal transition of Filipino American midlife women represent the bio-psycho-social-cultural domains discussed in the second chapter. These variables were generated from available empirical research and represent the most salient variables in each dimension. To summarize, variables that measured the biological dimension included age in years, number of pregnancies, number of children, menstrual cyclicity, calcium food intake, and urine FSH level. Salient variables representing the psycho-social dimensions included well-

being and depressed mood, employment, family income, number of years in school completed, complexity of household, and relationship satisfaction. Variables for the cultural dimension included English language proficiency (defined as the ability to read, write, and speak English), cultural identity, positive and negative attitudes toward menopause and aging, and data from open-ended items that asked such questions as "how did you learn about menopause?" and "how do women in your culture feel about menopause?" Additionally, variables that measured the perimenopausal symptom experience and response included an estrogen-related menopause symptom severity score, an estrogen-related menopause symptom distress score, presence or absence of a visit to a health care provider, use of medications, and number of self-care activities reported. Participants were instructed to report their symptoms, distress and responses over the past week.

Measure of Time

A study of a developmental phase, such as the perimenopausal transition, implies time and change and would suggest that a time-series design or a longitudinal study would best capture the changes that occur. It is certainly well recognized that a longitudinal approach to the study of the perimenopausal transition is most appropriate to establish the sequence of events and suggest causal relationships. However, prospective, longitudinal designs are not always cost effective nor can all studies adhere to the time frame required. A compromise approach that can effectively provide some insight into direction and change is to utilize a cross-sectional study design in which the data are collected at one point in time. This technique provides descriptive data and can classify participants by age category. In this way, prevalence

data can be calculated, and comparison across age groups can provide a beginning understanding of the changes that occur in women as measured by the study variables in each of the age categories selected. The underlying assumption of this methodology is that the entire group studied is homogeneous and that studying each age group for prevalences simulates change as if the study were prospective. Since time and cost were critical elements to consider for the present study, this particular design strategy was utilized. From this cross-sectional, descriptive study, a cohort of premenopausal women will be identified and followed prospectively. The information obtained from the present study provides the baseline data necessary for such a longitudinal design.

Selection of the setting

The setting is an important aspect of research design, because its description is needed in order for clinicians to assess the utility of the research results for other populations. For the study of Filipino American midlife women, data were collected from a community-based sample that was recruited within the context of church or social group meetings. Data obtained from participants recruited in these settings will generalize to community women more readily than would a hospital or clinic-based sample.

Role of the investigator

To study the perimenopausal transition of Filipino American women, the investigator/interviewer remained unobtrusive for the majority of the data collection procedures, as most of the instruments were self-administered questionnaires. The qualitative data were obtained via a short-answer instrument that invited the

participant to write out answers to the questions listed. For all data gathering, an age and culturally appropriate research assistant was present to strengthen the internal validity of the study by reducing the response bias that might occur with an interviewer not representative of the group being studied.

Procedure

Filipino community groups and churches were contacted to familiarize them with the purpose and design of the study. Permission was sought from these group leaders for the principal investigator and a research assistant to attend the group meetings to introduce the research and invite participation. Appointments were made well in advance of the meetings, so that appropriate time could be allotted and agendas could reflect that University of California, San Francisco, School of Nursing researchers were making a presentation. Only those groups whose leaders expressed interest in the research and exhibited a willingness to allot time for presentations were attended.

The research team, consisting of the principal investigator and research assistant(s), attended meetings of these community social groups and church organizations to present a general outline of the research protocol and to invite age and culturally appropriate women to participate. The principal investigator, or one of the age and culturally appropriate research assistants, discussed the purpose of the study, described the measures taken to protect the confidentiality of the participants, explained that declining to participate would in no way affect the health care services that she or her family would ever receive at the University of California at San Francisco, and answered any questions that the potential participants might have.

Human subjects approval from the University of California, San Francisco was obtained. Risks to the participants were explained, though those risks were minimal.

After the signed study consents and contact information sheets were collected from participants, the questionnaire booklets were handed out. The number code on the signed consent form matched the number code on the booklet. No other identifying information was on the questionnaire booklet. Participants understood that this procedure was undertaken to protect their confidentiality, and that signed study consents and contact information sheets would be kept in a separate locked file and would be accessible only to the principal investigator and research assistants. Participants generally took the questionnaire booklets home to complete; they were either collected at a prearranged time by a research assistant, or the participant mailed the completed questionnaire booklet to the principal investigator in a stamped envelope provided for that purpose. Upon receipt of the completed booklet from a participant, the principal investigator mailed a certificate of completion and $10.00 to the participant. Women who were not using hormonal contraception or hormone therapy were eligible to submit a urine specimen for FSH assay. Specimens were obtained prior to the close of the introductory meeting.

Questionnaire Booklet

The questionnaire booklet was made up of several different instruments aimed at measuring the study variables (see Appendix A). Each of the instruments will be described in detail. Tables 3-1, 3-2, 3-3, and 3-4 outline the study concepts, indicators, and measures.

Instruments and Measures

Women's Health Questionnaire (WHQ)

Background information that included assessment of education, religious and political preferences, relationship status, members in the present household (household complexity), employment, and family income was obtained with the WHQ (Taylor, 1988, 1994; Woods et al., 1986). The same instrument was utilized to obtain a comprehensive health history from questions about age/parity, menstrual cyclicity, and past and present medical problems. The WHQ is a self-administered survey of a woman's own health history and contains 135 items; only the two sub-sections relating to demographic information and health history were utilized for the present study. There were 14 items in the demographic section and 29 items in the health history section. All items were either multiple choice or short answer questions which generated frequency data. The WHQ has been utilized with large samples of European American midlife women and with smaller samples of African American and Mexican American women. The instrument had not previously been administered to Filipino American women.

Age/Parity

Participant age was obtained from an item on the WHQ. To capture differences by age in the study variables, women were categorized into age groups for analysis: 35-39 years, 40-44 years, 45-49 years, and 50-56 years. Two items on the WHQ were used to estimate parity: number of pregnancies and number of children.

Menstrual Cyclicity

Menstrual cyclicity was estimated from questions asking if participants had had a period in the past 6 months, in the past 3 months, or if their period had stopped for 12 months or more. Menopause ages were calculated by adding 12 months to participants' recorded last menstrual period (LMP) and subtracting from their date of birth. This method was used only for those who answered yes to the question, "has your period stopped for 12 months or more?" For women who had a surgical menopause, the LMP date was subtracted from the date of birth to obtain the age at surgical menopause.

Calcium Food Sources

The Calcium Food Sources (CFS) instrument was developed for use in the present study to estimate the participants' intake of foods recognized as the best sources of dietary calcium. Calcium rich foods as listed by the American Society for Bone and Mineral Research (1986) were utilized. The questionnaire asked women to indicate how often they ate each item on the food list. Foods considered to be primary sources of calcium provide more than 300 mg per serving; foods considered to be secondary calcium sources provide more than 150 mg per serving. A total score was obtained by multiplying the frequency the items were eaten (0, 2, and 6 respectively for rarely/none, $\leq$ 3/week, and $\geq$4/week) by the value (150 mg or 300 mg) and totaling all items. This strategy was employed in order to estimate the total weekly intake of calcium from food sources. Women were asked to consider that some of the listed food items might be ingredients in prepared foods and to include this in their estimate of frequency. Scores could range from 0 to 28,800 mg.

The minimum daily requirement for premenopausal women and postmenopausal women taking estrogen is 1000 mg (7000 mg/week); postmenopausal women not taking estrogen need 1500 mg of calcium daily (10,500/week) (American Society for Bone & Mineral Research, 1986).

Urinary FSH Assays

A secondary purpose of this study was to determine the utility of urine FSH assays from random urine specimens in perimenopausal research by categorizing values as reproductive age range ($\leq$2.5 IU/DL) or menopausal/postmenopausal (>2.5 IU/DL). Serum FSH assays have largely been utilized in previous research but are thought to be a deterrent to participants. Similarly, 24-hour urine collections

Table 3-1

Biological Dimension Variables & Measures

Concepts/Indicators	Variables	Measure/Instrument
Age/Parity	Age in years/ preg./child #	Women's Health Question. (WHQ)
Menstrual cyclicity	Cycle description Menses frequency Menses occurrence in past 6/3 mo. Cycle compared to 6 months ago	WHQ Q. #14 Q. # 15 & 16 Q. # 20
Calcium sources in diet	Calcium score	Calcium Food Sources
HPO suppression	FSH level	Urine FSH Assay

Table 3-2. Psycho-Social Dimension Variables & Measures

Concept/Indicators	Variables	Measure/Instrument
Health & Risk Behaviors	Exercise >2/wk; Smoking; Alcohol >1 serving/day; Caffeine >1/day.	Menstrual Symptom Severity List (MSSL)
Well-being (WB)	Well-being scores: General WB; Personal WB Interest in life Feeling cheerful	4 Global well-being scores summated
	Life/self satisfaction	Q. #14 on Relationship Satisfaction (RSAT)
Depressed mood	Depression score ≥16	Center for Epidemiological Studies Depression Scale (CES-D)
Socio-economic status		
Employment	Occupation	WHQ Q. #3 in Background
Household income	Household income	WHQ Q. #13 in Background
Level of education	Years in school	WHQ Q. #1 in Background
Family structure, complexity of household	Persons living in household now	WHQ Q. #5 in Background
Relationship satisfaction	Relationship satisfaction score	RSAT Q. #1-13 summated

Table 3-3

Cultural Dimension Variables & Measures

Concept/Indicators	Variables	Measure/Instrument
Acculturation		
Language use	Language preferred	WHQ Q. #4 in Health History
Cultural identity	Acculturation score	Cultural identity question
Attitude		
Toward menopause	(+) & (-) attitudes	Attitudes Toward Menopause/Aging Summated Q. #1-28
Toward aging	(+) & (-) attitudes	Attitudes Toward Menopause/Aging Summated Q. #29-48
Cultural meanings/beliefs How learned about menopause Age of menopause How Filipino women feel about menopause Health complaints of midlife Filipinas	Responses to short-answer questions	Semi-structured Question.

Table 3-4. Perimenopausal Symptom Experience and Response Variables & Measures

Concept/Indicators	Variables	Measure/Instrument
Perimenopausal Symptom Experience		MSSL
Neg. affect symptom cluster	12 symptoms[a]	(0-4) rating per item
Neg. affect perception	12 symptoms[a] severity level	(0-48) summated score
Estrogen-related symptom cluster	4 symptoms[b]	(0-4) rating per item
Estrogen-related symptom perception	4 symptoms[b] severity level	(0-16) summated score
Perimenopausal Symptom Response		
Estrogen-related symptom[b] distress	Distress level	(0-40) summate score on MSSL Q. #52-55
Health behaviors		
Health care visit	Health care visit in past week	MSSL Q. #56
Use of medications	Prescription/OTC type	MSSL Q. #59; WHQ Q. #10 & 11
Self-care activities	# of activities	MSSL Q. #60

[a]anger, anxiety, depression, hostility, impatience, irritability, mood swings, nervousness, out of control feelings, panic feelings, tearfulness/crying spells, and tension

[b]day sweats, hot flashes/sudden flushes, night sweats, and vaginal dryness

present difficulties of collection, transport, and disposal that are likely to discourage participation. Timed 3-hour urine collections have been found to correlate with serum gonadotropin concentrations (Beitins, O'Loughlin, Ostrea & McArthur (1994) in previous research, and first morning urine specimens have been found to correlate closely with serum ($R^2=0.71$, $P<.01$) (Saketos et al., 1994). Saketos and colleagues (1994) found that FSH assay results varied linearly with concentration to 0.04 IU/L, and FSH was unaffected by changes of osmolarity from 0.5 to 3.0 mOsm/kg. As osmolarity or specific gravity were not determined on the random samples collected, assumptions must be made as to the expected concentration (thus, values) in order to categorize results in the present study participants. Expected ranges have been set as $\leq$15 IU/24 hour collections by the World Health Organization (A.R. Watts, personal communication, September 11, 1996) for reproductive age women; one void should contain a fraction of the 24 hour expected volume. Though there is wide variation in both the frequency and overall volume of urination, the assumption is made that women urinate an average of six times per day (including one nighttime void). Based upon this assumption, the calculated expected range for FSH levels in a single voided specimen would be $\leq$2.5 IU/DL for reproductive age women and >2.5 IU/DL for menopausal and postmenopausal women.

FSH levels were determined on selected participants by double antibody radioimmunoassay of urine specimens that were obtained at random times. Specimens obtained were placed in ice chests to prevent breakdown of the essential proteins; after transfer to special polypropylene transport tubes, the specimens were placed in a freezer kept at -20° F until transport to the laboratory for analysis.

Saketos and colleagues (1994) reported that specimens kept at -20° F and stored in polypropylene tubes had no loss of gonadotropin immunoactivity after nearly one year of storage.

Health and risk behaviors/health problems

Health and risk behaviors were estimated by a number of variables: exercise >2 times per week, smoking, alcohol consumption >1 serving per day, and caffeine consumption in excess of 1 serving per day. Another health behavior, obtaining calcium from food sources, was described as a biological dimension variable but will be reported with this group. Health problems for the sample were obtained from data provided by participants who had ever been told by a health care provider that they had a major health problem. Participants wrote in their major health problems. These data were coded into categories; categories were summated to provide frequency information.

Well-being

Two measures were utilized to profile the participants' overall satisfaction with life and are indicators of well-being. The first measure was the summated and averaged score from four global questions, originally developed by Dupuy (1978) and modified by Woods and colleagues (1987). The four questions profiled how participants were feeling in general (from in excellent spirits to in very low spirits); how happy, satisfied, or pleased they were with their personal life (from extremely happy to very dissatisfied); how often their life was full of interesting things (from all of the time to none of the time); and how often they felt cheerful, lighthearted (from all of the time to none of the time). Scores could range from 1 to 6 for each of the

questions with lower scores indicating more satisfaction or more frequency. The mean summated score could range from 1 (excellent spirits or all of the time) to 6 (in low spirits or none of the time). Cronbach's alpha coefficient for the four questions indicated internal consistency reliability at .84 for the sample, which provided evidence that these four questions can be synthesized into one score.

Question number fourteen of the *Relationship Satisfaction* instrument developed by Burns and Sayers (as cited in Heyman, Sayers & Bellack, 1994) is an overall measure of satisfaction with life and self and is not included in the summated RSAT score. This item was used by Heyman and colleagues (1994) to check for single-item test-retest reliability. Scores can range from 0 to 6 with higher scores indicating greater satisfaction.

Center for Epidemiologic Studies Depression Scale (CES-D)

The CES-D Scale was developed for use in studies of the epidemiology of depressive symptomatology in the general population (Radloff, 1977). The instrument was designed to measure current level of depressive symptomatology; emphasis is placed upon the affective component, depressed mood. Items on the CES-D were selected from previously validated depression scales, such as the Beck, Ward, Mendelson, Mock and Erbaugh (1961) and the Zung (1965). Clinical literature and factor analytic studies identified the major components of depressive symptomatology and include depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Only a few items were selected from the validated scales to represent these components. Radloff (1977) identified four factors in the final instrument:

Depressed Affect, Positive Affect, Somatic Symptoms and Retarded Activity, and Interpersonal Relations. Though others have pointed to a three-factor and a one-factor model, Sheehan, Fifield, Reisine and Tennen (1995) re-examined the factor structure for the CES-D and demonstrated the stability over time of a four-factor measurement structure for the instrument.

The CES-D consists of 20 questions. Respondents report the frequency of occurrence for each item during the previous week on the following 4 point scale: 0 (rarely, less than 1 day) 1 (some of the time, 1 to 2 days), 2 (a moderate amount of the time, 3 to 4 days), or 3 (most or all of the time, 5 to 7 days). To prevent response bias, four of the items are worded in a positive direction and require reverse scoring. Summary scores can range from 0 to 60. For this screening instrument, scores at or above sixteen are considered to be in the depressed range.

Once developed, field tests on selected samples were carried out to provide internal consistency, face validity, convergent validity, and test-retest reliability data, and results were compared across age, sex, race, and educational subgroups in order to determine generalizability of the CES-D. These field tests included a comparison with a clinical interview, thought to be the most widely accepted method for establishing depression. With few exceptions, the results for the total population were confirmed in all subgroups. In all subgroups, coefficient alpha was .80 or above, test-retest correlations were moderate in the range of .40 or above (Radloff, 1977). The subgroups from the field tests did not differ from each other or from the total population in factor structure.

Socio-economic Status, Level of Education, Family Structure

Socio-economic status was estimated from the total household income question in combination with the current job question on the WHQ. Level of education was also obtained from an item on the WHQ in which participants were to select the highest grade or year of school completed: less than 7th grade, junior high school, partial high school (10 or 11 grade), high school graduate, partial college or specialized training, college graduate, graduate degree, or unsure or decline to state.

Family structure was estimated from the WHQ question in which participants were to indicate "who lives at your home with you now?" participants were to check all that apply: live alone, spouse/partner, children, step children, parents, roommate(s), sister, mother, other (specify). This information was the basis for estimation of household complexity. A complex household is defined as living with more than spouse/partner or spouse/partner and children. Immigrant families are more likely to profile this complexity (Burr and Mutchler, 1993).

Relationship Satisfaction Questionnaire (RSAT)

The RSAT consists of 13 items that assess satisfaction in various areas of the relationship, such as handling finances and degree of affection and caring. Respondents are to indicate their degree of satisfaction in each area on a scale of 0 (very dissatisfied) to 6 (very satisfied). Total scores represent the sum of the items and can range from 0 to 78; higher scores indicate greater satisfaction. Internal consistency for the scale is very high ($r=.97$) while test-retest correlation at 6 weeks is relatively high ($r=.72$) (Heyman, Sayers & Bellack, 1994). The RSAT differentiates between couples in therapy and couples who are not being treated. It

also correlates highly with the Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959). Factor analysis of the RSAT suggests a single dimension underlying the items for both husbands and wives (Heyman, Sayers & Bellack, 1994).

In a comparison of relationship satisfaction instruments, Heyman and colleagues (1994) established that the RSAT has a high correlation with the Dyadic Adjustment Scale (DAS) (Heyman, Sayers & Bellack, 1993) and the Quality of Marriage Index (QMI) (Norton, 1983) which indicates convergent and discriminant validity. The measure was internally consistent as indicated by Cronbach's coefficient alpha of .95. The values reported by Heyman and colleagues (1994) suggest that the RSAT exhibits good sensitivity and specificity and modest positive predictive values for detecting marital distress.

Acculturation

Two measures of acculturation were used in the study, language use and self-specified cultural identity. Identifying language preference has been a successful method of determining level of acculturation, or second culture acquisition, for immigrants to another country whose language varies from the country of origin (Marin et al., 1987). In a study of 132 first generation Filipino Americans, dela Cruz (1996) found that personal outlook, food preference, percentage of lifetime in the United States, and family income influenced the subjects' level of acculturation as measured by a short acculturation scale developed by Marin and colleagues (1987). The instrument is based upon language preference; data validating the instrument on Filipino-Americans was not available.

Women were asked to rate their cultural identity on an 10-point scale from 1

to 10. Anchor points on the scale were, (1) completely traditional Filipina, (5) ½ traditional Filipina + ½ Americanized Filipina, (10) completely Americanized Filipina. Choices were not restricted to 1, 5 or 10; women could circle any number.

Attitudes Toward Menopause and Aging (ATMA)

The ATMA was developed for use in a study of the mother-daughter relationship in menopause and the aging process (Patsdaughter, 1989). It consists of 48 items which are rated on a 4-point Likert scale from (1) agree strongly to (4) disagree strongly.

Attitudes toward menopause items were adapted from the Attitudes Toward Menopause Checklist (ATM) (Neugarten et al., 1963). Patsdaughter selected the ATM over other attitude measures that use a bipolar opposites approach, because investigation uncovered the inappropriateness of a semantic differential bipolar opposites methodology for females. Dichotomization and universalism are dominant modes of male cognition, while particularism and relativism are characteristic modes of female thought (Gilligan, 1982).

The ATM was originally developed through a process of preliminary interviews, a pilot test on 50 perimenopausal women, revisions to include 35 unique items, and readministration to a criterion sample of 100 perimenopausal women as well as comparative samples. Content and criterion validity were maximized through the process. The completed instrument included eight dimensions: negative affect, postmenopausal recovery, extent of continuity, control of symptoms, psychological losses, unpredictability, sexuality, and miscellaneous. These dimensions were determined by factor analysis of the criterion group. The instrument contains both

positive and negative aspects of the menopausal experience, which is a desired feature of an attitudinal measure (Patsdaughter, 1989). Bowles (1986) documented an internal consistency reliability estimate of the ATM of .80 on a sample of 138 women; in the same study, the concurrent-validity coefficient was significant (Pearson r = .63) between the ATM and Bowles' Menopause Attitude Scale.

Patsdaughter (1989) revised the instrument by shortening it to 28 items and eliminating items that were ambiguous or misinterpreted. Eleven of the items were worded positively and required reverse scoring to obtain a total score. Scores can range from 0 to 112, with higher scores indicating a positive attitude toward menopause. The resultant 28 item version in Patsdaughter's study demonstrated internal consistency with coefficient alpha of .84 for mothers and .83 for daughters.

Since most existing scales found in the gerontology literature indirectly measured attitudes toward aging, Patsdaughter (1989) obtained items from Kogan's Attitudes Toward Old People Scale (1961), Neugarten and Garron's (1959) qualitative study of attitudes of middle-aged persons toward aging, and Tuckman and Lorge's Attitudes Toward Old People Questionnaire (Tuckman & Lorge, 1953) to develop the attitudes toward aging subscale of the ATMA which directly measures attitudes toward aging. The 20 items are rated on a 4-point Likert scale from strongly agree (1) to strongly disagree (4). Nine of the items are positively worded and must be reverse scored in order to obtain a total for the subscale. Scores can range from 0 to 80, with higher scores indicating a positive attitude to aging.

Internal consistency reliability coefficient alphas for the attitudes toward aging subscale were reported at .82 for mothers and .83 for daughters (Patsdaughter, 1989).

These estimates were quite favorable considering the eclectic development of the instrument and its shortness.

Cultural Meanings/Beliefs

Eight short-answer questions were completed by study participants (see Appendix A). These questions were designed to elicit information that could illuminate Filipino beliefs and practices regarding midlife and the perimenopausal transition. Responses to these questions were coded and categorized to summarize the data and to report frequencies for response categories. An individual response was the unit of analysis for these data.

Symptom Severity

Perception of estrogen-related menopause symptoms and negative affect symptoms were measured by the Menstrual Symptom Severity List (MSSL). The same instrument was utilized to estimate the severity of symptoms; estrogen-related menopause symptom severity was estimated by the summation of the four items comprising the estrogen-related menopause symptom subscale and negative affect symptom severity was estimated by summating the twelve items on the negative affect symptom subscale. The MSSL, developed by Woods and colleagues (1986), is a self-report symptom checklist which has been highly reliable for obtaining data on symptom and mood patterns for particular populations of women and has been an effective means for studying perimenstrual symptoms (Taylor, 1988, 1994; Woods et al., 1987). As originally developed, the MSSL is a 33-item symptom checklist which incorporates symptoms selected from the Moos Menstrual Distress Questionnaire (Moos, 1968), the PMTS Self-Rating Scale (Haskett et al., 1984), and the

Premenstrual Assessment Form (Halbreich & Endicott, 1985). To adapt the instrument's use to a perimenopausal and menopausal population of women, symptoms that relate to menopause were embedded in the MSSL. It has been suggested that a list of menopause symptoms is likely to lead to an over-reporting of those symptoms listed and that bias is introduced into estimates of symptom reports by telling women that the study relates specifically to menopause (Woods, 1982). By embedding the menopause symptoms in an instrument that measures menstrual symptoms, the internal validity of the instrument is strengthened.

Participants are asked to rate their symptom severity for the last week on a five point scale as 0 (not present), 1 (minimal), 2 (mild), 3 (moderate), and 4 (extreme). The negative affect subscale of the instrument consists of twelve items that include anger, anxiety, depression, hostility, impatience, irritability, mood swings, nervousness, out of control feelings, panic feelings, tearfulness/crying spells, and tension. Summated scores for negative affect can range from 0 to 48. Higher scores indicate extreme negative affect. Categories of responses for the negative affect subscale can be minimal (0 - 12), mild (12 - 23), moderate (24 - 35), and extreme (36 - 48). The estrogen-related menopause symptom subscale of the MSSL consists of a cluster of three vasomotor symptoms (day sweats, hot flashes/sudden flushes, and night sweats) and vaginal dryness. Total scores for these symptoms can range from 0 to 16, with higher scores indicating higher estrogen-related menopause symptom severity. Categories of responses for the estrogen-related menopause symptom subscale can be minimal (0 - 4), mild (5 - 8), moderate (9 - 12), and extreme (13 - 16).

Menopause symptom experience/distress

Women were asked to rate the symptoms experienced in the past week as not present, minimal, mild, moderate, and extreme. Summated estrogen-related menopause symptom severity scores from the estrogen-related menopause symptom subscale of the MSSL could range from 0 to 16, with 0-4 (minimal), 5-8 (mild), 9-12 (moderate), and 13-16 (extreme). Women who scored one or more of the symptoms comprising the estrogen-related menopause symptom subscale of the MSSL as mild, moderate, or extreme, were asked to rate how distressing the symptoms were. Scores could range from 0 to 40 with higher scores indicating greater estrogen-related menopause symptom distress, as 0-10 (minimal), 11-20 (mild), 21-30 (moderate), and 31-40 (extreme).

Data Management

Data were entered into a database management program (Microsoft Access). Every fifth entry was double-entered to detect and correct inaccuracies. Once all data were entered, printouts of all sections were double-checked against the raw data for accuracy. Short answer or fill-in items were checked for logical inconsistency; inconsistent items were not entered into the database. Range checks were employed to identify items that fell outside the expected ranges, and identified outliers were corrected after comparison with the raw data.

Signed consent forms and contact information were placed in a locked file to protect participant confidentiality. Only the principal investigator and three research assistants had access to these locked files. Backup computer discs were made after each data entry session until a complete record was obtained. These backup discs are

stored in a location that is geographically separate from the original data files. This precaution was taken to insure against accidental damage or destruction of the raw data or original computer files.

For validated or standardized instruments (CES-D, RSAT, ATMA, 4 well-being questions, MSSL), missing data were managed by assigning the participant's mean score for the instrument to the missed items; however, if greater than 20% of the items on an instrument were missing, the instrument was not scored or entered into the database. On the MSSL and the ATMA, missing items were assigned the mean score for the subscale the item belonged to, rather than the mean score for the overall instrument. Participants were instructed to write in their responses to medication use, health problems, and reason for hysterectomy. If they did not take medications, did not have a health problem, or had not had a hysterectomy, these items were intentionally left blank. During data transformation and manipulation, zeros were assigned to these blank items in order to avoid losing participants' data in a stepwise deletion process.

Methods of Data Analysis

Descriptive statistics

Sample characteristics and variables were analyzed using descriptive statistics and measures of central tendency. Expressed as frequencies, specified variables, such as major health problems, medication use, and health and risk behaviors (% who exercise >2/week, % who obtained calcium from food sources greater than the recommended 7000 mg/wk, % smokers, % with alcohol intake >1 serving/day, and % with caffeine intake >1 serving/day) were compared between age groups of 35-39,

40-44, 45-49, and 50-56. Women were categorized by age group in order to capture changes associated with age and to avoid the flaw in previous perimenopausal research that compared women across a twenty year age span (Polit & Hungler, 1993). Variables representing menstrual cyclicity and perimenopausal symptom experience (cycle description, flow in last 6 months, ability to predict period in last 6 months, hysterectomy or oophorectomy or both, estrogen-related menopause symptoms, estrogen-related menopause symptom distress, and menopause age) were analyzed by age group in order to capture possible changes with aging. Variables that represent symptom response (contact with a health care provider in the past week, medication use, and number of self-care strategies used) were also compared across age groups.

Inferential statistical tests

An alpha level of .05 was used for all statistical tests. Using the cross tabulations module, differences by age group were tested for significance using Chi-square statistics. Specified continuous variables were correlated via Pearson's product-moment correlation coefficient calculations. In an attempt to explain the variance in estrogen-related menopause symptom severity scores, independent variables (household income, level of education, number of self-care strategies used, visit to a health care provider, and use of pharmacologic or surgical interventions) were entered into a regression model.

Responses to the short answer questions were coded to categorize and summarize the responses. The unit of analysis for this aspect of data analysis was an individual response. A response could consist of a word or a phrase that had one

meaning. Individuals sometimes provided more than one response to a question. Once the responses were coded into categories, the number of responses for each category was summated to generate frequency data.

Summary

Study aims and hypotheses were addressed by variables representing the biological, psycho-social, and cultural dimensions, and by variables representing symptom experience and responses. The design for the study, as well as the procedural protocol were outlined. Psychometric data for the instruments selected for the study were reported; Cronbach's alpha coefficients calculated for the study sample to estimate internal consistency reliability were included. Data management protocols were profiled and include measures to protect participant confidentiality and to create a backup data file in the event of damage or loss to the originals. Statistical methods for data analysis included descriptive and inferential statistical tests.

Chapter 4

RESULTS

Introduction

Data analyses for the study are reported in this chapter. Presentation of results is organized into sections based upon the two aims: (1) To describe the biological, psycho-social, and cultural dimensions of Filipino American midlife women's perimenopausal experience, and (2) to identify the perimenopausal symptom experience and responses of Filipino American midlife women. These sections include description of the study participants on specified demographic variables, descriptive data on salient variables in each of the bio-psycho-social-cultural domains, and answers to the five study hypotheses. Qualitative data expand the cultural information about Filipina Americans.

Data were collected from a total convenience sample of 165 Filipino American midlife women. Although apriori sample estimation targeted a larger number of participants ($\underline{N}$ = 192), data collection was stopped at 165 as this number provided adequate power to perform regression analyses on a model comprised of one dependent variable and seven independent variables. Furthermore, participant ages were evenly spread across the four age groups and afforded sufficient comparisons. The individual woman was the unit of analysis for the descriptive demographic data, for the salient variables representing the study domains, and for answers to the study hypotheses. However, an individual response was the unit of analysis for the data obtained from the short answer questions that addressed cultural issues.

Missing Data

Missing data varied by instrument. Nearly all participants completed the demographic information, although one participant in the 45-49 year group did not respond to the education question and one participant in both the 35-39 year group and the 50-56 year group did not provide a response to the current employment query. All participants responded to the total household income question.

On good health and risk behavior indicators, more participants completed the *Calcium Food Sources* instrument (N = 163) than provided a response to exercise, smoking, or alcohol and caffeine use (N = 160). Of these indicators, exercise, smoking, and alcohol and caffeine use required that participants write in a response. Throughout the questionnaire, more women failed to provide a response to short answer or written responses than omitted multiple choice items.

The menstrual cyclicity indicators in the WHQ have the widest variability in responses. As directed, women who responded "no" to the question "during the last 6 months, have you had a menstrual period?" generally skipped the remainder of the section. Therefore, the number of participants answering questions comparing menstrual cycles to 6 months ago, indicating heaviness of periods, and describing menstrual predictability varied. Some post-menopausal women, however, answered these questions. To clearly portray the actual number of responders to questions, all study tables reflect the number of participants in each group that actually answered the question as well as the number of participants in the group that actually provided the responses detailed. This technique allows the reader to understand the numbers that calculated frequencies represent and at the same time, to detect where missing

data points occur.

Some participants' ATMA were not scored due to missing data points. If more than 20% missing items were contained within an instrument, it was not scored. Six participants' (2 in the 35-39 year group; 1 in the 40-44 year group; and 2 in the 45-49 year group) data (3.6%) were not included for analysis of the ATMA due to missing data. The prevalence of more than 20% missing items for other standardized instruments was lower: Relationship Satisfaction (3.0%); Global well-being (2.4%). No participants were removed from analysis due to missing data for the CES-D or the MSSL.

Sample Characteristics

The sample consisted of women who (1) self-identified as Filipino American, (2) could speak, read, and write in English, and (3) were in the appropriate age range (35 to 56). Mean age for the participants was 45.1 $\pm$ 6.2 years. The majority of the women were born in the Philippines (93.3%) and had lived in the U.S. an average of 18.4 ($\pm$8.7) years. The majority were married (74.6%), had completed college (62.8%) or a graduate degree (15.9%), and worked (full-time, 77.9%; part-time, 12.9%). Occupational categories suggested by Hollingshead (1975)[1] were utilized to

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[1] In the professional group, occupational titles such as nurse, dean, staff accountant, faculty, real estate agent were noted in the sample. In the managerial group, titles included marketing manager, bank vice president, office manager, quality control manager. In the clerical group, occupational titles included warehouse clerk, unit secretary, administrative assistant, banking services assistant, and filing clerk. In the semi-professional/technical group, participants were specification writer, material inspector, executive secretary, programmer-analyst. In the semi-skilled and unskilled group, women were retail sales, warehouse sales, cashier, door security, child care provider.

TABLE 4-1

Current Relationship of the Sample

35 - 39 yr.	40 - 44 yr.	45 - 49 yr.	50 - 56 yr.[a]	Total Group
(n = 39)	**(n = 40)**	**(n = 37)**	**(n = 49)**	**(N = 165)**
%(n)	**%(n)**	**%(n)**	**%(n)**	**%(N)**
Current relationship				
Single/live alone:				
12.8(5)	10.0(4)	2.7(1)	20.4(10)	12.1(20)
Married/live w/partner:				
82.1(32)	82.5(33)	81.1(30)	57.1(28)	74.5(123)
Divorced/separated:				
5.1(2)	7.5(3)	10.8(4)	18.4(9)	10.9(18)
Widowed:				
0.0(0)	0.0(0)	5.4(2)	4.1(2)	2.4(4)

[a] $\chi^2(2, N = 165) = 11.1$, $p = .004$ (50-56 year group more likely to be single, divorced/widowed than all other groups).

Table 4-2

Education Level of the Sample

	35 - 39 yr. (n = 39) %(n)	40 - 44 yr. (n = 40) %(n)	45 - 49 yr. (n = 36) %(n)	50 - 56 yr. (n = 49) %(n)	Total Group (N = 164) %(n)
Education level					
10 or 11 grade:	5.1(2)	5.0(2)	2.8(1)	6.1(3)	4.9(8)
High school graduate:	2.6(1)	2.5(1)	2.8(1)	0.0(0)	1.8(3)
Some college or specialized training:	23.1(9)	17.5(7)	16.7(6)	4.1(2)	14.6(24)
College graduate:	56.4(22)	62.5(25)	58.3(21)	71.4(35)	62.8(103)
Graduate degree:	12.8(5)	12.5(5)	19.4(7)	18.4(9)	15.9(26)

Table 4-3

Current Employment for the Sample

35 - 39 yr. (n = 38) %(n)	40 - 44 yr. (n = 40) %(n)	45 - 49 yr. (n = 37) %(n)	50 - 56 yr. (n = 48) %(n)	Total Group (N = 163) %(N)
Current Employment				
Full time:				
81.6(31)	75.0(30)	75.7(28)	79.2(38)	77.9(127)
Part time:				
5.3(2)	15.0(6)	18.9(7)	12.5(6)	12.9(21)
Laid off/unemployed:				
5.3(2)	0.0(0)	0.0(0)	2.1(1)	1.8(3)
Homemaker:				
2.6(1)	2.5(1)	5.4(2)	4.2(2)	3.7(6)
Student:				
5.3(2)	2.5(1)	0.0(0)	0.0(0)	1.8(3)
Volunteer/Retired:				
0.0(0)	5.0(2)	0.0(0)	2.1(1)	1.8(3)

Table 4-4

Total Household Income for the Sample

	35 - 39 yr. (n = 39) %(n)	40 - 44 yr. (n = 40) %(n)	45 - 49 yr. (n = 37) %(n)	50 - 56 yr. (n = 49) %(n)	Total Group (N = 165) %(N)
Total household income					
<7500:	2.6(1)	0.0(0)	0.0(0)	2.0(1)	1.2(2)
7500-15,000:	5.1(2)	5.0(2)	2.7(1)	2.0(1)	3.6(6)
15,001-25,000:	5.1(2)	15.0(6)	0.0(0)	4.1(2)	6.1(10)
25,001-35,000:	5.1(2)	7.5(3)	18.9(7)	12.2(6)	10.9(18)
35,001-50,000:	17.9(7)	12.5(5)	16.2(6)	18.4(9)	16.4(27)
>50,000:	59.0(23)	57.5(23)	59.5(22)	57.1(28)	58.2(96)
Unsure/decline to state:	5.1(2)	2.5(1)	2.7(1)	4.1(2)	3.6(6)

describe the participants' current work: professional (32.9%), managerial (9.3%), clerical (23.5%), semi-professional/technical (25.5%), and semi-skilled/unskilled (8.7%). More of these women supervised others at work (53.3%) than didn't (46.7%), and 93% of the women had health insurance. Most of the participants were Catholic (86.7%) and attended church regularly (once a week, 50%; greater than once a week, 14.6%), considered themselves to be religious (not at all, 4.3%; somewhat, 60.7%; very, 35%), but were more diverse in their political preferences (Republican, 24.1%; Democrat, 38.9%; Independent, 4.9%; no preference, 31.5%). Since age is directly related to the experience of menopause (Lee & Taylor, 1996), women's ages were categorized for analysis: 35 to 39 years of age (n=39), 40 to 44 years of age (n=40), 45 to 49 years of age (n=37), and 50 to 56 years of age (n=49). Tables 4-1, 4-2, 4-3, and 4-4 detail demographic variables of current relationship status, education level, current employment, and total household income for the sample.

Health and risk behaviors

Descriptive data in the study included a number of health and risk behavior indicators: exercise more than two times per week (health), calcium obtained from food sources greater than the recommended 7000 mg per week (health), smoking (risk), alcohol consumption more than one serving per day (risk), and caffeine consumption in excess of 1 serving per day (risk). These data are detailed by age group in Table 4-5. There were no statistically significant differences among the age groups on these indicators.

Calcium sources in the diet. Mean scores obtained from the *Calcium Food*

Table 4-5

Good Health and Risk Behaviors in Filipino American Midlife Women

35 - 39 yr.	40 - 44 yr.	45 - 49 yr.	50 - 56 yr.	Total Group
% gp.(n/n of gp. who completed the item)				
Good health behavior:				
Exercise >2 times/week:				
53.8(21/39)	60.0(24/40)	61.1(22/35)	48.9(22/45)	55.6(89/160)
>7000 mg/wk calcium from food sources in diet:				
20.5(8/39)	17.5(7/40)	16.2(6/37)	8.5(4/47)	15.3(25/163)
Risk behaviors:				
Smoking:				
12.8(5/39)	2.5(1/40)	5.6(2/36)	6.7(3/45)	6.9(11/160)
Alcohol >1 serving/day:				
0.0(0/39)	2.5(1/40)	0.0(0/36)	4.4(2/45)	1.9(3/160)
Caffeine >1 serving/day:				
35.9(14/39)	37.5(15/40)	33.3(12/36)	46.7(21/45)	38.8(62/160)

Sources instrument were compared across age groups: 35-39, 4369.2 (±2505.1); 40-44, 3997.5 (±2660.3); 45-49 , 4354.1 (±3269.3); 50-56, 3931.9 (±3068.5). Groups were not significantly different from each other on numbers of participants who had greater than 7000 mg of calcium from food per week. Note that, as reported in Table 4-5, low percentages of women obtained more than 7000 mg per week from food sources in all age groups. The 50-56 age group had fewer participants with scores demonstrating more than 7000 mg of calcium from food per week. Postmenopausal women not taking hormones (n = 14) had an average calcium intake from food sources of 4221.4 (±3300) mg. Only one woman in this group had a calcium intake from food sources greater than the recommended 10,500 mg per week.

Of particular importance, both the prevalence of smoking and alcohol use was very low in the Filipinas studied. Overall, 6.9% (n = 11) of the women reported smoking, yet of those 11 women, 3 reported smoking one cigarette per day, and one reported smoking two cigarettes per day. The definition of smoking in the present study was any response other than "0" or "N/A" to the questionnaire item "on a typical day, how many cigarettes do you smoke?" Women (n = 13) who did not respond to the question (8%) were not counted as smokers.

Alcohol intake of greater than one serving per day was reported by 1.8% (n=3) of the 165 Filipinas studied. Overall, 5.5% (n=9) reported alcohol use. Of particular note is that none of the women in the 35-39 or the 45-49 year groups reported alcohol use.

Health Problems

Women did not differ significantly across the age groups on major health problems reported. Of the total sample, 38 (23%) reported that a health care provider had diagnosed a major health problem at sometime in their history. Major health problems identified by participants included hypertension or cardiac problems (6.1%), diabetes (2.4%), thyroid disease (1.2%), eye problems (1.2%), endometriosis and uterine fibroids (3.0%), gall bladder disease (0.6%), cancer (3.0%), kidney problems (1.8%), and other (3.0%) which included weight problem, emotional problems, anemia, asthma, pituitary tumor, rash and allergies. Fewer women (13.9%) reported that the health problem was still present.

Participants did not differ significantly on medication use. In the total sample, medications used included diuretics (3.6%), anti-anxiety and antidepressant medications (3.6%), asthma medications (4.2%), thyroid medication (5.5%), pain medications (1.2%), antihypertensives (7.9%), and other (6.7%). Women did differ across age groups on use of oral contraceptives and hormones (estrogen, progesterone, or both). As expected, women in the younger age groups were more likely to be taking oral contraceptives, $\chi^2(1, \underline{n} = 83) = 11.5, \underline{p} = .0007$, while women in the older age groups, particularly the 50-56 year group, were more likely to be taking hormones, $\chi^2(1, \underline{n} = 83) = 12.8, \underline{p} = .0003$.

No significant differences were found between women who identified major health problems and those who did not on key variables of age/parity, menstrual cyclicity, calcium from food sources, FSH levels, well-being, level of depression, relationship satisfaction, cultural identity, number of years in the U.S., attitude

toward menopause and aging, or perimenopausal symptom experience or response. Thus, no participant was excluded from analysis based upon health status. Of the participants diagnosed with diabetes (n=4), none were taking insulin, one was taking oral medication, and two had been diagnosed with gestational diabetes in the past. Women who reported a cancer diagnosis (uterine, breast) were not taking medication and indicated that the condition was no longer present (n = 4) or were not certain if the condition was no longer present (n = 1). Though 5.5% (9) were taking thyroid medication, they were not significantly different from other participants on estrogen-related menopause symptom severity or estrogen-related menopause symptom distress scores. They, too, were included in the overall analysis.

Descriptive Results

Aim #1

The first specific aim of this study was to describe the biological, psycho-social, and cultural dimensions of Filipino American midlife women's perimenopausal experience. For that purpose, descriptive statistics were employed to profile biological variables (age, parity, menstrual cyclicity, calcium sources in the diet, and FSH level), psycho-social variables (level of well-being, depression, household income, level of education, household complexity, and marriage/relationship satisfaction), and cultural variables (self-rated acculturation level, attitudes toward menopause and aging, and short responses to cultural queries).

Biological Variables

Biological variables are summarized in Table 4-6, Table 4-7 and Table 4-8 by age group. As expected, regularity of menstrual cycles varied by age as did

menopausal status (period stopped for ≥ 12 months) and number of women who had surgical procedures (hysterectomy, oophorectomy, or both).

Age/parity. Mean age for the sample was 45.1 (± 6.2) years. The average number of pregnancies and number of children for age groups were calculated and reported as means. Table 4-6 details these data. Overall, these women had an average of 2.5 (± 1.8) pregnancies and 2.1 (± 1.4) children. Women in the 45-49 year group had the highest mean number of children and were more likely to have 3 or more children than all other groups, χ^2 (3, N = 163) = 10.1, p = .02.

Menstrual cyclicity. The mean age at menarche for the overall group was 12.9 (± 1.8) years. More than 94% of the women in the 35-39 year group had a period in the past 6 months and 100% had a period in the past 3 months. In contrast, of the 50-56 year total group members, only 58% had a period in the past 6 months and 50% had a period in the past 3 months. Differences between the 50-56 year group and all other groups were significant, χ^2 (1, N = 140) = 13.1, p = .0003, χ^2 (1, N = 137) = 20.6, p < .0001, at six months and three months respectively. Women reported cycle regularity in the past six months as less regular, about the same, and more regular. Table 4-7 details these data by age group. The 45-49 and 50-56 year groups differed significantly from the 35-39 and 40-44 year groups, χ^2(1, n = 116) = 20.7, p < .0001. More women in the 35-39 age group were able to predict their period within 1 day to 2 weeks (87.2%) than women in the 50-56 age group (24.5%), though this difference was not significant. As expected, age was related to reporting that periods had stopped for 12 months or more; women in the two older groups were more likely to report this than women in the two younger

Table 4-6. Biological Variable Means (SD) in the Perimenopausal Transition of Filipino American Midlife Women

35 - 39 yr	40 - 44 yr	45 - 49 yr	50 - 56 yr	Total Sample
M(SD)n	M(SD)n	M(SD)n	M(SD)n	M(SD)N
Mean age:				
36.8(1.4)39	42.1(1.4)40	47.3(1.6)37	52.7(2.0)49	45.1(6.2)165
# pregnancies:				
2.0(1.7)39	2.3(1.7)40	3.1(1.7)37	2.6(1.9)47	2.5(1.8)163
# Children:				
1.7(1.3)39	1.9(1.2)40	2.5(1.3)37	2.3(1.5)47	2.1(1.4)163
FSH Assay:				
0.8(0.7)12	2.0(3.8)17	4.3(5.2)11	2.9(3.1)14	2.4(3.7)54
Menopause age:				
Natural				
0.0(0)0	37.0(1.4)2	41.9(6.3)8	50.4(3.9)16	48.9(4.9)26
Surgical				
38.0(0)1	36.7(1.2)3	41.6(5.9)5	45.1(4.5)14	42.2(5.7)23

Table 4-7. Menstrual Cyclicity and Menstrual Cycle Regularity of Past Six Months in the Perimenopausal Transition of Filipino American Midlife Women

35 - 39 yr. %(n/gp. n)	40 - 44 yr. %(n/gp. n)	45 - 49 yr. %(n/gp. n)	50 - 56 yr. %(n/gp. n)	Total Group %(N/Gp. N)
Menstrual cyclicity:				
Period in past 6 mo:				
94.7(36/38)	89.5(34/38)	75.8(25/33)	58.1(18/31)	80.7(113/140)
Period in past 3 mo:				
100.0(37/37)	91.9(34/37)	69.7(23/33)	50.0(15/30)	79.6(109/137)
No period x 12 mo:				
0.0(0/39)	7.5(3/40)	24.3(9/37)	63.3(31/49)	26.1(43/165)
Menstrual cycle regularity in past six months:				
Less regular:				
0.0(0/38)	8.8(3/34)	42.3(11/26)	27.8(5/18)	16.4(19/116)
About the same:				
92.1(35/38)	88.2(30/34)	46.2(12/26)	72.2(13/18)	77.6(90/116)
More regular:				
7.9(3/38)	2.9(1/34)	11.5(3/26)	0.0(0/18)	6.0(7/116)

Note. The (n) for each age group represents the number within the age group with the response. The group (n) for all age groups represents the number within the age group who completed the item.

Table 4-8. Prevalence of Gynecologic Surgeries: Hysterectomy, Oophorectomy or Both in Midlife Filipinas.

35 - 39 yr. %(n/gp. n)	40 - 44 yr. %(n/gp. n)	45 - 49 yr. %(n/gp. n)	50 - 56 yr. %(n/gp. n)	Total Group %(N/Gp. N)
Gyn. surgery:				
2.6(1/39)	7.5(3/40)	13.5(5/37)	30.4(14/46)	14.2(23/162)
Hysterectomy only:				
100.0(1/1)	66.7(2/3)	20.0(1/5)	35.7(5/14)	39.1(9/23)
Oophorectomy only:				
0.0(0/1)	0.0(0/3)	0.0(0/5)	14.3(2/14)	8.7(2/23)
Both:				
0.0(0/1)	33.3(1/3)	80.0(4/5)	50.0(7/14)	52.2(12/23)

Note. The (n) for each age group represents the number within the age group with the response. The group (n) for all age groups represents the number within the age group who completed the item.

groups. The highest number of women whose periods had stopped for 12 months or more was statistically significant in the 50-56 year group, $\chi^2(1, n = 43) = 50.1$, $p < .0001$.

Menopause ages calculated for age groups are reported in Table 4-6. A significant difference was detected between groups on the age at menopause, as expected, with women in the 50-56 year group reporting the highest age at

menopause, χ^2 (1, n = 43) = 6.9, p = .0087. Overall, menopause ages computed for surgical menopause, with 13.9% (n = 23) of the total sample having experienced hysterectomy, or hysterectomy and oophorectomy (surgical menopause). Women in the 50-56 year group were more likely to have experienced a surgical menopause, χ^2 (1, N = 162) = 13.9, p = .0002, than women in all other age groups. Neither the age at menarche nor the number of pregnancies and children born significantly related for the sample are 48.9 (±4.9) years for natural menopause and 42.2 (±5.7) years to age at menopause.

Urine FSH assays. FSH levels were estimated from assayed random urine specimens provided by 54 participants (39 premenopausal; 15 postmenopausal). Results from 35 of the premenopausal women and 12 of the postmenopausal women fell into expected ranges (≤2.5 IU/DL; >2.5 IU/DL). Sensitivity and specificity calculations from these data were .8 and .9 respectively. Consequently, the false positive rate for the test was .10 and false negative rate was .20. Table 4-6 profiles the mean FSH levels from urine assays in each of the age groups.

Psycho-Social Variables

Depression, household complexity, relationship satisfaction, well-being. Psycho-social measures of household complexity and depressive symptoms, as measured by the CES-D, are described in Table 4-9 and 4-10. Table 4-11 details relationship satisfaction, two measures of well-being, and negative affect symptoms. Current relationship, which is an aspect of the social dimension of the perimenopausal transition was profiled in Table 4-1.

Household complexity. There were no significant differences across age groups in

TABLE 4-9. Household Complexity of Midlife Filipinas

35 - 39 yr.	40 - 44 yr.	45 - 49 yr.	50 - 56 yr.	Total Group
(n = 38)	(n = 40)	(n = 37)	(n = 49)	(N = 164)
%(n)	%(n)	%(n)	%(n)	%(N)
Household Complexity:				
Live alone:				
2.6(1)	0.0(0)	0.0(0)	10.2(5)	3.7(6)
S/P or S/P w/Ch:				
34.2(13)	67.5(27)	59.5(22)	44.9(22)	51.2(84)
S/P, Ch, Par:				
28.9(11)	7.5(3)	8.1(3)	4.1(2)	11.6(19)
Ch or Par only:				
10.5(4)	7.5(3)	10.8(4)	18.4(9)	12.2(20)
S/P/Ch/Par/Other[a]:				
2.6(1)	0.0(0)	5.4(2)	4.1(2)	3.0(5)
Others:				
21.1(8)	17.5(7)	16.2(6)	18.4(9)	18.3(30)

Note. Abbreviations used: S/P = spouse or living with partner; ch = children; par = parents.

[a]Mother/daughter/brother-in-law, grandchild, cousin, brother, nephew, niece, aunt, cat(s).

TABLE 4-10. Scores[a] on Depression Screening Instrument for Midlife Filipinas

35 - 39 yr. (n = 39) %(n)	40 - 44 yr. (n = 40) %(n)	45 - 49 yr. (n = 37) %(n)	50 - 56 yr. (n = 49) %(n)	Total Group (N = 165) %(N)
CESD < 16				
79.5(31)	75.0(30)	81.1(30)	67.3(33)	75.2(124)
CESD ≥ 16				
20.5(8)	25.0(10)	18.9(7)	32.7(16)	24.8(41)

[a]Scores from 0-15 = not depressed range; scores of 16 and greater = depressed range.

the complexity of their households, with the exception of the category live alone. As already reported, women in the 50-56 year group were more likely to live alone than women in the other groups. The majority lived with their children and spouse or partner (51.2%); participants lived alone (3.7%), with spouse or partner, children, and parents (11.6%), with children or parents only (12.2%), with spouse or partner, children, parents, and others (3.0%), and with others (18.3%). Household complexity data are detailed by age group in Table 4-6.

Depression. Overall prevalence of depression detected by the screening instrument in the sample was 24.8% (n = 41). Prevalence of depression for each of

Table 4-11. Means (SD) of Relationship Satisfaction, Well-being, and Negative Affect Symptom Measures of Filipino American Midlife Women

	35 - 39	40 - 44	45 - 49	50 - 56	Total
	M(SD)n	M(SD)n	M(SD)n	M(SD)n	M(SD)N
Relationship Satisfaction[a]:					
	56.4(14.2)39	59.0(15.0)40	59.4(11.7)36	57.2(14.1)45	57.9(13.8)160
Global Satisfaction[b]:					
	4.5(1.4)39	4.8(1.5)40	4.9(1.0)36	4.9(1.2)45	4.8(1.3)160
Global Well-being[c]:					
	2.8(0.8)38	2.5(0.7)40	2.7(0.8)35	2.8(0.7)48	2.7(0.7)161
Negative Affect[d]:					
	12.5(8.8)39	8.8(7.8)40	8.4(5.1)37	12.1(8.3)49	10.5(7.9)165

[a]Relationship satisfaction scores range from 0-78.

[b]Overall satisfaction with life and self, range is 0-6.

[c]Feelings in general, satisfaction with personal life, how interesting life is, and how cheerful, lighthearted in feeling. Scores range from 1 (in excellent spirits or extremely happy all of the time) to 6 (in very low spirits or very dissatisfied or feeling cheerful or life is interesting none of the time).

[d]Scores range from 0-48 for twelve items from the MSSL: anger, anxiety, depression, hostility, impatience, irritability, mood swings, nervousness, out of control feelings, panic feelings, tearfulness/crying spells, and tension.

the age groups was 20.5% (35-39), 25.0% (40-44), 18.9% (45-49), and 32.7% (50-56). The overall mean CES-D score for the participants was 12.3 (±8.2). Mean scores for the age groups were 35-39 (11.6 ±6.1), 40-44 (12.1±9.2), 45-49 (12.5±9.1), and 50-56 (12.9±8.2). All of these mean scores fell into the not depressed range. For Filipinas in the present study, the CES-D proved to be internally consistent with Cronbach's alpha coefficient of .83.

Relationship satisfaction. The mean score representing relationship satisfaction for the entire sample was 57.9 (SD = 13.8). Women in the 35-39 and 50-56 year groups had lower relationship satisfaction scores, but these were not statistically significant. Furthermore, all relationship satisfaction mean scores fell within the "satisfied" range. Cronbach's alpha coefficient was .90 in the present study, which demonstrates that the measure was internally consistent for this sample of Filipino American midlife women.

Well-being. Two measures were utilized to profile the participants' overall satisfaction with life and are indicators of well-being. The means from the global life satisfaction question on the RSAT, and the summated means from four global feelings questions are reported for age groups in Table 4-11. By collapsing the RSAT global question and global feelings scores into categories of 0-2.2 (dissatisfied), 2.3-4.5 (neutral), and 4.6-6.0 (satisfied) and 0-2 (in excellent spirits all of the time), 3-4 (in good spirits a good bit of the time), 5-6 (in very low spirits most of the time), respectively, then testing against the four age categories using Chi-square statistics, no differences were found between groups. Overall, participants were generally satisfied with their life. The overall group mean score on the RSAT global satisfaction

question was 4.8 (±1.3), which falls into the satisfied range. The overall summated score from global feelings questions was 2.7 (±.7) indicating that a good bit of the time, participants were mostly in good spirits and were generally happy, satisfied or pleased. On the negative affect symptom subscale of the MSSL, the overall mean score was 10.5 (±7.9) which falls into the minimal range.

Cultural Variables

Cultural variables for the present study are profiled in Tables 4-12, 4-13, and 4-14. Included is information about language preference and travel to the Philippines. These variables were not originally included in discussion of the cultural domain, but are described here as they add additional descriptive information about the participants.

Years lived in the US and travel to the Philippines. As expected, there was a significant difference between groups on the number of years lived in the United States, χ^2 (6, N = 150) = 29.7, p <.0001, since this variable may be connected to a participant's age. More women in the 35-39 year group had lived in the U.S. for 1-9 years, while more in the 50-56 year group had been residents for 30-51 years.

Key informants in the Filipino community advised that Filipino families keep close ties with family and friends in their homeland and frequently travel back to the Philippines to visit or for extended stays. No differences were detected across age groups in travel patterns, and number of years in the U.S. did not appear to influence this frequency of travel. The most commonly reported travel frequency was once in 3-5 years (39.5%); once a year and greater than once a year was reported by 6.1% of the overall group. Surprisingly, 27.9% of the sample reported never having traveled

back to their country of origin. Details about travel frequency to the Philippines can be found in Table 4-12.

Language preference. Language preference is detailed in Table 4-13. These data were obtained from a question in which the respondents were asked to write in their language of preference. More than 26% of the responses contained two preferred languages; they were categorized by the first listed response, as it was assumed that the first response was the actual preferred language. It is notable that more women listed English and Tagalog than listed Tagalog and English, just as more women preferred English than preferred Tagalog. Significant differences on language preference were not found among the age groups.

Cultural identity. Cultural identity data were obtained from the question on which the women were asked to rate themselves on a scale from 0 to 10. Responses to this rating scale can be found in Table 4-14. There was no correlation between number of years in the U.S. and self-rating of cultural identity. It is interesting that more than half (62.4%) of these women considered themselves to be ½ traditional Filipina + ½ Americanized, particularly because 93.3% of the women are immigrants. No significant differences were found across age groups on cultural identity.

Attitudes toward menopause. Filipina's attitudes toward menopause are detailed in Table 4-15. There was little variation from a generally positive attitude (56-84); only 3.1% of the total sample scored in the negative attitude range (28-55) . Similarly, fewer women (7.5%) scored in the very positive range (85-112). Significant differences in attitude toward menopause were not detected across age groups. Cronbach's coefficient alpha was a moderate .70 for the attitudes toward

Table 4-12

Number of Years in the U.S. and Travel to the Philippine Islands

35 - 39 yr. %(n/gp. n)	40 - 44 yr. %(n/gp. n)	45 - 49 yr. %(n/gp. n)	50 - 56 yr. %(n/gp. n)	Total Group %(N/Gp. N)
Years in U.S.:				
1 - 9 years: 44.4(16/36)	8.3(3/36)	3.2(1/31)	8.5(4/47)	16.0(24/150)
10 - 29 years: 50.0(18/36)	86.1(31/36)	87.1(27/31)	80.9(38/47)	76.0(114/150)
30 - 51 years: 5.6(2/36)	5.6(2/36)	9.7(3/31)	10.6(5/47)	8.0(12/150)
Travel to Philippines:				
>1 & 1/year: 5.6(2/36)	0.0(0/36)	3.2(1/31)	13.6(6/44)	6.1(9/147)
Once in 3-5 years: 44.4(16/36)	33.3(12/36)	48.4(15/31)	34.1(15/44)	39.5(58/147)
Never: 38.9(14/36)	27.8(10/36)	19.4(6/31)	25.0(11/44)	27.9(41/147)
Other[a] 11.1(4/36)	38.9(14/36)	29.0(9/31)	27.3(12/44)	26.5(39/147)

Note. The (n) for each age group represents the number within the age group with the response. The group (n) for all age groups represents the number within the age group who completed the item.

[a]Range from once in 7 to once in 26 years.

menopause subscale of the ATMA.

Attitudes toward aging. As profiled in Table 4-15, attitudes toward aging were generally in the positive range. Of the total sample, negative, positive, and very positive attitudes toward aging were 1.3%, 89.3%, and 9.4% respectively. Differences were not significant across the age categories. The internal consistency reliability coefficient alpha for the attitudes toward aging subscale of the ATMA was a moderate .68 for Filipinas. By removing the item "people grow wiser with the coming of old age", the subscale Cronbach's alpha coefficient increased to .71. For the present study participants, this particular item was either ambiguous or was not consistent with the attitudes represented by the other 19 items of the subscale.

Short Answer Questions

As part of the data collection procedure, participants were asked to complete a short-answer instrument containing eight questions aimed at gleaning a cultural perspective on the perimenopausal transition. Only four of the questions will be profiled in this discussion. The unit of analysis for these questions was an individual response. Data were coded into categories for summation purposes and frequencies are reported. Tables 4-16, 4-17, 4-18, and 4-19 detail the categorized responses.

How did you learn about menopause? It is notable that female relatives formed the largest group to provide information for the respondents about menopause. Little information was obtained from lectures (1.1%), television (2.7%), or word of mouth (1.1%). A small number of responses (1.1%) indicate that menopause was not discussed. Examples provided by women in the study are "never talk about it" and "no one discusses it".

Table 4-13

Language Preference of Filipino American Midlife Women

35 - 39 yr. (n = 39) %(n)	40 - 44 yr. (n = 39) %(n)	45 - 49 yr. (n = 36) %(n)	50 - 56 yr. (n = 48) %(n)	Total Group (N = 162) %(N)
Language Preference:				
English:				
51.3(20)	51.3(20)	38.9(14)	64.6(31)	52.5(85)
Tagalog:				
15.4(6)	7.7(3)	22.2(8)	25.0(12)	17.9(29)
English & Tagalog:				
20.5(8)	23.1(9)	25.0(9)	10.4(5)	19.1(31)
Tagalog & English:				
10.3(4)	10.3(4)	11.1(4)	0.0(0)	7.4(12)
Other[a]:				
2.6(1)	7.7(3)	2.8(1)	0.0(0)	3.1(5)

[a]Ilocano, Russian, Visayan, Spanish

Table 4-14

Self-Rated Cultural Identity of Filipino American Midlife Women

35 - 39 yr.	40 - 44 yr.	45 - 49 yr.	50 - 56 yr.	Total Group
(n = 39)	(n = 40)	(n = 37)	(n = 49)	(N = 165)
%(n)	%(n)	%(n)	%(n)	%(N)
Cultural Identity:				
Completely Traditional Filipina:				
33.3(13)	20.0(8)	24.3(9)	20.4(10)	24.2(40)
½ Completely Traditional Filipina + ½ Completely Americanized Filipina:				
53.8(21)	65.0(26)	64.9(24)	65.3(32)	62.4(103)
Completely Americanized Filipina:				
12.8(5)	15.0(6)	10.8(4)	14.3(7)	13.3(22)

Table 4-15

Attitudes Toward Menopause and Aging in Filipino American Midlife Women

35 - 39 yr. (n = 36) %(n)	40 - 44 yr. (n = 39) %(n)	45 - 49 yr. (n = 35) %(n)	50 - 56 yr. (n = 49) %(n)	Total Group (N = 159)[a] %(N)
Attitudes Toward Menopause:				
Negative:				
2.8(1)	2.6(1)	2.9(1)	4.1(2)	3.1(5)
Positive:				
91.7(33)	97.4(38)	88.6(31)	81.6(40)	89.3(142)
Very positive:				
5.6/1.3(2)	0.0/0.0(0)	8.6/1.9(3)	14.3/4.4(7)	7.5(12)
Attitudes Toward Aging:				
Negative:				
0.0(0)	2.6(1)	0.0(0)	2.0(1)	1.3(2)
Positive:				
91.7(33)	89.7(35)	91.4(32)	85.7(42)	89.3(142)
Very positive:				
8.3(3)	7.7(3)	8.6(3)	12.2(6)	9.4(15)

[a]Participants with more than 20% missing items on the instrument were not included.

Table 4-16

How did you learn about menopause? (N = 182 responses)[a]

Category	%(n)
Mom, aunt, other relatives	23.6(43)
Reading (medical texts, literature, books, articles)	20.9(38)
Friend(s), other older women	18.7(34)
School	17.0(31)
Medical personnel (MD, NP, RN)	9.3(17)
Own experience	2.7(5)
Television	2.7(5)
Don't know, don't remember	1.6(3)
Lectures	1.1(2)
No one, never talked about it	1.1(2)
Word of mouth	1.1(2)

[a]Unit of analysis was an individual response.

Table 4-17

At what age does a woman become menopausal? (N = 128 responses)[a]

Category	%(n)
Late 40s to early 50s, 50-55, 50, 50 or greater	37.5(48)
43-49, 45, 45 or greater, 45-50	25.0(32)
40, 40 or greater, 40-50	18.0(23)
Varies, no age limit, don't know	11.7(15)
30, 35 and above, 35-45	7.8(10)

[a]Unit of analysis was an individual response.

Table 4-18

How do women in your culture feel about menopause? (N = 136 responses)[a]

Category	%(n)
Developmental stage, natural cycle of life, period in women's lives all go through, part of life, normal, fact of life, open-minded	40.4(55)
Uneasy, concerned, not comfortable, nervous, scary experience, inconvenient, unbearable at times, irritable, go crazy, get depressed	15.4(21)
Getting old, sign of old age, end of sexuality, sign of disease, end of womanhood	14.7(20)
Don't know, have no idea, not sure, don't talk about it, never discussed, nothing	13.2(18)
Acceptable, comfortable, no concern, don't mind not much concern, it's okay	7.4(10)
End of bleeding, free from pregnancy and headaches, welcome and happy, beginning of new life	7.4(10)
Same as American women and others	1.5(2)

[a]Unit of analysis was an individual response.

Table 4-19

What are the Most Reported Health Complaints by Midlife Women in your Culture? (N = 176 responses)[a]

Category	%(n)
Menopause symptoms (hot flushes, palpitations, sweats, hot and cold temperatures, menstrual irregularity, red face, vaginal symptoms, UTI, decreased libido, cramps, hormone imbalance)	38.6(68)
Mood swings, irritability, hot temper, nervousness, grouchy, depression	24.4(43)
Arthritis, body aches	11.4(20)
Headache	8.5(15)
Don't know, women have no complaints	6.8(12)
High blood pressure	4.0(7)
Weight problems (control)	2.8(5)
Cardiac problems, osteoporosis	1.1(2)
Fatigue, insomnia, tired easily	1.1(2)
Loss of memory, forgetfulness	1.1(2)

[a]Unit of analysis was an individual response

At what age does a woman become menopausal? There was wide variation in responses to age of menopause; the range, according to respondents, is 30 to 50 or greater, though some reported "no age limit" or "it varies" (11.7%).

How do women in your culture feel about menopause? Participant responses to how women in their culture feel about menopause are detailed in Table 4-18. A number of these responses were positive (47.8%) and acknowledged menopause as a "developmental stage" or "normal process". One woman captured this feeling by saying, "it's a normal aging process and Filipinas don't do anything about it (take pills)". However, 30.1% of the responses demonstrated concern ("not comfortable", "nervous") or that menopause is a "sign of old age". Comments were, "women in my culture feel very nervous when they reach menopause age", and "sometimes it make [sic] you crazy, angry". Only 1.5% of the responses compared Filipinas' feelings about menopause to those of other American women: "we have some symptoms like other women going through a change of life", and Filipinas feel the "same as the American women" about menopause.

What are the most reported health complaints by midlife women in your culture? Responses to what the most reported health complaints are by midlife women in the Filipino culture are listed in Table 4-19. The most reported complaints were categorized as menopause symptoms, for they were largely made up of symptoms that comprise symptom checklists developed by research on European American women (Jazmann, van Lith & Zaat, 1969; Uphold & Susman, 1985; Glazer & Rozman, 1991). Headache was named in 8.5% of the responses. Although 24.4% of the responses in the present study reflected mood or negative affect symptoms ("mood

swings", "irritability", "hot temper", "nervousness", "grouchy", "depression"), few responses reflected concern about fatigue or sleep problems (1.1%). Loss of memory and forgetfulness comprised only 1.1% of the responses.

Salient examples in women's own words demonstrate the types of responses to "what are the most reported health complaints by midlife women in your culture?" Examples of estrogen-related menopause symptomatology are "headache and change of body temperature", "sometimes you're hot & sweaty, sometimes, you're cold" and "women in my culture feel very hot, they're not comfortable". Responses that reflect mood include "very irritable", "always angry, hot temper", "emotional swings", "irritability, nervousness", and "moodiness". More than 18% of the responses linked estrogen-related symptomatology with negative affect symptoms: "hot flashes, irritability", "irritability, hot flushes, nervousness", "headache, hot flushes, irritability, mood swings", and "red face, loss of memory, hot flashes, emotional swings, night sweats, difficulty focusing".

Aim #2

The second specific aim of this study was to identify the perimenopausal symptom experience and responses of Filipino American midlife women. Variables of symptom perception as measured by responses to symptoms comprising the estrogen-related menopause symptom subscale of the MSSL, the summated estrogen-related menopause symptom severity score, and the estrogen-related menopause symptom distress score are profiled in Table 4-20 and 4-21. Perimenopausal symptom responses are listed in Tables 4-21 and 4-22.

Estrogen-related menopause symptom experience. The estrogen-related

menopause symptom subscale of the MSSL was moderately internally consistent with a subscale Cronbach's coefficient alpha of .75. As noted in Table 4-20, mean estrogen-related menopause symptom severity scores across all groups were on the low end of the minimal range. The overall mean estrogen-related menopause symptom scores were daytime sweats (0.5 $\pm$0.9), hot flashes (0.6$\pm$1.0), night sweats (0.4$\pm$0.8), and vaginal dryness (0.6$\pm$0.9). Frequencies of estrogen-related menopause symptom reporting in the sample were daytime sweats, 27.9% (n = 46); hot flashes, 37.6% (n = 62); night sweats, 24.2% (n = 40); and vaginal dryness, 39.4% (n = 65). For all symptoms, minimal was the most frequently chosen severity rating, as evidenced by the low mean scores reported in Table 4-20. Vaginal dryness followed by hot flashes were the most frequently reported of the estrogen-related menopause symptoms. Summated estrogen-related menopause symptom scores appear as the estrogen-related menopause symptom severity score; the mean estrogen-related menopause symptom severity score for all groups was 2.2 ($\pm$2.7). Again, this score fell into the minimal range. Women in the 50-56 year range did have the highest estrogen-related menopause symptom severity score and reported severity of moderate/extreme on these symptoms more frequently. This difference was not statistically significant from scores reported by the other age groups, χ^2 (6, N=165) = 10.6, p = .1016.

Fatigue and sleep disruption, which are frequently reported by women in the perimenopausal transition, were not perceived with high prevalence by the Filipinas in the present study. The fatigue/sleep disruption subscale on the MSSL ranged from 0-16 with 0-4 (minimal), 5-8 (mild), 9-12 (moderate), and 13-16 (extreme). Prevalence

Table 4-20. Estrogen-related Menopause Symptom Experience of Filipino American Midlife Women

Variable	35-39 yr M(SD)n	40-44 yr M(SD)n	45-49 yr M(SD)n	50-56 yr M(SD)n	Total M(SD)N
Estrogen-related Menopause Symptoms Mean Severity Scores (Range 0 - 4):					
Day sweats	0.5(0.9)37	0.2(0.6)38	0.5(0.9)36	0.8(1.1)45	0.5(0.9)156
Hot flashes	0.3(0.4)39	0.2(0.5)39	0.7(1.0)36	1.2(1.2)48	0.6(1.0)162
Night sweats	0.2(0.5)38	0.2(0.6)39	0.4(0.7)35	0.7(1.1)47	0.4(0.8)159
Vaginal dry	0.5(0.8)39	0.3(0.6)39	0.5(0.8)36	0.9(1.1)47	0.6(.9)161
Total (0-16)	2.5(2.2)37	1.5(2.0)38	3.1(2.9)36	4.3(3.6)45	2.2(2.7)156
	35 - 39 yr. (n = 39) %(n)	**40 - 44 yr. (n = 40) %(n)**	**45 - 49 yr. (n = 37) %(n)**	**50 - 56 yr. (n = 49) %(n)**	**Total Group (N = 165) %(n)**
Estrogen-related Menopause Symptom Severity:					
Minimal:	89.7(35)	87.5(35)	70.3(26)	87.8(43)	84.2(139)
Mild	10.3(4)	10.0(4)	16.2(6)	8.2(4)	10.9(18)
Mod/Extreme:	0.0(0)	2.5(1)	13.5(5)	4.1(2)	4.8(8)

Table 4-21. Estrogen-related Menopause Symptom Distress, Contact with Health Care Provider and Use of Medications in Midlife Filipinas

	35 - 39 yr.	40 - 44 yr.	45 - 49 yr.	50 - 56 yr.	Total Group
	%(n/gp. n)	%(n/gp. n)	%(n/gp. n)	%(n/gp. n)	%(N/Gp. N)
Estrogen-related Menopause Symptom Distress:					
Minimal:					
	75.0(3/4)	42.9(3/7)	55.6(5/9)	62.5(5/8)	57.1(16/28)
Mild	25.0(1/4)	28.6(2/7)	22.2(2/9)	25.0(2/8)	25.0(7/28)
Moderate/Extreme:					
	0.0(0/4)	28.6(2/7)	22.2(2/9)	12.5(1/8)	17.9(5/28)
Contacted health care provider:					
	17.9(7/39)	32.5(13/40)	30.6(11/36)	22.2(10/45)	25.6(41/160)
Consulted someone else[a]:					
	15.4(6/39)	15.0(6/40)	19.4(7/36)	20.0(9/45)	17.5(28/160)
OTC medication[b]					
	5.1(2/39)	27.5(11/40)	22.2(8/36)	24.4(11/45)	20.0(32/160)
Hormone use[c]					
	0.0(0/16)	14.3(3/21)	29.4(5/17)	51.7(15/29)	27.7(23/83)

Note. The (n) for each age group represents the number within the age group with the response. The group (n) for all age groups represents the number within the age group who completed the item.

[a]Doctor, husband, friend, sister, children, others

[b]Vitamins, tylenol, aspirin

[c]Estrogen, progesterone, or both

Table 4-22. Non-pharmacologic Strategies Used by Midlife Filipinas

35 - 39 yr. (n = 39)	40 - 44 yr. (n = 40)	45 - 49 yr. (n = 36)	50 - 56 yr. (n = 45)	Total Group (N = 160)
%(n)	%(n)	%(n)	%(n)	%(N)
Something else done[a]:				
20.5(8)	30.0(12)	33.3(12)	33.3(15)	29.4(47)
Relaxation:				
69.2(27)	65.0(26)	58.3(21)	68.9(31)	65.6(105)
Meditation:				
20.5(8)	22.5(9)	30.6(11)	17.8(8)	22.5(36)
Visualization:				
17.9(7)	17.5(7)	22.2(8)	17.8(8)	18.8(30)
Affirmation:				
15.4(6)	12.5(5)	16.7(6)	11.1(5)	13.8(22)
Prayer:				
79.5(31)	75.0(30)	86.1(31)	73.3(33)	78.1(125)
Talk with friend(s):				
89.7(35)	87.5(35)	86.1(31)	71.1(32)	83.1(133)
M(SD)	M(SD)	M(SD)	M(SD)	M(SD)
#self-care strategies[b]:				
3.7(1.9)	3.9(1.9)	4.2(1.9)	3.7(2.1)	3.9(2.0)

[a]Exercise, garden, listen to music, deep breathing, dance, walk, back massage, heat, guided meditation, cold towel, sleep, prayer, watched movie, talked to friend, increased workout

[b]Total of (1) something else done, (2) medications for symptoms, (3) exercise >2/week, (4) relaxation, (5) meditation, (6) visualization, (7) affirmation, (8) prayer, (9) talking w/friends

of scores in each of these categories was 61.7%, 29.6%, 7.4%, and 1.2% respectively. In addition, only 1.1% of the women reported "fatigue" or "sleep disruption" as a health complaint of women in midlife on the short-answer questions.

Estrogen-related menopause symptom distress. Women who rated either day sweats, hot flashes, night sweats or vaginal dryness (estrogen-related menopause symptoms) as mild, moderate, or extreme on the MSSL were asked to report how distressing these symptoms were on a scale from 0 to 10, with 10 indicating greater distress. Scores could range from 0 to 40, with 0 - 10 (minimal), 11 - 20 (mild), 21 - 30 (moderate), and 31 - 40 (extreme). Only 28 participants reported their symptom distress. The overall mean estrogen-related menopause symptom distress score for the combined sample (n = 28) was 12.9 ($\pm$ 8.4). Distress scores for the total sample ranged from 0 to 32. Estrogen-related menopause symptom distress scores for age groups were, 35-39 (M = 8.5 $\pm$6.0, n = 4), 40-44 (M = 7.0 $\pm$9.1, n = 7), 45-49 (M = 14.1$\pm$8.1, n = 9), 50-56 (M = 11.6$\pm$9.4, n = 8). Scores in the 45-49 and 50-56 year groups fell into the mild range. Prevalence of minimal, mild, and moderate/extreme responses for age groups are reported in Table 4-21. No differences were detected across age groups on estrogen-related menopause symptom distress scores.

Menopause symptom response. Table 4-21 and 4-22 detail the information gathered to estimate Filipino American women's responses to the perimenopausal transition. Three general areas were profiled: contact with a health care provider or someone else, use of medications (over the counter, hormones), and non-pharmacologic strategies. The total number of self-care strategies for each group is

represented as a summated score and is presented as a mean. Total possible for this item was 9. The overall group mean for the number of self-care strategies used was 3.9 (SD = 2.0). Medications taken in response to symptoms listed by the participants were tylenol/aspirin (24.2%), antiinflammatory medications (10.3%), cold/allergy medication (5.5%), and vitamins (9.1%). Participants did not specify the types of vitamins taken nor did they list minerals, such as calcium. Overall, 20% of the participants took over-the-counter medications. Women in the 35-39 year group and women in the 50-56 year group were more likely than the 40-44 and 45-49 year groups to take tylenol or aspirin, χ^2 (3, N = 165) = 9.7, p = .021.

Examination of Table 4-22 reveals that prayer and talking with friends were the most prevalent self-care strategies employed by Filipinas. Overall, prayer and talking with friends were used by 78.1% and 83.1% respectively. No significant differences were noted across the age groups on self-care strategy use, with the exception of talking with friends. Women in the 50-56 year group were less likely to use this strategy than were women in the other three groups, χ^2 (1, N = 160) = 6.4, p = .011.

Study Hypotheses

Higher parity will be significantly correlated with later age at menopause.

To test this hypothesis, the number of children reported by participants and the calculated age at natural menopause were the variables utilized. Pearson's product moment correlation coefficient was calculated to test the relationship. Though not significant (r = .2, p = .16), this statistic indicates a positive direction to a relationship that is weakly correlated.

Self-reported menopausal status will be significantly related to FSH levels greater than 2.5 IU/DL established by random urine specimen FSH assay.

To test this hypothesis, the variable representing menopause age was categorized (1 = 0 age, 2 = other than "0"age). FSH level categories were created (1 = FSH $\leq$ 2.5 IU/DL; 2 = FSH >2.5 IU/DL). Chi-square statistics were calculated from these data and found to be, $\chi^2(1, n = 54) = 21.5$, $p < .0001$. Urine FSH levels were significantly related to self-reported menopausal status in this sample; the hypothesis was supported by these data.

Current smoking will be correlated with an earlier menopause.

This hypothesis could not be tested from the data, because only one participant in the menopausal group was a smoker. The overall low prevalence of smoking in the sample is, however, a clinically relevant finding from the descriptive data.

Depression will be positively correlated and well-being will be negatively correlated with estrogen-related menopause symptom severity scores.

To test this hypothesis, CES-D scores were correlated with estrogen-related menopause symptom severity scores. The relationship was found to be positive yet not statistically significant ($r = .12$, $p = .136$). To examine the relationship between well-being and estrogen-related menopause symptom severity, two measures were utilized, the global life satisfaction item on the RSAT and the total score from the four global well-being questions. The RSAT life satisfaction scores were not significantly correlated with estrogen-related menopause symptom severity scores, however the relationship was in the expected direction, $r = -.12$, $p = .134$. This correlation indicates that for these Filipinas, greater life satisfaction is related to lower

estrogen-related menopause symptom severity scores. There was no relationship between the four summated global well-being scores and estrogen-related menopause symptom severity scores (r = .06, p = .431). These data do not support the hypothesis.

Household income, level of education, number of self-care strategies used, visit to a health care provider, and use of pharmacologic or surgical interventions will explain a statistically significant amount of the variance in symptom severity scores.

To examine the relationship of independent variables (household income, level of education, number of self-care strategies used, visit to a health care provider, use of medications (OTC, hormones), and surgical interventions (hysterectomy, oophorectomy, or both) to the dependent variable (estrogen-related menopause symptom severity), a correlation matrix was generated and simultaneous multiple regression was conducted. These data are profiled in Table 4-23 and Table 4-24. In this model, the independent variables were not strong predictors of estrogen-related menopause symptom severity; the overall model was not significant (p = .8181). When women whose age is less than 45 and women who had experienced a hysterectomy were removed from the model, R-square became .049, F-value .45, p = .842. These adjustments did not increase the ability of the independent variables to predict estrogen-related menopause symptom severity.

A better explanation for the variance in estrogen-related menopause symptom severity is a regression model in which household income, depression, age categories, and the negative affect symptom subscale from the MSSL are entered as independent variables. These independent variables significantly explained 8% of the

Table 4-23

Correlations (Pearson r) and p-values (in parentheses) Among (1) Estrogen-related Menopause Symptom Severity and Independent Variables: (2) Income, (3) Education, (4) Self-Care Strategies, (5) Visit to Health Care Provider, (6) Use of OTC Medications, (7) Hormones, and (8) Surgical Interventions

	Sx	Inc	Ed	SC#	HCP	OTC	Hor
Inc	.2 (.1)						
Ed	.1 (.5)	**.2 (.01)**					
SC#	-.02 (.8)	.0 (1.0)	.01 (.9)				
HCP	.01 (.9)	-.01 (.9)	.01 (.9)	.1 (.2)			
OTC	-.03 (.7)	.02 (.8)	-.02 (.8)	**.4 (.0)**	**.3 (.0)**		
Hor	-.02 (.8)	.02 (.7)	.1 (.4)	.0 (1.0)	-.1 (.3)	.1 (.5)	
Hys	.04 (.6)	.03 (.5)	.1 (.5)	-.1 (.5)	-.1 (.1)	.02 (.8)	**.6 (.0)**

Note. Sx = estrogen-related menopause symptom severity score, Inc = household income, Ed = level of education, SC# = number of self-care strategies used, HCP = visit to health care provider, OTC = use of OTC medications, Hor = non-contraceptive hormones, and Hys = surgical interventions (hysterectomy, oophorectomy, or both).

Table 4-24

The Ability of Household Income, Level of Education, Number of Self-Care Strategies, Visit to Health Provider, Use of OTC Medications, Use of Hormones, and Surgical Interventions to Predict Estrogen-related Menopause Symptom Severity

Independent Variables:	Beta	Squared Semi-partial	p
Income	.12	.01	.2
Education	.1	.002	.6
#Self-care strategies	.01	.00	.9
Visit to provider	.01	.00	.9
OTC meds	-.03	.001	.7
Hormones	-.1	.003	.5
Surgical interventions	**.1**	**.004**	**.01**

	R^2	F-Value	p
[Overall Model]	.03	.5	.8

Table 4-25. Correlations (Pearson r) and p-values (in parentheses) Among (1) Estrogen-related Menopause Symptom Severity and Independent Variables: (2) Income, (3) Depression (4) Age Category, (5) Negative Affect Symptoms[a] (6) Pain Symptoms[b], (7) Physical Symptoms[c], and (8) Fatigue/Sleep Disruption Symptoms[d]

	Inc	Dep	Age	NAF	PSS	PHY	FSL
Sx	.1 (.06)	.1 (.2)	**.2 (.02)**	**.2 (.05)**	**.3 (.001)**	**.3 (.0)**	**.3 (.0)**
Inc		.1 (.3)	.01 (.9)	.1 (.5)	.1 (.2)	.1 (.4)	.1 (.2)
Dep			.1 (.5)	**.3 (.0)**	**.2 (.01)**	**.3 (.0)**	**.3 (.0)**
Age				.1 (.5)	.1 (.1)	.1 (.2)	.1 (.2)
NAF					**.5 (.0)**	**.6 (.0)**	**.5 (.0)**
PSS						**.7 (.0)**	**.5 (.0)**
PHY							**.6 (.0)**

Note. Sx = estrogen-related menopause symptom severity, Inc = household income, Dep = depression score, Age = age category, NAF = negative affect symptoms, PSS = pain symptoms, PHY = physical symptoms, and FSL = fatigue and sleep disruption.

[a]anger, anxiety, depression, hostility, impatience, irritability, mood swings, nervousness, out of control feelings, panic, tearfulness/crying spells, tension

[b]backache, cramps, bodyache, headache, jointpain, breastpain

[c]constipation, diarrhea, heartpounding, indigestion, no appetite, nausea, numbness, short of breath, acne, hands/feet swelling, weight gain, weight loss

[d]difficulty falling asleep, fatigue, wake up during night, wake up too early

Table 4-26

The Ability of Household Income, Depression, Age Categories, Negative Affect Symptoms, Pain Symptoms, Physical Symptoms, and Fatigue/Sleep Disruption Symptoms to Predict Estrogen-related Menopause Symptom Severity

Independent Variables:	Beta	Squared Semi-partial	p
Income	.1	.01	.1
Depression	-.01	.0002	.9
Age category	**.2**	**.02**	**.05**
Negative affect symptoms	-.1	.004	.4
Pain symptoms	.06	.002	.6
Physical symptoms	**.2**	**.02**	**.04**
Fatigue/sleep disrupt sx	.1	.008	.2

	R^2	F-Value	p
[Overall Model]	**.16**	**4.21**	**.0003**

Note. Negative affect symptoms, pain symptoms, physical symptoms and fatigue/sleep disruption symptoms are symptom cluster subscales of the MSSL.

variance in estrogen-related menopause symptom severity scores (R-square = 08, F-value = 3.4, p = .01). In this new model, income explained 1.9% of the variance, age category explained 3.2% of the variance, and the negative affect subscale of the MSSL, with internal consistency reliability coefficient alpha of .92, explained 1.4% of the variance in estrogen-related menopause symptom severity. Of these unique contributions to the model, however, only age category was statistically significant. Although negative affect symptoms correlated significantly with estrogen-related menopause symptom severity (r = .16, p .05), the unique contribution of negative affect was not significant in the model. Both of these scores are subscales of the MSSL. Unexpectedly, when the variable age category was replaced with the continuous variable age, the overall R-square became .06, F-value was 2.3, and p-value was .06. The fact that these data did not meet the assumptions for multiple regression analysis may explain this phenomenon.

As detailed in Table 4-25 and 4-26, by adding pain (Cronbach's coefficient alpha of .79), physical symptoms (Cronbach's coefficient alpha of .79), and the fatigue/sleep disruption (Cronbach's coefficient alpha of .74) subscale scores from the MSSL, the overall R-square for the regression model increased to 16.1%. The individual contributions of the independent variables pain score, physical symptoms score, and fatigue/sleep score were 0.002 (p = .6), .02 (p = .04), and .01 (p = .2), respectively. Only the physical symptoms subscale from the MSSL was statistically significant, and it could explain 2.4% of the variance in estrogen-related menopause symptom severity.

Summary

In addition to descriptive data for biological, psycho-social, and cultural variables, answers to the five study hypotheses were outlined in this chapter. Chi-square statistics were employed to determine differences among the age group categories on many of the variables; Pearson's product moment correlations were provided as a test for significant relationships between variables; and multiple regression analysis looked at the relationship between estrogen-related menopause symptom severity scores and specified independent variables in an attempt to explain the variance in women's perimenopausal estrogen-related symptom experience.

Chapter 5

DISCUSSION

Introduction

The purpose of this study was to describe the perimenopausal transition experience of Filipino American midlife women from a bio-psycho-social-cultural perspective and to identify their symptom experience and responses. Sample characteristics and variables representing the biological, psycho-social, and cultural dimensions were described using descriptive statistics, and specific hypotheses were tested using inferential statistical tests. In this chapter, the significance of the findings is discussed with the relevance to clinical practice and to nursing science highlighted. State and national census data are used to compare the present study sample with available California and U.S. population information where applicable (Roberts, 1995); other samples of U.S. midlife women and information from two studies in the Philippines (Ramosa-Jalbuena, 1994a; 1994b) are compared to the study group on selected variables. Evaluative comments about the study are presented, with particular emphasis upon its strengths and limitations. Finally, directions for future research are suggested.

Demographic Variables

Perhaps the most significant contribution of the study was to profile Filipino American midlife women living in the San Francisco Bay Area. This growing group of women, previously undescribed, is made up of immigrants who have lived in the U.S. for nearly 20 years and are married, have achieved college graduation, and are employed full or part-time; many prefer to speak English. The majority of the

women have household incomes above $50,000 per year. Although most of the women are Catholic, they had fewer pregnancies and have fewer children than their counterparts in the Philippines. This difference may be explained by the accessibility of reproductive technologies in the United States or by an adoption of a more Western attitude toward family size.

The highly educated profile of the participants may partially be explained by the history of their migration to the United States. Anderson (1983) reported that immigrants from the Philippines since 1966 have primarily been educated, English-speaking urbanites; many were professionals and came as families. Unlike previous Filipino immigrants who chose more rural areas, this latest wave of immigrants settled in urban areas like the San Francisco Bay Area. The oppression and stagnated economy of the Marcos government hastened their departure from their native land (Anderson, 1983). Alternatively, in the 1950s and 1960s, the shortage of nurses in the U.S. encouraged nurses trained in the Philippines to take advantage of special programs that provided an opportunity for them to obtain licensure and residency (ultimately citizenship) here. Probably due to the snowball feature of the sampling design, more than 21% (n = 36) of the participants in the study were nurses.

National Database and Other Group Comparisons

Comparisons with national data are made in order to place the Filipina Americans studied within the context of the U.S. population. Compared to the national median age (34 years), relationship status (19% single; 83% married or partnered), and educational attainment level (20% college graduates) the present study participants were older (45 years), fewer were married or partnered (74.5%), fewer

were single or lived alone (12.1%), and more had achieved college graduation (62.8%). The national poverty level is set at $13,359 for a 4-person family; national data reported in 1990 showed that 10% of U.S. families lived below the poverty level. Similarly, the national data set indicated that in 1993, 13% of women did not have health insurance (Roberts, 1995). In the current sample, 4.8% reported household incomes below the poverty level, while 4.3% had no health insurance.

Burr and Mutchler (1993) found the single/unmarried Filipinas (>age 55) in their sample to have very low personal economic resources as a group. Their median incomes were well below the poverty level for unrelated individuals in 1979 (set at $3,689 for persons living alone or with nonrelatives only). Data in the present study were collected for the total household rather than for individual income and represent a somewhat younger group (35-56 years).

Health and Risk Behaviors

Exercise >2/week. The prevalence of women who exercised more than two times per week was markedly higher than that reported by Lee and Taylor (1996) (40-44 years, 34.7%; 45-49 years, 34.9%; 50-54 years, 40.4%; 55-60 years, 45.2%), but unlike the women in the Lee and Taylor study, the prevalence of women who exercised more than two times per week did not increase across the age groups in the present sample. Rather, fewer Filipinas in the 50-56 year group exercised more that twice a week, though this difference was not statistically significant.

Calcium Sources in the Diet. Calcium obtained from food sources by women in the study may not meet minimum daily requirements. Only 15.3% of the overall group reported eating high calcium foods in sufficient quantities to meet the

requirement for pre-menopausal women or post-menopausal women taking estrogen (7000 mg/week). Only one woman in the post-menopausal group reported eating high calcium foods in sufficient quantities to meet the minimum requirement for post-menopausal women not taking estrogen (10,500 mg/week). Although 9.1% of the women reported vitamin use, only one woman specified calcium supplementation.

The instrument developed for the study represents primary and secondary sources of dietary calcium. It does not measure total calcium intake, and though women were advised to consider that some of the foods on the instrument might be ingredients in prepared dishes, the instrument could not measure their adherence to this directive. Nevertheless, these data provide a beginning estimation of calcium obtained from food sources and represent an important finding for the overall group. Since there is a high incidence of the gene responsible for lactose intolerance in Filipinos (Anderson, 1983) and because key informants in the Filipino community have indicated that primary sources of calcium, such as dairy foods and milk, are not strongly represented in the daily diet, there is a strong need for further investigation of the true prevalence of calcium from food sources for Filipinas. Furthermore, key informants have advised that secondary sources of calcium, green leafy vegetables, are not a mainstay for Filipinas.

There is no evidence in the literature that points to a decreased risk of osteoporosis in Filipinas. Rather, Davis and colleagues (1994) found that after adjusting for height and weight, there was no difference in bone mass between Hawaiian, Filipino, Japanese, and white women studied in a 25-34 age range. At least in their reproductive age range, Filipinas may have the same risk as the other

groups described. Since the incidence of osteoporosis in aging Filipino American women has not been found in the literature, it is essential that these women be included in osteoporosis research. At the same time, dietary calcium intake through 24-hour diet recalls should be studied. Together, these measures can provide a better understanding of the threat (or non-threat) of osteoporosis to aging Filipinas in this country. Once this threat is understood and measured, intervention strategies targeted toward health promotion and disease prevention using culturally appropriate messages can be crafted.

Smoking. Of note, the prevalence of smoking in the sample (6.9%) was slightly higher than the prevalence rate of 6.3% as reported by Zane and colleagues (1994); however, of the smokers in the present sample, 3 reported smoking one cigarette per day, and one reported smoking two cigarettes per day. The definition of smoking in the present study was any response other than "0" or "N/A" to the questionnaire item, "on a typical day, how many cigarettes do you smoke?" Zane and colleagues (1994) did not provide the definition of smoking used in their report. Of particular interest, however, is the fact that both reports indicate a lower prevalence of smoking in Filipinas than for that of the California population at large (33%) (Zane et al., 1994). In a study of 266 midlife European American working women, Lee and Taylor (1996) found higher smoking prevalence rates in the age groups studied: 40-44 years (16.8%); 45-49 years (27.4%); and 50-54 years (33.3%).

Alcohol >1 serving/day. Brown and colleagues (1995) reported alcohol intake categories in a national community-based sample of ethnically diverse women to be higher than in the present study, with moderate drinkers (13%) and heavy drinkers

(4%). Similarly, Lee and Taylor (1996) found a higher prevalence of alcohol use in their sample of midlife employed women, with the prevalence of those obtaining more than 2 servings per week to be 17.3% in the 40-44 year group, 20.3% in the 45-49 year group, and 19.6% in the 50-54 year age group.

Prevalence of alcohol use was very low in this sample. Only 5.5% of the total group reported alcohol use; this prevalence compares very favorably with alcohol use by Japanese Americans (21.6%) and European Americans (28.5%), and is somewhat lower than the rate reported for Filipino Americans (11.4%) living in Hawaii (McLaughlin et al., 1987). Unlike for smoking, the 35-39 year group did not report alcohol use.

Health and risk behavior indicators in the study provide equivocal data. Filipinas exercised more than the midlife women in Lee and Taylor's (1996) group, but they scored below the recommended intake of calcium from food sources. On risk behavior indicators (smoking; alcohol >1 serving per day; caffeine >1 serving/day), the Filipinas scored very well. Although only 53.9% of the women reported exercise activities more than twice a week across the age categories, from an overall health perspective, this was balanced by the favorable, and very low, prevalence of smoking and alcohol use. Since smoking is the single most preventable cause of coronary artery disease (Hoffman, 1995); has been implicated in lung and cervical cancer (Brinton, 1996); may be related to increased risk for pelvic inflammatory disease; has effects which can be interpreted as accelerating aging (Baron, 1996); and has been associated with increased risk of osteoporotic fractures (Baron, 1996), Filipinas may have an advantage over groups with higher smoking

prevalences. However, the 35-39 year age group in the study reported the highest prevalence of smoking. This finding, though not statistically significant, is clinically relevant and may signal a change that can have great impact upon future health. Education programs and nursing intervention strategies targeted toward smoking prevention and smoking cessation could have a positive effect upon maintaining this low prevalence.

Health Problems

Health problems reported by the participants did not portray a major trend. The overall reporting of diabetes (2.4%) is considerably lower than the prevalence reported for European American women aged 45-54 (8.5%), African American women aged 45-54 (14.5%), and Japanese American women aged 40-59 (9.8%) (Kawete et al., 1980; Harris et al., 1987). Hypertension/cardiac problems were reported by 6.1% of the study participants, which is considerably lower than the rate reported for Filipinos (24.5%) in a large sample study ($\underline{N}$ = 4211) in Oakland, California (Klatsky & Armstrong, 1991). However, the latter study was conducted at a health care facility and included men who are reported to have a higher prevalence of hypertension and smoking. Moreover, clinic-based samples are expected to have a higher prevalence of hypertension. In the same study, the adjusted mean systolic (119.2 $\pm$0.3 mmHg) and diastolic (72.9$\pm$0.2 mmHg) blood pressure readings of Filipino females were significantly higher compared with all other Asian Pacific ethnic groups (Klatsky & Armstrong, 1991). Although there is research-based evidence that Filipinos as a group have a higher prevalence of hypertension than do all other Asian groups (Klatsky & Armstrong, 1991; Zane, Takeuchi & Young,

1994), this was not confirmed by women in the present study.

The prevalence of cancer (breast, uterine) reported by the study Filipinas was 3%. Filipinos are reported to experience cancer incidence at rates lower than whites at a number of sites, including breast and corpus uteri (Zane, Takeuchi, & Young, 1994). Cited among the risk factors for poor survival after a cancer diagnosis is delayed diagnosis due to missed screening (Zane, Takeuchi, & Young, 1994). Filipinas in the present study (12.1%) reported they had visited a health care provider in the past week for a check-up; others (23.6%) reported they had consulted a physician for advice/treatment in response to symptoms reported on the MSSL. These data provide beginning evidence that these women access the health care system, however, more information is needed to determine if regular screening procedures are accessed and if health promotion activities are followed. Overall, the results from health status indicators for the studied group are very promising. On all health status indicators, with the exception of exercise activities and calcium from food sources, these women compared favorably to other groups.

The low prevalence of health problems in the present study confirms previous research reports that foreign-born persons have better health than the U.S.-born population, although this health advantage appears to vary by length of residence in the United States (Stephen et al., 1994). In previous research, all measures of health status and with regard to almost every sociodemographic characteristic, the most recent immigrants were healthier than foreign-born persons who have lived in the United States 10 years or more as well as healthier than the U.S.-born population (Stephen et al., 1994). For the Filipinas studied, length of time in the U.S. is not a

predictor for health problems, rather, there were no significant differences between groups who had lived in the U.S. for 0-9 years, 10-29 years, and 30-51 years. Perhaps these Filipinas were healthier than previous cohorts of immigrants and their health has not deteriorated by acquiring physical conditions or behaviors that put them at risk in their new environment (Stephen et al., 1994).

Biological Variables

Age, Parity, Menstrual Cyclicity

Though comparator data of midlife Filipina Americans has not been found in the literature, a few studies have been reported about women in the Philippines. Ramosa-Jalbuena (1994a) surveyed Filipino women (N = 1015) of Metro Manila and found the average age at menarche to be slightly older (13.4 years) with a range from 9 to 19 years. Age at menopause for the surveyed women was somewhat younger than in the present sample and ranged from 35 to 55 with a mean of 47.2 and median of 48 years. The overall number of pregnancies (4.8) and living children (4.0) was higher in the Ramoso-Jalbuena (1994b) sample.

Lee and Taylor (1996) found a somewhat higher prevalence rate (17.7%) of surgical menopause in their study group. The U.S. rate of hysterectomy is about 30%, though there appears to be wide regional variation (New England Research Institute, 1993). Lee and Taylor's study (1996), in contrast to the present data, exemplifies this regional variation. Women who are frequent users of the medical care system are at highest risk for this procedure (New England Research Institute, 1993). In other countries, the rate is considerably lower (Manitoba, Canada, 20%; Scotland, 15%) (New England Research Institute, 1993).

Age at natural menopause for the study sample was 48.9 (±4.9) years. This finding, though somewhat higher than that reported by Ramosa-Jalbuena (1994a) in the Philippines (47.2 years), supports the finding that women of other ethnicities experience menopause at an earlier age than do European American women (Beyene, 1986). Women in the U.S. are reported to experience menopause at age 51.4 years (New England Research Institute, 1993). Despite the finding of an earlier menopause in Filipinas, 90% of the women in the 35-39 year group were menstruating regularly, 93% had periods in the past six months and three months, and no women from this group reported natural menopause. This significant finding can guide future perimenopausal research on this group toward sampling women aged 40 and older, allowing easier comparisons across cultural groups. Since 37% of the 50-56 year olds continue to menstruate, this study confirms that 40 to 60 is a more suitable age range to capture the perimenopausal transition of this group.

Data from the present study confirm previous research findings that age at menarche has no association with age at natural menopause (Jaszmann, van Lith & Zaat, 1969; Whelen et al., 1990). However, unlike previous research (Chompootweep et al., 1993; McKinley, McKinley & Brambilla, 1987), parity was not significantly correlated with delayed age at menopause. This finding might be explained by the overall lower parity ($\underline{M}$ = 2.1, $\underline{SD}$ = 1.4) in the present sample, as only 3% of the total sample had more than four children. On the other hand, the overall mean number of children reported by Ramosa-Jalbuena (1994a; 1994b) for women in the Philippines was higher (4.0) yet their age at menopause was lower (47.2 years). Parity may not be a strong predictor of menopausal age for these

women.

The prevalence of surgical menopause for the group (N = 165) was 13.9%, which is somewhat lower than the 17.7% rate reported by Lee and Taylor (1996) and is lower than the overall U.S. rate (30%). However, the most reported reason for obtaining this surgery by the 23 study participants was uterine fibroids (47.8%), and of those obtaining a hysterectomy for removal of uterine fibroids, one-third had a concomitant oophorectomy. Current recommendation is that hysterectomy as a treatment for uterine fibroids be a last resort (Hoffman, 1995) and that healthy ovaries should be spared (New England Research Institute, 1993). Nevertheless, women with fibroids are regularly warned by their physicians that removal of the uterus, ovaries, or both is their only safe recourse (Hoffman, 1995). Women in the study (3%) listed uterine conditions, including fibroids, as the major health problem diagnosed by a health care provider, which suggests that their health care provider impressed them with the seriousness of the problem. Data from the present study suggest that Filipinas living in the Bay Area access medical care and sometimes heed the advice of their physicians who continue to recommend hysterectomy for fibroid treatment. Furthermore, these working women have health insurance that affords them access to such expensive treatment options.

Random Urine FSH Assays

Random urine specimens were obtained from 54 participants for FSH assay analysis. Testing was limited to this number of participants due to lack of funding. Originally, it was hoped that the research project would receive sufficient funding to calculate FSH levels on all participants. However, the project was only partially

funded and only 32% of the total sample FSH levels were completed.

Although the sensitivity and specificity calculations for the random urine FSH assays in the study sample were very favorable (.8 and .9 respectively), this finding must be interpreted with caution. Only 24-hour urine collections, timed 3-hour urine collections and first morning urine specimens have been evaluated by large-scale research studies and found to be accurate indicators of FSH gonadotropin levels. The findings in the present study, though very encouraging, were based upon an assumption (women averagely urinate 6 times per day, including one nighttime void) that may not be accurate. To further assess the utility of random urine specimens in perimenopausal research, a study comparing paired values from serum and random urine assays in each participant could provide reliable normative data.

Psycho-Social Variables

Household Complexity

An unexpected finding from these data was that more than 51% of the women lived with their spouse/partner or with their spouse/partner and children only. Burr and Mutchler (1993) found that 84.3% of the older Filipino American women in their study were more than six times as likely as European American women to live in a complex household compared to living alone. In their sample, a larger percentage (10.9%) lived alone. Mean age for their sample was 67.1 years, considerably older than the mean age in the present study.

Although more than 84% of the Filipino Americans in Burr and Mutchler's study (Burr & Mutchler, 1993) lived in complex households, the present study participants appear to model their American counterparts by maintaining a separate residence from

parents or extended family. It may be that these immigrant women do not have extensive ties in the U.S. and that family members are not near enough to share households, or it may be that the mean age difference between the two study groups can explain the differences in household complexity, with Burr and Mutchler's older sample embracing a more traditional Filipino approach to household make-up. Another explanation for this finding might be that the participants in the present study represent a high socioeconomic group, and it is known that Filipino women are more likely than Japanese women to use their economic resources to purchase privacy (Burr & Mutchler, 1993). Alternatively, ethnographic research informs us that as members of a minority group become more culturally assimilated, important aspects of their behavior begin to resemble those of the majority group. In terms of living arrangements, minority members who have accepted the dominant group's cultural definition of family, privacy and independence will be most likely to live alone in later life or, if married, in a couple-only household (Burr & Mutchler, 1992). With previous research reporting that Filipino women rely upon female relatives for their major social support network (Lantican & Corona, 1992), this change in household living arrangements may have some influence on feelings of wellbeing or upon what strategies these women utilize to cope with perimenopausal transition issues. At any rate, 26.1% of the present study participants did report living in a complex household, and though lower than expected, this phenomenon may mirror the acculturation patterns of the group.

Well-being/Depression

Well-being findings in the present study across age groups (satisfied and a good bit of the time participants were mostly in good spirits and were generally happy, satisfied or pleased) are similar to those of Lee and Taylor (1996) who found no difference in mean levels of well-being by age group. However, they did report that feelings of well-being and happiness appear to diminish with age. Women in their study in the oldest age group (55-60) rated themselves significantly less happy than women in the youngest age group. Present study participants did not vary on these measures by age.

Despite the high scores on the RSAT global question (satisfied) and the four summated global questions (mostly in good spirits), the prevalence of depression measured by the CES-D screening instrument was 24.8%. This is an unexpected finding. Differences on CES-D scores were not significant across the age groups, which confirms previous research reports that menopausal status does not affect symptoms of depressive mood (Hunter, 1990; Glazer & Rozman, 1991). However, levels of depression reported in European American samples (9-11%; 16-18%) were somewhat lower (Kaufert et al., 1988; Lee & Taylor, 1996). Of interest, Lee and Taylor (1996) found that the rate of depression in their 45-49 year group to be 28%, and though this was not statistically significant from the other age groups they studied, the screening instrument utilized (CES-D) was the same instrument that detected a prevalence of depression (24.8%) for the present study participants. The overall mean score for the total sample in the present study was 12.3 ($\pm$8.2) which falls into the not depressed range.

Somervell, Beals and Manson (1993) reported CES-D psychometric data on a sample of 120 American Indians belonging to a single Northwest Coast tribe. Their data suggest that the CES-D scores discriminate persons with depressive disorders but also reflect other psychiatric conditions and impairment in overall functioning. One explanation for the elevated CES-D scores for the Filipinas might be that in this population, the CES-D measured other psychiatric disorders, including high stress or anxiety. Conversely, one can always suspect instrumentation problems for immigrants whose first language is not English. Marin and Marin (1991) suggest that research instruments should be developed from cultural immersion and cannot easily be adapted from one culture to another. Since the CES-D was originally developed for use by European Americans, it may not include items with constructs that are etic (universal) as well as emic (group-specific) for Filipinas, as is recommended (Marin & Marin, 1991). However, the CES-D is a Likert scale instrument that is similar to most of the instruments used in the study. There is no real reason to suspect that the CES-D was any more, or any less difficult for the participants to understand or complete.

More interesting is that participants in Ramosa-Jalbuena's study in the Philippines reported use of tranquilizers (40.7%) and hormones (18.7%) in response to menopause symptoms (Ramosa-Jalbuena, 1994a). With greater use of tranquilizers for symptomatology by women in the Philippines, Filipinas in the present study may be culturally influenced to attribute negative affect symptoms and depressed mood to the perimenopausal transition experience or to expect these symptoms during this time in their lives. This expectation can be seen in one of the participant's own words in

response to how did you learn about menopause?: "The very first time I heard the word was when a friend joked about a middle-aged woman who always gets irritable at the slightest provocation because she was undergoing menopause".

The overall picture presented by these Filipinas (generally satisfied with life, low symptom severity scores, satisfied with primary relationship) does not portray depressed mood, however, other variables representing well-being/depression provide equivocal support to the depression findings. Women listed negative affect symptoms in response to the short-answer query about the most reported health complaints by midlife women in their culture. Examples of these responses include "mood swings", "irritability", "hot temper", "nervousness", "grouchy", and "depression". The response prevalence (24.4%) of negative affect provides convergent evidence to the finding on the CES-D and supports the notion that the CES-D may reflect other psychological conditions as well as depression. Conversely, the negative affect subscale of the MSSL fell into the minimal range. Persons with minimal scores on the negative affect subscale are unlikely to be depressed, however the subscale scores represent group means and do not provide individual symptom scores. To illuminate the unexpected finding of depression among the study participants and to clarify the equivocal supportive data, further investigation, particularly cluster analysis, of this phenomenon is warranted.

Relationship satisfaction

The Filipinas in the present study reported satisfaction with their primary relationship. In Lee and Taylor's (1996) study, relationship satisfaction was estimated by the Kansas Marital Satisfaction Scale; scores could range from 3-21, with higher

scores indicating greater satisfaction. Mean scores for the groups were: 40-44, 16.3 (SD = 5.2); 45-49, 15.6 (SD = 6.1); 50-54, 15.2 (SD = 5.4); 55-60, 14.7 (SD = 5.9). All but the latter group's means fell into the satisfied range and are comparable to the present study findings.

Previous literature reports that low marital adjustment is significantly related to higher menopause symptom severity (Lee & Taylor, 1996) could not be confirmed by these data, because, the overall estrogen-related menopausal symptom severity scores were skewed toward the minimal level. With very little variability in severity scores across age groups, it cannot be said that these data confirm or refute previous findings on European Americans regarding the relationship between relationship satisfaction and menopause symptom severity.

Cultural Variables

Language Preference and Cultural Identity

The use of language in this sample appears to be a good indicator of acculturation. More than 52% of the women preferred to speak English, and another 19% preferred to speak English and Tagalog (English listed first). Together with the information about household complexity and the self-rated acculturation scale demonstrating that 62% declare themselves ½ traditional Filipina + ½ completely Americanized, it is clear that this was a fairly acculturated group. Further evidence of the acculturation of this group is the less than expected frequency of travel between the U.S. and the Philippines. Women who are more acculturated would be expected to travel less frequently, and since the high household income levels of these women would not necessarily prevent travel for economic reasons, there is greater reason to

believe these travel patterns may reflect acculturation.

Although the cultural identity item requested that participants indicate their cultural identity on a scale from 1 to 10, the anchor points on the scale may have been confusing. Rather than the full array of responses, more than 86% of the participants chose one of the anchor points (1 = completely traditional Filipina, 5 = ½ traditional Filipina + ½ completely Americanized Filipina, and 10 = completely Americanized Filipina). Due to this phenomenon, the remaining responses (12.7%) were grouped with the anchor point nearest the value chosen. In this way, all of the responses were represented as completely traditional Filipina, ½ traditional Filipina + ½ completely Americanized Filipina and completely Americanized Filipina. This difficulty with the instrument may have decreased the ability to capture the true acculturation state of the group. Despite this problem, all other acculturation measures (language use, household complexity, language preference, and travel to the Philippines) provide evidence that this is a fairly acculturated group of women.

Attitude Toward Menopause/Aging

The prevalence of missing data on the ATMA resulted in a lower response rate (N = 159). A similar response rate (N = 160) was found for the RSAT. Interestingly, both of these instruments represent forced choice methodology. All three research assistants, as well as the principal investigator, found participants to ask more questions about controversial items on these instruments and some stated a reluctance to choose an item they had not previously thought about. One participant wrote "I haven't experienced this yet" in the margin of the questionnaire booklet when asked to select agree strongly, agree mildly, disagree mildly or disagree

strongly to the ATMA item "women who have trouble in the menopause are those who are expecting it." Forced choice may be difficult for some Filipinas, particularly those who are more traditional, due to a cultural desire to not offend or appear critical.

Mean scores for Filipinas on attitude toward menopause and aging (M = 71.0 $\pm$8.5; M = 51.3$\pm$6.3) were very similar to the findings by Patsdaughter (1989) in her study of primarily European American mother-daughter dyads (M = 70, attitude to menopause; M = 50, attitude to aging). Ramosa-Jalbuena (1994a; 1994b) also found that women in her sample (N = 1015) had a generally positive attitude to menopause across all age groups.

Responses to the short-answer question about how women in the Filipino culture feel about menopause were frequently positive (47.8%); these responses provide convergent evidence to the findings on the ATMA. However, 30% of the responses expressed concern: uneasy, concerned, not comfortable, nervous, scary experience, inconvenient, unbearable at times, getting old, sign of old age, end of sexuality, sign of disease, end of womanhood. The prevalence of negative attitudes toward menopause in the presence of an overall positive attitude toward menopause suggests that the conceptualization of the phenomenon is not totally unified in this group.

There was no relationship between age and attitudes toward menopause in the present study. Previous menopause research has demonstrated that younger women have a more negative attitude toward menopause (Thiesen et al., 1991).

Women in the present study had a generally positive attitude toward aging. Both the attitude toward aging subscale of the ATMA and 48% of the short-answer

responses to how women feel about menopause point to this positive attitude: acceptable, comfortable, no concern, don't mind, natural cycle of life, part of life, normal, and open-minded. Conversely, 15% expressed that menopause is a sign of old age, end of sexuality, sign of disease, end of womanhood. These responses express some concern for aging and point out the end or loss that menopause brings. These oppositional representations indicate that attitudes to aging, like attitudes toward menopause, are not conceptually unified in this group.

Short-Answer Questions

Responses to the short-answer questions have been referred to within the context of discussions about health status indicators and the biological and psycho-social dimensions. However, additional salient points are addressed here. More than 23% of the participants' responses to how they learned about menopause named close female relatives ("mom", "aunt", "sisters", "grandmother", "other relatives"). Friends and other older women accounted for 19% of the responses. These data provide further evidence that Filipinas rely upon their female relatives and friends for information and social support (Lantican & Corona, 1992). Although these women appear to access health care, medical personnel accounted for only 9.3% of the responses. A number of the women learned about menopause in school (17%) and from reading materials (21%), but very few accessed information from television or lectures. These data confirm previous research reports that women obtain very little information about the menopause from health care providers (Kennedy & Comko, 1991). It may be that Filipinas do not seek information from health care providers, because they do not believe there is a need for more information, for treatment, or

that menopause is a health care problem. Correspondingly, they may not seek assistance with menopause issues or symptoms, because they do not see menopause as a problem for them. Similarly, in data gathered from 1015 women in the Philippines, Ramosa-Jalbuena (1994a; 1994b) noted that though women experienced menopause symptoms, they did not appear to be bothered by them nor did they seek health care for them.

Headache was named in 8.5% of the responses in the present study, but in Ramosa-Jalbuena's data, headache was reported by 62% of the respondents (Ramosa-Jalbuena, 1994a). Interestingly, in the Ramosa-Jalbuena study, headache was reported as a symptom during menopause by women classified as pre-, peri-, and post-menopausal in frequencies of 61%, 62%, and 58% respectively (Ramosa-Jalbuena, 1994a). The most reported health problems by women in the Lee and Taylor (1996) study were hemorrhoids, problems with skin, hair, and nails, and bladder problems.

Overall, the responses to the short-answer questions provided insight into Filipino women's views about the menopause, the range of ages that these women expect menopause to occur, how they learned about menopause, and the health complaints of women in midlife. These women's responses tell us that they learned about menopause from family members, older adults and friends; they are generally positive in their attitude toward menopause, though some negatives were reported; they believe the age range for menopause to occur is 30 to 50+ years, and they believe that midlife women's health complaints are comprised of symptoms often labelled as menopause symptoms ("hot flushes, palpitation"; "hot flashes, cold

flashes"; "irregularity of menstrual period, hot flashes, dizziness") and negative affect symptoms ("mood swings"; "grouchy"; "irritability"; "nervousness").

Unlike the prevalence of fatigue and sleep problems (29.3% for women not on hormones, 44.4% for women on hormones) reported in Lee and Taylor's work (1996), very few women in the present study described fatigue or sleep disruption (1.1%). Similarly, prevalence of fatigue and sleep disruption represented by scores on the fatigue/sleep disruption subscale of the MSSL was greatest in the minimal score range. Both data sources provide evidence that Filipinas do not experience fatigue or sleep disruption as severe during this time in their lives.

Menopause Symptom Experience

Findings from the present study indicate that Filipino American midlife women do not perceive the menopause symptoms from the estrogen-related menopause symptom subscale of the MSSL to a high degree of severity. There was little variability in the estrogen-related menopause symptom severity scores (summated estrogen-related menopause symptom scores) and the mean severity scores across all age groups were in the minimal range. Although this finding indicates that these women are not bothered by symptoms, it is important to be certain that the symptom cluster represented by the estrogen-related menopause symptom subscale of the MSSL is analogous to the menopause symptoms exhibited by this group. It may be that scores were low because day sweats, night sweats, hot flashes/hot flushes, and vaginal dryness are not the primary symptoms of the group. Before concluding with certainty that these Filipinas do not have a high prevalence of menopause symptoms, a factor or cluster analysis of all symptoms from the MSSL will be conducted. This step is

particularly important in light of the fact that internal consistency reliability for the estrogen-related menopause symptom subscale of the MSSL was only moderate (Cronbach's α =.75), while internal consistency reliability for the negative affect subscale of the same instrument was more robust (Cronbach's α = .92). This finding indicates that for this group, the negative affect subscale had more internal consistency reliability and, therefore, was made up of symptoms that clustered together for the group. Additional analysis of the total symptom experience should provide specificity about culture-specific symptoms or symptom clusters.

Ramosa-Jalbuena (1994b) reported that 63% of surveyed women ages 40-50 years in the Philippines (N = 413) reported estrogen-related symptoms and 79% mentioned menopause-related nervous or psychological disorders. These frequencies are noticeably higher than those found in the present study. However, both study groups rank nervous or psychological symptoms (mood swings) above estrogen-related symptom complaints.

Menopause Symptom Response

Menopause Symptom Distress

As expected, distress caused by estrogen-related menopause symptoms was significantly different in the 45-49 and 50-56 year age groups from the 35-39 and 40-44 year age groups. Previously reported, this finding of significance must be interpreted with caution, for the Chi-square p-value may not be accurate due to the lack of variance in the data across Chi-square cells. Despite the significant difference among these groups, the overall estrogen-related menopause symptom distress score fell into the minimal range and indicates that symptom distress is not a major

response to estrogen-related menopause symptomatology among the women studied.

Use of Over-The-Counter (OTC) Medications

In response to symptoms reported on the MSSL, 20% of the women reported use of OTC medications. Vitamin use was reported by 9.1% of the participants, which is similar to vitamin/mineral use (8.4%) by women in Lee and Taylor's (1996) study. Tylenol and aspirin were used by 24.2% of the women; of interest is that significantly more women in the 35-39 year group and more women in the 50-56 year group reported use of these medications. Rather than a linear relationship with age, tylenol and aspirin use in these women can be represented by a U-shaped curve. The explanation for the curvilinearity of the relationship of age to tylenol and aspirin use may rest with the reasons for use of the drugs. Whereas women in the younger group reported use of these medications primarily for headache, women in the 50-56 year group reported use of tylenol and aspirin for bodyaches and joint pain. Body aches and particularly joint pain have been associated with aging, so it is not unexpected that women in the older age group seek relief from these symptoms.

Non-Contraceptive Hormones

Non-contraceptive hormone use in the present study participants was 13.9% (n = 23) of the total sample (N = 165), which is lower than the 27.9% reported by Lee and Taylor (1996). Furthermore, there was no difference in menopause symptom reporting by hormone users and non-hormone users in the study, so these data do not support the finding that women taking hormones have higher symptom severity (Lee & Taylor, 1996). The low prevalence of hormone use by the study Filipinas might be explained by their attitude toward menopause (positive) and by their belief that

menopause is a natural life stage. Taken together, these findings provide a plausible explanation for the low prevalence of pharmacologic intervention as a response to menopause.

Non-Pharmacologic Strategies

Relaxation was reported by 65.6% of the study participants as a response to symptoms. Fewer women in Lee and Taylor's report (1996) used this technique. In their study, participants practiced relaxation strategies, reported by age groups, 40-44 (37.6%), 45-49 (35.9%), 50-54 (41.4%), and 55-60 (28.6%). The differences between the samples on use of relaxation cannot be explained by differences in available time, for both samples were comprised of employed women. The use of relaxation by midlife Filipinas in response to symptoms may partially explain their low prevalence of fatigue and sleep disruption symptoms, for only 1.1% described these symptoms as health concerns of midlife women on the short-answer cultural questions. In addition, 61.7% of the participants rated fatigue and sleep disruption symptoms on the MSSL as minimal.

More than 78% of the Filipinas in the present study reported the use of prayer, and many used this strategy daily. This finding provides evidence that Filipinas rely upon their religion (primarily Catholic) for coping with daily life and prefer this strategy to meditation (23%), visualization (19%), or affirmation (14%). Previous research of Filipinos has reported the strong influence of religion upon daily life and upon health care decisions (Klessig, 1992); findings in the present study concur.

Women in the present study had a high prevalence of talking with friends (83%); this finding confirms the work of Lantican and Corona (1992) who found that

pregnant Filipinas have an extensive social support network that is comprised of female relatives and friends. In the present study 19% reported they obtained information about menopause from friends, while 24% reported their information came from female relatives. Similarly, when asked if they consulted anyone else about symptoms, participants (17%) reported that they consulted "doctor", "husband", "friend", "sister", or "children". Reference to relatives and friends provides additional evidence that Filipinas look to these entities for social support or information.

Overall, study participants utilized a variety of strategies to cope with symptoms as reported on the MSSL. Women used an average of 3.9 $\pm$2.0 self-care strategies to cope with symptoms. There was a strong representation of non-pharmacologic strategies in their responses, and more women used OTC medications (20%) than took hormones (13.9%). With the exception of hormone use, the participants' responses are indicative of a group that sees menopause as a natural life stage which does not require medical intervention.

Study Hypotheses

Higher parity will be significantly correlated with later age at menopause.

As already discussed, this hypothesis was not supported by the data. Explanations for this finding include that the overall parity for the group was low and that there might not have been sufficient power to detect significance. A sample size of 192 was calculated by power analysis to be the required number for detecting a weak (.2) effect size with a power of .8 and α set at .05. Since the present sample size fell short of that goal, lack of power must be considered as an explanation for

nonsignificance. Conversely, the fact that women in the Philippines have more pregnancies and more children yet have an earlier menopause calls into question whether this hypothesis could be supported even with an adequate sample size.

Self-reported menopausal status will be significantly correlated with FSH levels established by random urine FSH assay.

This hypothesis was supported by the data and provides support to previous research findings that an elevated FSH level is a predictable physiological marker of menopause (absence of menses for 12 months or longer). Alternatively, FSH levels may not be the best markers for perimenopausal women. Clinically, women in the perimenopausal phase ovulate erratically and demonstrate FSH levels in the reproductive age range during ovulatory cycles and in the postmenopausal range during anovulatory cycles. Random FSH assays during the perimenopause have not been accurate predictors. In this study, the random urine FSH assays did not correctly categorize four women who were premenopausal with elevated FSH levels. The number of women in the study who were perimenopausal yet had FSH levels in the reproductive age range cannot be determined from the study findings. Sensitivity and specificity calculations included this group as correctly categorized (reproductive age range with appropriate FSH levels), yet menstrual cyclicity history might point to a different categorization. At best, FSH levels can discriminate women who have made the transition to menopause; another measure may be needed to guide clinicians with identification of women's perimenopausal transition.

Current smoking will be correlated with an earlier menopause.

This hypothesis could not be tested, because only one menopausal woman reported

smoking. Data were obtained from the MSSL question "how many cigarettes to you smoke per day?" Information about past smoking was not obtained in the study.

Depression will be positively correlated and well-being will be negatively correlated with estrogen-related menopausal symptom severity.

The lack of variability in estrogen-related menopause symptom severity scores for this sample and lack of a reliable and internally consistent depression scale may be the most plausible explanations for the lack of support for this hypothesis. Not only were the correlations between measures of depression and well-being (CES-D scores, negative affect subscale of MSSL; summated global questions score, global question on RSAT) and estrogen-related menopause symptom severity not significant, the relationships were very weak. Again, this interesting finding is best explained by the lack of variability in estrogen-related menopause symptom severity, for it is very difficult mathematically to correlate scores that do not vary. On the other hand, two of these measures were associated in the expected direction. Depression was positively correlated with estrogen-related menopause symptom severity (r = .12, p = .14); although the relationship between these variables was not statistically significant in Filipina Americans, there is a relationship reported in other studies (Woods, 1982). Similarly, the global life satisfaction question from the RSAT was negatively correlated with estrogen-related menopause symptom severity (r = -.12, p = .13), and the direction of the relationship follows other reports (Woods, 1982).

Household income, level of education, number of self-care strategies used, visit to a health care provider, and use of pharmacologic or surgical interventions will explain a statistically significant amount of the variance in menopause vasomotor symptom severity.

This hypothesis was tested with multiple regression analysis and was not supported by the data. The overall model was not significant and did not achieve significance when the two younger age groups and women who had experienced hysterectomies were removed from the model. This latter strategy was employed in an attempt to establish more variability in the dependent variable (estrogen-related menopause symptom severity) by removing participants thought to skew the data toward minimal symptom severity. Younger women were not expected to experience severe estrogen-related menopause symptoms, and hysterectomized women were expected to be taking non-contraceptive hormones that are known to diminish estrogen-related menopause symptom severity. However, no difference was found; in fact, the frequency distributions of symptom severity scores across age groups did not differ. This provides evidence that the underlying problem of finding statistical significance for the model lies with the lack of variability in the dependent variable.

From the correlation matrix of salient variables representing the biological, psycho-social, and cultural dimensions, variables with the highest correlations were selected to be the independent variables in a model with estrogen-related menopause symptom severity as the dependent variable. Theory support for building an alternate regression model using these independent variables is reported in the literature (Lee & Taylor, 1996; Greene & Visser, 1992; Hunter, 1993; Polit & LaRocco, 1980). The

overall model (dependent variable, estrogen-related menopause symptom severity; independent variables, household income, depression scores, age categories, and negative affect severity scores) was statistically significant and these variables were able to explain 8% of the variance in symptom severity. As expected, the greatest unique contribution (2.1%) came from the age category variable. This was expected because age is related to the experience of menopause symptoms; younger women are expected to have fewer estrogen-related menopause symptoms with less severity. When the pain, physical symptoms and fatigue/sleep subscale scores from the MSSL were added to the model described, the explained variance of the overall model increased to 16.1%. This increase in R-square may simply be a function of the expected correlations of a single instrument subscales and may not provide a good explanation of variance in the dependent variable.

Bio-Psycho-Social-Cultural Dimensions of the Perimenopausal Transition

Variables representing the bio-psycho-social-cultural dimensions of the perimenopausal transition of Filipinas provided important information about the experience and responses of this group of women. The ways in which these dimensions interrelate are not completely evident, however, a few important relationships have been established in this study. Perhaps the most identifiable component that crosses dimensions is culture.

The acculturation process may have influenced Filipina Americans to the degree that these women are English language proficient, prefer to use English, and are employed. Similarly, the family size reported by these women is reflective of a group that has adopted a more western attitude toward family size (fewer children)

and may have been made possible by access to reproductive technologies available in the U.S.

Culture may play an important role in the amount of dietary calcium obtained by these women. Because there is a high incidence of lactose intolerance in Filipinos and because dairy products and green leafy vegetables do not occupy a significant place in their diet, calcium from food sources may not be adequate. Culture and the traditions around food may provide a powerful influence on an aspect of these midlife women's lives that can lead to future morbidity.

Culture, reflected in attitudes toward menopause and aging, may have influenced these Filipina Americans' perception of estrogen-related menopausal symptoms to the degree that they do not experience these symptoms with severity, or if experienced, the symptoms do not cause high distress. Evidence for this observation can be found in these Filipinas' own words in response to how women in their culture feel about menopause. Women reported that menopause is an "acceptable part of a woman's life" and "it's natural, but inconvenient". Others stated menopause is "a fact of life that many women accept as is".

Culture may have a significant role to play in these women's depressed mood. In response to the health complaints by midlife women in the Filipino culture short-answer question, women provided such responses as, "mood swings", "always angry, hot temper", "depression", "moodiness", and other negative affect symptoms. Because women in the Philippines are more often prescribed tranquilizers for menopause symptoms than they are prescribed hormones (Ramosa-Jalbuena, 1994a; 1994b), one can believe that mood and other negative affect symptoms are perceived

by these women. There is no reason to link these symptoms with menopause, in fact, there were no differences in depressed mood reported across the age groups in the present study. However, the prevalence of depression in combination with a recognition of negative affect symptom reporting brings the role of culture or adaptation to immigration into question. It will be an important task for health care researchers to further specify the role that aging, culture, biological, and psycho-social variables play in the depressed mood of Filipina Americans.

Culture may explain some of these women's responses to the perimenopausal symptom experience, particularly in their choices of self-care strategies. Significantly more women in the study used prayer and talking with friends as strategies to cope with symptoms than used pharmacologic strategies. This wellness approach to the perimenopausal transition is in keeping with Filipinas' philosophy that menopause is a normal life stage and does not warrant medical intervention.

Strengths and Limitations of the Study

Strengths

The greatest strength of the study was to provide the very needed descriptive data about Filipino American midlife women living in the San Francisco Bay Area. The community-based sample, though one of convenience, provided sufficient data representing biological, psycho-social, and cultural dimensions to describe the perimenopausal transition experience of this group. These descriptive data alone can guide health practitioners toward understanding this group's general attitude toward menopause and their expectations of the perimenopausal transition. Similarly, these descriptive data have provided a beginning understanding of the symptom experience

of Filipinas.

Special care was taken in the design of the study to overcome expected community resistance to health care research. The sampling design was crafted in order to provide the greatest appeal to participants yet lend the least intrusiveness possible. By using age and culturally matched research assistants at each data gathering session, community women could see that others in the community supported the research. Similarly, by recruiting community leaders to promote the research project, participants were able to understand the significance of their contribution. This research project introduced the community to the need for, and the value of, health care research.

The results of this study have identified key areas for future research. One of the identified areas is the need to investigate the true calcium intake from food sources for this group and to find the prevalence of osteoporosis in aging Filipino American women. Together, these investigations can inform us about the need to design relevant intervention strategies for this potential morbidity issue. Without the present study to identify calcium intake from food sources as a concern, Filipinas might have been overlooked in future osteoporosis studies.

The prevalence of scores in the depressed range on the CES-D for the present study participants is a key area for future research. Somewhat higher than depression levels reported for European American midlife women, depressed mood in Filipinas needs to be assessed. Measurement strategies that are diagnostic of depression in combination with clinical interviews may provide validity data for using the CES-D (depression screening instrument) with this population; conversely, these added

measures may demonstrate that the CES-D is not valid with midlife Filipinas. In this way, health care providers can gain an understanding of the phenomenon, determine instrument validity, and be able to predict the need for community resources dedicated to promoting health and/or treating this problem.

This study provided good pilot data for a study of the utility of random urine FSH assays in women's health care research. The encouraging results from the 54 assays run indicate that this methodology is worthy of further investigation. Normative data from a large-scale study using paired samples over several cycles can provide the evidence needed to accept or reject random urines for FSH determination. Certainly, researchers would welcome normative data that supports the use of random urines, for the convenience of this modality has the potential of promoting research participation, or at the least, not discouraging study enrollment.

Limitations

The use of a convenience sample limits the ability to generalize the study findings. However, this limitation is partially offset by the participation of community-based women. Furthermore, inclusion and exclusion criteria allowed the study to describe Filipino American midlife women and to report prevalence rates for major health problems. This baseline information can assist health care providers to target the health problems of this community of women.

An obvious limitation to analyzing and interpreting the results of this study was the sample size and restricted variance within age groups. Although sample size was estimated apriori, restricted variance on many of the study variables interferes with interpretation of statistical inference.

The study was limited by the exclusion of women who do not speak, read, or write in English. Although the participants appeared to be a fairly acculturated group, the exclusion of women who do not have English skills might have skewed this finding, and the study results may not be generalizable to women in the community who do not have English language proficiency. Conversely, by excluding women without English skills, the feasibility of the study increased through cost (time and money) containment.

Significance to Nursing Science

Nurses are committed to providing care to diverse groups of people with sensitivity to cultural nuances. This research study contributed to our knowledge-base of a minimally described cultural group that is gaining in size and importance in the San Francisco Bay Area. Similarly, the study provided data about the biological, psycho-social, and cultural dimensions of the perimenopausal transition of this group in order to better understand the interrelationships of salient variables representing these dimensions in Filipinas. Health care providers now have (1) a research-based demographic profile of these women; (2) cultural information about their attitudes, their information sources about menopause, and their various responses to symptomatology; and (3) their major health problems.

Findings from this study have important implications for therapeutic interventions in nursing practice. For example, the finding that Filipinas do not obtain information about menopause from health care providers can stimulate nurses in advanced practice to include information about midlife health issues during examinations of women over age 40. Placing particular emphasis upon lifestyle changes that promote health can

have great influence upon behavior. Similarly, emphasis placed upon obtaining adequate calcium intake might ward off morbidity in later life. On the other hand, education strategies that promote hormone use or other pharmaceutic interventions for menopause symptoms might not be successful. A better education strategy would be to include a number of self-care responses as alternatives to hormone therapy. This recognition of the cultural belief that menopause is a natural life stage and not cause for medical intervention is more in keeping with a commitment to providing culturally appropriate care.

Nursing science can benefit from the study results that target areas for future research on this group. The morbidity threat caused by low levels of calcium intake from food sources may be very real. By targeting osteoporosis research to include Filipinas, health care providers may be able to first identify a significant problem and to then intervene in ways that limit bone loss and improve the quality of life for aging Filipinas. Similarly, the prevalence of depression identified by the study screening instrument (CES-D) may signal the need for mobilization of community resources. Health care providers must be alert to clinical indicators of depression in midlife Filipinas, such as lack of energy, trouble concentrating, change in appetite, change in sleep patterns, loss of interest in things usually enjoyed, lack of motivation, and losing or gaining weight (American Health Consultants, 1996).

Nurses in advanced practice can use the information from this study to provide education for midlife Filipinas that embraces their attitudes toward menopause and aging, reinforces their low smoking and alcohol use prevalences, encourages ongoing hypertension screening, promotes obtaining calcium from food sources, encourages

exercise activities, and conveys current medical advice about hysterectomy treatment for fibroids. Education and screening that targets these areas would be the most effective way to promote and maintain health in these women.

Nursing science, with a bio-psycho-social-cultural orientation, has much to contribute to perimenopausal research of diverse groups of women. Potential contributions from nursing science include further elaboration of the biological, as well as psycho-social dimensions with a cultural perspective superimposed. With studies designed to include all of these parameters, analysis and comparisons can be made across studies and across groups. In this way, previous barriers to meta-analysis can be reduced, if not eliminated. To move forward in our quest for information about diverse midlife women's health, studies must include these common elements and must be conducted with the utmost sensitivity to cultural variations in attitude, acculturation, and approach to health and illness.

References

American Health Care Consultants (1996). Depression: It's not all in their heads. Women's Health Center Management. 4(12), 146-148.

American Society for Bone and Mineral Research (1986). Osteoporosis: The silent epidemic [Brochure]. Dairy Council of California, Marcus, R. & Singer, F.

Anderson, J. (1983). Health and illness in Pilipino immigrants. In Cross-cultural medicine, Western Journal of medicine, 139(12), 811-819.

Baron, J. (1996). Birth control, hormones, and reproduction: Smoking and premature aging. Association of Reproductive Health Professionals Clinical Proceedings, 10, 3-4.

Bart, P. (1972). Depression in middle-aged women. In J. Bardwick (Ed.), Readings in the psychology of women. New York: Harper & Row.

Beck, A., Ward, C., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Beitins, I., O'Loughlin, K., Ostrea, T. & McArthur, J. (1975). Gonadotropin determination in timed 3-hour urine collections during the menstrual cycle and LHRH testing. Journal of Clinical Endocrinology & Metabolism, 43, 46-55.

Bernhard, L. & Sheppard, L. (1993). Health symptoms, self-care, and dyadic adjustment in menopausal women. Journal of Obstetric, Gynecologic and Neonatal Nurses Association, 22, 456-461.

Beyene, Y. (1986). Cultural significance and physiological manifestations of menopause: A biocultural analysis. Culture, Medicine & Psychiatry, 10, 47-51.

Beyene, Y. (1992). Measure of attitude toward menopause using the semantic

differential model. Nursing Research, 35, 81-85.

Bowles, C. (1986). Measure of attitude toward menopause using the semantic differential model. Nursing Research, 35, 81-85.

Boyle, J. (1995). Transcultural perspectives in the nursing care of middle-aged adults. In M. Andrews & J. Boyle (Eds), Transcultural Concepts in Nursing Care, Second Edition. Philadelphia: J.B. Lippincott.

Brinton, L. (1996). Smoking and cancer: Cigarette smoking and endometrial, ovarian, and cervical cancers. Association of Reproductive Health Specialists Clinical Proceedings, 10. 8 - 10.

Brown, M., Wyn, R., Cumberland, W., Yu, H., Abel, E., Gelberg, L. & Ng, L. (1995). Women's health-related behaviors and use of clinical preventive services. A Special Report: The Commonwealth Fund Commission on Women's Health. Los Angeles, CA: UCLA Center for Health Policy Research.

Burr, J. & Mutchler, J. (1992). The living arrangements of unmarried elderly Hispanic females. Demography, 29, 93-112.

Burr, J. & Mutchler, J. (1993). Nativity, acculturation, and economic status: Explanations of Asian American living arrangements in later life. Journal of Gerontology, 48(2), S66-S73.

Chompootweep, S., Tankeyoon, M., Yemarat, K., Poomsuwan, P. & Dusitsin, N. (1993). The menopausal age and climacteric complaints in Thai women in Bangkok. Maturitas, 17, 63-71.

Corson, S. & Upton, U. (1982). The perimenopause physiologic correlates and clinical management. Journal of Reproductive Medicine, 27, 1-28.

Davis, J., Novotny, R., Ross, P. & Wasnich, R. (1994). The peak bone mass of Hawaiian, Filipino, Japanese, and White women living in Hawaii. Calcified Tissue International, 55, 249-252.

dela Cruz, F. (1996). Validating a short acculturation scale for Filipino-Americans. Journal of the American Academy of Nurse Practitioners, 8(10), 480.

Dinnerstein, L., Smith, A. & Morse, C. (1994). Psychological well-being, mid-life and the menopause. Maturitas, 20, 1-11.

Dupuy, H. (1978). Self-representation of general psychological well-being of American adults. Paper presented at American Public Health Association Meeting, Los Angeles, October, 1978.

Espiritu, Y. (1995). Filipino American Lives. Philadelphia: Temple University Press.

Ettinger, B., Golditch, I. & Friedman, G. (1988). Gynecologic consequences of long-term, unopposed estrogen replacement therapy. Maturitas, 10, 271-282.

Feely, E. & Pyne, H. (1975). The menopause: Facts and misconceptions. Nursing Forum, 14, 74-86.

Flaskerud, J. & Soldevilla, E. (1986). Pilipino and Vietnamese clients: Utilizing an Asian mental health center. Journal of Psychosocial Nursing, 24(8), 32-36.

Flint, M. & Samil, R. (1990). Cultural and subcultural meanings of the menopause. In M. Flint, F. Kronenberg & W. Utian (Eds.), Multidisciplinary perspectives on menopause. Annals of the New York Academy of Sciences, 592, (134-148). New York: The New York Academy of Sciences.

Frey, K. (1981). Middle-aged women's experience and perceptions of menopause.

Women & Health, 6(1/2), 25-37.

Galloway, K. (1975). The change of life. American Journal of Nursing, 75, 1006-1011.

Glazer, G. & Rozman, A. (1991). Marital adjustment, life stress, attitudes toward menopause, and menopausal symptoms in premenopausal, menopausal, and postmenopausal women. In D. Taylor & N. Woods (Eds.), Menstruation, health and illness (pp. 237-244). New York: Hemisphere Publishing.

Gilligan, C. (1982). Adult development and women's development: Arrangements for a marriage. In J.Z. Giele (Ed.), Women in the middle years: Current knowledge and directions for research and policy (pp. 89-114). New York: Wiley.

Good, B. & Good, M. (1982). Toward a meaning-centered analysis of popular illness categories: "Fright illness" and "heart distress" in Iran. In A.J. Marsella & G.M. White (Eds.), Cultural conceptions of mental health and therapy, 141-166.

Goodman, M., Stewart, C. & Gilbert, F. (1977). Patterns of menopause: A study of certain medical and physiological variables among Caucasian and Japanese women living in Hawaii. Journal of Gerontology, 32(3), 291-298.

Greendale, G. & Judd, H. (1993). The menopause: Health implications and clinical management. Journal of the American Geriatrics Society, 41, 426-436.

Greene, J. & Visser, A. (1992). Longitudinal studies: Comparative conclusions. Maturitas, 14, 157-160.

Halbreich, U. & Endicott, J. (1985). Relationship of dysphoric premenstrual changes

to depressive disorders. Acta Psychiatric Scandinavica, 71, 331-338.

Hamburger, J. & Anderson, E. (1990). The value of education and social-psychological support in a menopause clinic. Multidisciplinary perspectives on menopause. Annals of the New York Academy of Sciences, 592, 242-249.

Harris, M., Hadden, W., Knowler, W. & Bennett, P. (1987). Prevalence of diabetes and impaired glucose tolerance and plasma glucose levels in U.S. population aged 20-74 years. Diabetes, 36, 523-534.

Haskett, R., Steiner, M., Osmun, J. & Carroll, B. (1984). Severe premenstrual tension: Delineation of the syndrome. Biological Psychiatry, 15, 121-129.

Helman, C. (1990). Culture, Health and Illness (Second edition). London: Wright.

Henrik, E. (1982). Neuroendocrine mechanisms of reproductive aging in women and female rats. In A. Voda, M. Dinnerstein, and S. O'Donnell (Eds.), Changing perspectives on menopause (pp. 100-123). Austin, Texas: University of Texas Press.

Heyman, R., Sayers, S. & Bellack, A. (1994). Global marital satisfaction versus marital adjustment: An empirical comparison of three measures. Journal of Family Psychology, 8(4), 432-446.

Hoffman, E. (1995). Our health, our lives: A revolutionary approach to total health care for women. New York: Pocket Books.

Hollingshead, A. (1975). Four factor index of social status, Manuscript. New Haven, CT: Department of Sociology, Yale University.

Holte, A. (1992). Influences of natural menopause on health complaints: A prospective study of healthy Norwegian women. Maturitas, 14, 127-141.

Hunter, M. (1990). Somatic experience of the menopause: A prospective study. Psychosomatic Medicine, 52, 357.

Hunter, M. (1993). Predictors of menopausal symptoms: Psychosocial aspects. Balliere's Clinical Endocrinology and Metabolism, 7(1), 33-45.

Hunter, M., Battersby, R. & Whitehead, M. (1986). Relationships between psychological symptoms, somatic complaints and menopausal status. Maturitas, 8, 217-228.

Jaszmann, L., van Lith, N. & Zaat, J. (1969). The perimenopausal symptoms: A statistical analysis of a survey. Medical Gynecology and Society, 4, 268-277.

Kaufert, P. and Gilbert, P. (1986). Women menopause, and medicalization. Culture, Medicine and Psychiatry, 10, 7-21.

Kaufert, P., Gilbert, P. & Hassand, T. (1988). Researching the symptoms of menopause: An exercise in methodology. Maturitas, 10, 117-131.

Kawate, R., Yamakido, M & Nishimoto, Y. (1980). Migrant studies among the Japanese in Hiroshima and Hawaii. In W.K. Waldhausel (Ed.), Diabetes 1970: Proceedings of the 10th Congress of the International Diabetes Federation. Amsterdam: Excerpta Medica.

Kennedy, J. & Comko, R. (1991). Health needs of midlife women. Nursing Management, May, 62-66.

Klatsky, A. & Armstrong, M. (1991). Cardiovascular risk factors among Asian Americans living in Northern California. American Journal of Public Health, 81, 1423-1428.

Klessig, J. (1992). Cross-cultural medicine a decade later: The effect of values and

culture on life-support decisions. Western Journal of medicine, 157(9), 316-322.

Koeske, R. (1982). Toward a biosocial paradigm for menopause research: Lessons and contributions from the behavioral sciences. In A. Voda, M. Dinnerstein & S. O'Donnell (Eds.) Changing Perspectives on Menopause. Austin: University of Texas Press, pp. 3-23.

Kogan, N. (1961). Attitudes toward old people: The development of a scale and an examination of correlates. Journal of Abnormal and Social Psychology, 62(1), 44-54.

Kraemer, H. & Thiemann, S. (1987). How many subjects? Statistical power analysis in research (p. 109). Newbury Park, CA: Sage Publications.

Krolner, B., Toft, B., Nielson, S. & Tondevold, E. (1983). Physical exercise as prophylaxis against involutional vertebral bone loss: A controlled trial. Clinical Science, 64, 541-546.

Lam, S. Baker, H., Seeman, E. & Pepperell, R. Gynaecological disorders and risk factors in premenopausal women predisposing to osteoporosis: A review. British Journal of Obstetrics and Gynaecology, 95, 963-972.

Lantican, L. & Corona, D. (1992). Comparison of the social support networks of Filipino and Mexican American primigravidas. Health Care for Women International, 13, 329-338.

Lee, K. & Taylor, D. (1996). Is there a generic midlife woman? The health and symptom experience of employed midlife women. Menopause: The Journal of The North American Menopause Society, 3(3), 154-164.

Lee, K., Taylor, D., Beyene, Y., Green, N., Gilliss, C. & Guitierrez, Y. (1994).

Biobehavioral health in diverse midlife women. University of California at San Francisco. NIH Grant # NR04259 (1995-2000).

Lipson, J. & Meleis, A. (1989). Methodological issues in research with immigrants. Medical Anthropology, 12, 103-115.

Lock, M., Kaufert, P. & Gilbert, P. (1988). Cultural construction of the menopausal syndrome: The Japanese case. Maturitas, 10, 317-322.

Locke, H. & Wallace, K. (1959). Short marital adjustment and prediction tests: Their reliability and validity. Marriage and Family Living, 21, 251-255.

Logothetis, M. (1991). Women's decisions about estrogen replacement therapy. Western Journal of nursing research, 13, 458-474.

Marin, G. & Marin, B. (1991). Research with Hispanic populations. Newbury Park, CA: Sage.

Marin, G., Sabogal, F., Marine, B., Otero-Sabogal, R. & Perez-Stable, E. (1987). Development of a short acculturation scale for Hispanics. Hispanic Journal of Behavioral Science, 9, 183-205.

Martin, M., Block, J., Sanchez, S., Arnaud, C. & Beyene, Y. (1993). Menopause without symptoms: The endocrinology of menopause among rural Mayan Indians. Proceedings of the Pacific Coast Obstetrical and Gynecological Society, Ojai, California.

McKinlay, S., Brambilla, D. & Posner, J. (1992). The normal menopause transition. Maturitas, 14, 103-115.

McKinlay, J., McKinlay, S. & Brambilla, D. (1987). Health status and utilization behavior associated with menopause. American Journal of Epidemiology, 125,

110-121.

McLaughlin, P., Raymond, J., Murakami, S. & Gilbert, D. (1987). Drug use among Asian Americans in Hawaii. Journal of Psychoactive Drugs, 19, 85-94.

Milburn, N., Gary, L., Booth, J. & Brown, D. (1992). Conducting epidemiologic research in a minority community: Methodological considerations. Journal of Community Psychology, 19(1), 3-12.

Moos, R. (1968). The development of the menstrual distress questionnaire. Psychosomatic Medicine, 30, 853-867.

Moore, B. & Kombe, H. (1991). Climacteric symptoms in a Tanzanian community. Maturitas, 13, 229-234.

Mutchler, J. & Burr, J. (1991). Racial differences in health and health care service utilization in later life: The effect of socioeconomic status. Journal of Health and Social Behavior, 32, 342-356.

Neugarten, B. & Garron, D. (1959). Attitudes of middle-aged persons toward growing older. Geriatrics, 14, 21-24.

Neugarten, B., Wood, V., Kraines, R. & Loomis, B. (1963). Women's attitudes toward the menopause. Vita Humana, 6, 140-151.

New England Research Institute (1993). Summary of current knowledge concerning menopause and potentially related pathologies, 1993. Watertown, Massachusetts: S. McKinlay.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. Journal of Marriage and the Family, 45, 141-151.

O'Connor, V., Del Mar, C., Sheehan, M., Siskind, V., Fox-Young, S & Cragg, C.

(1995). Do psycho-social factors contribute more to symptom reporting by middle-aged women than hormonal status? Maturitas, 20, 63-69.

Patsdaughter, C. (1989). The mother-daughter relationship in menopause and the aging process (Doctoral dissertation, University of Washington, 1989). UMI Dissertation Services, 9000299.

Pearson, T & Terry, P. (1994). What to advise patients about drinking alcohol Journal of the American Medical Association, 272, 967-968.

Piscitelli, J. & Parker, R. (1986). Primary care in the postmenopausal woman. Clinical Obstetrics and Gynecology, 29(2), 343-352.

Polit, D. & Hungler, B. (1993). Essentials of nursing research: Methods, Appraisal and Utilization. Philadelphia: J.B. Lippincott.

Polit, D. & LaRocco, S. (1980). Social and psychological correlates of menopausal symptoms. Psychosomatic Medicine, 42, 335-345.

Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1(3), pp. 385-401.

Ramoso-Jalbuena, J. (1994a). The climacteric Filipina: A preliminary survey of 1015 cases. Philippine Journal of Obstetrics and Gynecology, 4/6, 75-88.

Ramoso-Jalbuena, J. (1994b). Climacteric Filipino women: A preliminary survey in the Philippines. Maturitas, 19, 183-190.

Richardson, S. (1993). The biological basis of the menopause. Balliere's Clinical Endocrinology and Metabolism, 7(1), 1-16.

Roberts, S. (1995). Who we are: A portrait of America based on the 1990-95 U.S. Census. New York: Random House.

Ruble, D. & Brooks-Gunn, J. (1982). Expectations regarding menstrual symptoms: Effects on evaluation and behavior of women. In A. Voda, M. Dinnerstein, and S.O'Donnell (Eds.), Changing perspectives on menopause (pp. 209-219). Austin, Texas: University of Texas Press.

Saketos, M., Sharma, N., Tovaghol, A., Raghuwanshi, M. & Santoro, N. (1994). Time-resolved immunofluorometric assay and specimen storage conditions for measuring urinary gonadotropins. Clinical Chemistry, 40(5), 749-753.

Schumacher, K. & Meleis, A. (1994). Transitions: A central concept in nursing. Image: Journal of Nursing Scholarship, 26(2), 119-127.

Sheehan, T., Fifield, J., Reisine, S. & Tennen, H. (1995). The measurement structure of the Center for Epidemiologic Studies Depression Scale. Journal of Personality Assessment, 64(3), 507-521.

Shott, S. (1990). Statistics for health professionals (p. 373). Philadelphia: W.B. Saunders.

Somervell, P., Beals, J. & S. Manson (1993). Use of the CES-D in an American Indian village. Culture, Medicine and Psychiatry, 16, 503-517.

State of California, State Census Data Center (1990). Bay area populations of 6 largest Asian groups.

Stephen, E., Foote, K., Hendershot, G. & Schoenborn, C. (1994). Health of the foreign-born population: United States, 1989-1990. Advance Data, Feb.14(241), 1-12.

Sukwatana, P., Meekhangvan, J., Tamrongterakul, T., Tanapat, Y., Asavarait, S. & Boonjitrpimon, P. (1991). Menopausal symptoms among Thai women in

Bangkok. Maturitas, 13, 217-228.

Taylor, D. (1988). Premenstrual symptoms and syndromes: An explanatory model. Oregon Nutrition Council Journal, 16(1), 1-10.

Taylor, D. (1994). Evaluating therapeutic change in symptom severity at the level of the individual woman experiencing severe PMS. IMAGE: Journal of Nursing Scholarship, 26(1), 27-35.

Theisen, S., Mansfield, P., Voda, A. & Seery, B. (1991). Predictors of attitudes toward menopause among midlife women. Proceedings of the Society for Menstrual Cycle Research, Seattle, Washington.

Tuckman, J. & Lorge, I. (1953). Attitudes toward old people. Journal of Social Psychology, 37, 249-260.

Uphold, C. & Susman, E. (1985). Child-rearing, marital, recreational and work role integration and climacteric symptoms in midlife women. Research in Nursing and Health, 8, 73-81.

U.S. Congress, Office of Technology Assessment (1991). The menopause, hormone therapy, and women's health. OTA Staff Paper. Washington, DC: U.S. Government Printing Office.

U.S. Dept. of Commerce, Bureau of the Census (1989). Projections of the population of the United States by age, sex, and race: 1988 to 2080. Current Population Reports, Series P-25, No. 1018. Washington DC: U.S. Government Printing Office.

U.S. Dept. of Commerce, Bureau of the Census (1990). 1990 census of population: General population characteristics of California. Washington DC: U.S.

Government Printing Office.

U.S. Dept. of Health and Human Services (1990). Healthy people 2000: National health promotion and disease prevention objectives. (DHHS Publication No. DHS 91-50213). Washington DC: U.S. Government Printing Office.

Voda, A. & George, T. (1986). Menopause. Annual Review of Nursing Research, Volume 4, 55-75.

Waksberg, J. (1978). Sampling methods for random digit dialing. Journal of the American Statistical Association, 73, 40-46.

Whelan, E., Sandler, D., McConnaughey, D. & Weinberg, C. (1990). Menstrual and reproductive characteristics and age at natural menopause. American Journal of Epidemiology, 131, 625-632.

White, M., Martin, R., Yeater, R., Butcher, R. & Radin, E. (1984). The effects of exercise on the bones of postmenopausal women. International Orthopedics, 7, 209-215.

Woods, N. (1982). Menopausal distress: A model for epidemiologic investigation. In A. Voda, M. Dinnerstein & S. O'Donnell (Eds.), Changing perspectives on menopause. Austin: University of Texas Press, pp. 220-238.

Woods, N. (1988). Selecting a research design. In N. Woods & M. Catanzaro (Eds.), Nursing research: Theory and practice (pp. 117-132). St. Louis: C.V. Mosby.

Woods, N., Lentz, M., Mitchell, K., Taylor, D. & Lee, K. (1986). The daily health diary. The prevalence of perimenstrual symptoms: Final report (NUO1054). Division of Nursing, USPHS, DHHS, Washington, DC.

Woods, N., Lentz, M., Mitchell, E., Taylor, D. & Lee, K. (1987). Premenstrual symptoms: Another look. Public Health Reports (supplement), July-August, 106-112.

Wright, A. (1983). A cross-cultural comparison of menopausal symptoms. Medical Anthropology, 7, 20-35.

Yu, E. & Liu, W. (1992). U.S. national health data on Asian Americans and Pacific Islanders: A research agenda for the 1990s. American Journal of Public Health, 82(12), 1645-1652.

Zane, N., Takeuchi, D. & Young, K. (1994). Confronting critical health issues of Asian and Pacific Islander Americans. Thousand Oaks, CA: Sage.

Zung, W. (1965). A self-rating depression scale. Archives of General Psychiatry, 12, 63-70.

APPENDIX A

Study Questionnaire

Short Answer Cultural Questions

University of California, San Francisco

PILIPINA AMERICAN MIDLIFE WOMEN'S HEALTH STUDY

Judith A. Berg, RN, NP, PhD(c), Principal Investigator

Phone: (510) 339-8647

WOMEN'S HEALTH QUESTIONNAIRE[2]

The following questions ask you to tell us about your menstrual symptoms and other health symptoms which relate to midlife.

Please answer all questions which apply by circling the correct answer or filling in the appropriate blank. All information will be held in complete confidence by the staff of this research project.

ID# _____

BIRTHDATE _____

LAST MENSTRUAL PERIOD _____

TODAY'S DATE _____

---

[2] Adapted from: Women's Health Survey, Center for Women's Health Research, School of Nursing, University of Washington, Seattle, WA; Health Report, The Tremin Trust, College of Nursing, University of Utah, Salt Lake City, UT; Menstrual Disorders Program, Women's Health Questionnaire, School of Nursing, OHSU; Perimenstrual Symptom Management Program, University of California San Francisco, School of Nursing.

BACKGROUND INFORMATION

1. What was the highest grade or year of school you completed?
   1 Less than 7th grade
   2 Junior high school
   3 Partial high school (10th or 11th grade)
   4 High school graduate
   5 Partial college or specialized training
   6 College graduate
   7 Graduate degree
   8 Unsure or decline to state

2. What is your current employment status?
   1 Working full-time
   2 Working part-time
   3 Temporarily laid off
   4 Unemployed
   5 Homemaker
   6 Student
   7 Volunteer
   8 Retired

3. If you have been or are employed, please describe your current or most recent job. **(Write in your answer)**

	Occupation/Job Title	**Type of Business or Industry**
1	_____	_____
2	_____	_____

4. In your current or most recent job, did you supervise the work of others or tell other employees what work to do?
   0 No
   1 Yes

5. Who lives at home with you now? (Check all that apply)
   1 Live alone
   2 Spouse/Partner
   3 Children
   4 Step children
   5 Parents
   6 Roommate(s)
   7 Sister
   8 Mother
   9 Other (specify) _____

6. Which of the following best describes your current relationship?
   1 Single or living alone
   2 Married or living with a partner
   3 Divorced or separated
   4 Widowed

7. If applicable, please indicate your spouse's/partner's main occupation.

	Occupation/Job Title	**Type of Business or Industry**
1	_____	_____
2	_____	_____

8. People have different religious practices. Some attend services regularly, and others do not attend services. In the past year, about how often have you attended religious services?
   0 Not at all
   1 More than once a week
   2 Once a week
   3 Two or three times a month
   4 Once a month
   5 A few times a year

9. Do you consider yourself very religious, somewhat religious, or not at all religious?
   0 Not at all religious
   1 Somewhat religious
   2 Very religious

10. What is your religious preference at the present time?
   0 No religious preference
   1 Protestant (denomination)_____
   2 Catholic
   3 Jewish
   4 Other (specify)_____

11. What is your political party preference at this time?
   0 No preference
   1 Republican
   2 Democrat
   3 Independent
   4 Other (specify)_____

12. Politically, would you say that you are a:
    1 Radical
    2 Liberal
    3 Middle-of-the-roader
    4 Conservative
    5 Strong conservative
    6 Don't know

Income levels profoundly affect women's access to health care. For this reason, we are asking about you and your family's income. Remember, all information is confidential.

13. Check the appropriate range to indicate **your total household income** for the past year before taxes, no matter what the source. This figure should **include** income from your partner and/or parent if appropriate as well as your own.
    1 $7,500.00 or less
    2 $7,501.00 - $15,000.00
    3 $15,001.00 - $25,000.00
    4 $25,001.00 - $35,000.00
    5 $35,001.00 - $50,000.00
    6 $50,001.00 or more
    7 Unsure or decline to state

14. Check the item(s) which best describe your health insurance coverage. (Check all that apply)
    0 No coverage
    1 Blue Cross/Blue Shield
    2 Other private insurer (specify name if known)_____
    3 Military
    4 Veteran's Administration
    5 Health Maintenance Organization (HMO)
    6 Preferred Provider Organization (PPO/IPO)
    7 Medicare
    8 Medicaid/medical
    9 Other (specify)_____

HEALTH HISTORY[3]

1. What is your date of birth?_____ Age?_____ years.

2. Where were you born?_____

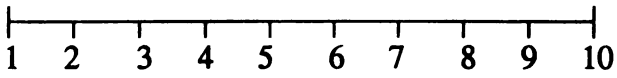
   If outside the U.S., how long have you lived in the U.S.? _____ years.

   If outside the U.S., how often do you travel back to your country of birth?
   1 More than once a year
   2 Once a year
   3 Every 2-3 years
   4 Once in 5 years
   5 Never
   6 Other (list)_____

3. Do you speak, read and write in English?
   0 No
   1 Yes

4. What language do you prefer to use?_____

5. Please circle the number on the scale below that best represents how you would identify yourself culturally:
   1 = Completely traditional Pilipina woman
   5 = ½ traditional Pilipina + ½ Americanized Pilipina woman
   10 = Completely Americanized Pilipina woman



6. This is a study of health during a woman's midlife years. Have you ever been told you have a major health problem by a health care provider?
   0 No (go to item # 9)
   1 Yes (go to item # 7)

7. If yes, what has been the problem?_____

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[3] Adapted from: Lee et al. (1994). Biobehavioral health in diverse midlife women. University of California at San Francisco, School of Nursing. NIH Grant # NRO4259 (1995-2000).

8. Are you still having the problem?
   0 No
   1 Yes

9. Has a doctor or nurse ever told you that you have any of these problems?

	No	Yes	Don't Know
thyroid disease	0	1	8
diabetes	0	1	8
cancer	0	1	8
heart disease	0	1	8
kidney disease	0	1	8
psychiatric illness	0	1	8

10. Are you taking prescribed medications?

	No	Yes
water pills/diuretics	0	1
tranquilizers	0	1
antidepressants	0	1
sleeping pills	0	1
steroids	0	1
birth control pills	0	1
hormones (estrogen, progestin, or both)	0	1

List names of medications now taking:_____

11. Are you taking any over-the-counter medications?
    0 No
    1 Yes

If yes, list:_____

Since this is a study of midlife women, I need to ask you some questions about your menstrual cycle.

12. How old were you when you started your periods? _____ years old.

13. Have your periods generally been regular?
    0 No
    1 Yes

14. How often have you usually had a period? Every _____ days.

These are questions about your recent experience with menstrual periods. Please consider the last 6 months when answering the questions:

15. During the last 6 months, have you had a menstrual period?
    0 No (go to item 22)
    1 Yes (go to item 16)

16. During the last 3 months, have you had a menstrual period?
    0 No
    1 Yes

17. How many days did your menstrual flow usually last? _____ days

18. Compared to 6 months ago, is your flow now:
    1 shorter (fewer days)
    2 about the same
    3 longer (more days)

19. For most days of a typical period in the past six months, how heavy was the menstrual flow?
    1 very light
    2 light
    3 medium
    4 heavy
    5 very heavy

20. If you compare your present menstrual cycle with your cycle 6 months ago, is it:
    1 less regular
    2 about the same
    3 more regular

21. Which of the following statements describes how well you can predict the beginning of your menstrual flow in the past six months?
    1 I never know whether I'll have a period during the month or not
    2 I can predict my period within a week or two of when it usually starts
    3 I can predict my period within 3-5 days of when it usually starts
    4 I can predict my period within a day of when it usually starts

22. Have your periods been stopped for 12 months or more?
    0 No
    1 Yes

23. When was your last menstrual period? Date:_____

24. Have you been pregnant in the past 6 months?
    0 No
    1 Yes

25. Are you breast feeding now?
    0 No
    1 Yes

26. How many times have you been pregnant in your life?
    0
    1
    2
    3
    4
    5
    6
    7
    ≥8

27. How many children do you have?
    0
    1
    2
    3
    4
    5
    6
    7
    ≥8

28. Have you had surgery to remove your uterus, ovaries, or both?
    0 No (go to next page)
    1 Yes (go to item 29)

29. If yes, what was removed? _____
    Why?_____

CALCIUM FOOD SOURCES

Directions: For each food category, please fill in the appropriate circle (O) in the "Weekly Consumption" column. Some of these foods might be ingredients in foods that you commonly eat. Please estimate how often you eat these foods with this in mind.

FOOD CATEGORY	WEEKLY CONSUMPTION			Score
	Rarely/Never	3 or less/week	4 or more/week	
Milk-Milk Products				
Milk (1 cup)	O	O	O	
Chocolate milk (1 cup)	O	O	O	
Hot chocolate (1 cup)	O	O	O	
Buttermilk (1 cup)	O	O	O	
Yogurt (1 cup)	O	O	O	
Mozzarella cheese (1½ oz.)	O	O	O	
Milkshake (1 cup)	O	O	O	
Pudding (1 cup)	O	O	O	
Custard (1 cup)	O	O	O	
Cottage cheese (1 cup)	O	O	O	
Ice cream (1 cup)	O	O	O	
Soup (½ can prepared w/milk)	O	O	O	
Meat-Meat Alternates				
Sardines (3 oz.)	O	O	O	
Tofu (1 cup)	O	O	O	
Salmon (3 oz. canned w/bones)	O	O	O	
Baked beans (1 cup)	O	O	O	
Vegetable-Fruit				
Bok choy (½ cup)	O	O	O	
Collard greens (½ cup)	O	O	O	
Mustard greens (½ cup)	O	O	O	
Turnip greens (½ cup)	O	O	O	
Bread-Cereal				
Waffles	O	O	O	
Pancakes	O	O	O	

CES-D

Below is a list of statements describing how people behave or feel. Please circle the number which best indicates how you felt or behaved during the past week.

		Rarely or none of the time (less than 1 day)	Some or little of the time (1-2 days)	Moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1.	I was bothered by things that usually don't bother me	0	1	2	3
2.	I did not feel like eating; my appetite was poor	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends	0	1	2	3
4.	I felt that I was just as good as other people	0	1	2	3
5.	I had trouble keeping my mind on what I was doing	0	1	2	3
6.	I felt depressed	0	1	2	3
7.	I felt that everything I did was an effort	0	1	2	3
8.	I felt hopeful about the future	0	1	2	3
9.	I thought my life had been a failure	0	1	2	3
10.	I felt fearful	0	1	2	3
11.	My sleep was restless	0	1	2	3
12.	I was happy	0	1	2	3
13.	I talked less than usual	0	1	2	3
14.	I felt lonely	0	1	2	3
15.	People were unfriendly	0	1	2	3
16.	I enjoyed life	0	1	2	3
17.	I had crying spells	0	1	2	3

18.	I felt sad	0	1	2	3
19.	I felt that people dislike me	0	1	2	3
20.	I could not "get going"	0	1	2	3

The next questions are about how you have felt and how things have been going for you during the past 2 months. For each question circle the number for the answer which best applies to you.

1. How have you been feeling in general?

   1 In excellent spirits
   2 In very good spirits
   3 In good spirits mostly
   4 I have been up and down in spirits a lot
   5 In low spirits mostly
   6 In very low spirits

2. How happy, satisfied, or pleased have you been with your personal life?

   1 Extremely happy, could not have been more satisfied or pleased
   2 Very happy most of the time
   3 Generally satisfied - pleased
   4 Sometimes fairly satisfied, sometimes fairly unhappy
   5 Generally dissatisfied, unhappy
   6 Very dissatisfied or unhappy most or all of the time

3. How often has your daily life been full of things that were interesting to you?

   1 All of the time
   2 Most of the time
   3 A good bit of the time
   4 Some of the time
   5 A little of the time
   6 None of the time

4. How often have you felt cheerful, lighthearted?

   1 All of the time
   2 Most of the time
   3 A good bit of the time
   4 Some of the time
   5 A little of the time
   6 None of the time

RELATIONSHIP SATISFACTION

On the scale below, circle the number which best describes the degree of satisfaction you feel in the various aspects of your relationship. The scale gradually ranges from the least possible satisfaction on the left to the greatest satisfaction on the right.

Please use this guide in circling the numbers:

0 = very dissatisfied
1 = moderately dissatisfied
2 = slightly dissatisfied
3 = neutral
4 = slightly satisfied
5 = moderately satisfied
6 = very satisfied

1.	**Communication and openness**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
2.	**Resolving conflicts and arguments**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
3.	**Handling of finances**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
4.	**Sexual satisfaction**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
5.	**Recreational activities and leisure time**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
6.	**Sharing duties and household chores**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied

7.	**Raising of children** [you may skip this if you have no children]	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
8.	**Degree of affection and caring**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
9.	**Relating to friends and relatives**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
10.	**Intimacy and closeness**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
11.	**Satisfaction with your role in the relationship**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
12.	**Satisfaction with your partner's role in the relationship**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
13.	**Overall satisfaction with your relationship**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied
14.	**Overall satisfaction with your life and self**	0	1	2	3	4	5	6
		very dissatisfied			neutral			very satisfied

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ATTITUDES TO MENOPAUSE AND AGING

The statements listed below describe attitudes toward menopause, aging, and older people. There are no right or wrong answers, only opinions. You are asked to circle the number for each question that expresses ***your current opinion*** about each statement by indicating whether ***you (1) agree strongly, (2) agree mildly, (3) disagree mildly, or (4) disagree strongly.***

1.	Women often use the change of life	1	2	3	4
2.	Women who have trouble with the menopause are usually those who have nothing to do with their time.	1	2	3	4
3.	A woman in menopause is apt to do crazy things she herself does not understand.	1	2	3	4
4.	Women who have trouble in the menopause are those who are expecting it.	1	2	3	4
5.	Menopause is a mysterious thing which most women don't understand.	1	2	3	4
6.	A woman is concerned about how her husband/partner will feel toward her after the menopause.	1	2	3	4
7.	Going through the menopause really does not change a woman in any important way.	1	2	3	4
8.	A woman's body may change in menopause, but otherwise she doesn't change much.	1	2	3	4
9.	The only difference between a woman who has not been through menopause and one who has is that one menstruates and the other doesn't.	1	2	3	4
10.	Women are generally calmer and happier after the change of life than before.	1	2	3	4

11.	After the change of life, a woman feels freer to do things for herself.	1	2	3	4
12.	Women worry about losing their minds during the menopause.	1	2	3	4
13.	It's no wonder women feel "down in the dumps" at the time of menopause.	1	2	3	4
14.	After the change of life, a woman gets more interested in community affairs than before.	1	2	3	4
15.	Women think of menopause as the beginning of the end.	1	2	3	4
16.	Life is more interesting for a woman after the menopause.	1	2	3	4
17.	Women generally feel better after menopause than they have for years.	1	2	3	4
18.	After the change of life, women often don't consider themselves "real women" anymore.	1	2	3	4
19.	A woman has a broader outlook on life after the change of life.	1	2	3	4
20.	A woman gets more confidence in herself after the change of life.	1	2	3	4
21.	Menopause is an unpleasant experience for a woman.	1	2	3	4
22.	Women often get self-centered at the time of the menopause.	1	2	3	4
23.	Menopause is a disturbing thing which most women naturally dread.	1	2	3	4
24.	After the change of life, a woman has a better relationship with her husband/partner.	1	2	3	4

25.	It's not surprising that most women get disagreeable during menopause.	1	2	3	4
26.	In truth, just about every woman is depressed about the change of life.	1	2	3	4
27.	Women should expect some trouble during the menopause.	1	2	3	4
28.	Many women think menopause is the best thing that ever happened to them.	1	2	3	4
29.	Most older people are really no different from anybody else; they're as easy to understand as younger people.	1	2	3	4
30.	Most older people get set in their ways and are unable to change.	1	2	3	4
31.	People grow wiser with the coming of old age.	1	2	3	4
32.	Most older people make one feel ill at ease.	1	2	3	4
33.	One of the most interesting qualities of most older people is their accounts of their past experiences.	1	2	3	4
34.	There are a few exceptions, but in general most older people are pretty much alike.	1	2	3	4
35.	Most older people should be more concerned with their personal appearance.	1	2	3	4
36.	Most older people are cheerful, agreeable, and good humored.	1	2	3	4
37.	Most older people are constantly complaining about the behavior of the younger generation.	1	2	3	4

38.	Most older people make excessive demands for love and reassurance.	1	2	3	4
39.	Most older people are dependent on others for care and daily needs.	1	2	3	4
40.	Most older people are generally able to function adequately and are in relatively good health.	1	2	3	4
41.	Most older people plan for retirement and are financially secure.	1	2	3	4
42.	Most older people have poor coordination and suffer many accidents and falls.	1	2	3	4
43.	Most older people cannot see, are hard of hearing, and have lost most of their teeth.	1	2	3	4
44.	Most older people need less sleep than younger people.	1	2	3	4
45.	Most older people are absent minded and forgetful.	1	2	3	4
46.	Most older people have the capacity for a satisfactory sex life.	1	2	3	4
47.	Most older people feel that their children neglect them.	1	2	3	4
48.	Most older people are in the happiest period of their lives.	1	2	3	4

MENSTRUAL SYMPTOM SEVERITY LIST (MSSL)

The following statements refer to feelings or behaviors. Please tell us how severely you have experienced these feelings or how bothersome the behaviors were over the past week. There are no right or wrong answers. Please rate "not present" if you have not experienced the feeling or behavior in the past week. Please rate "minimal" if you experienced the feelings as very minor or not at all bothersome. Rate the experience as "extreme" if this is the worst you have ever felt or if the experience is the most bothersome. Rate "moderate" if bothersome enough to interfere with your daily function in some way, and rate "mild" if only slightly bothersome or severe. Place an "X" in the box that best describes your experience.

Feelings or Behaviors	Not Present	Minimal	Mild	Moderate	Extreme
1. Abdominal bloating					
2. Alcohol cravings					
3. Anger					
4. Anxiety					
5. Backache or neckache					
6. Constipation					
7. Cramps - uterine or pelvic					
8. Daytime sweats _____ (# per day)					
9. Depression/felt sad or blue					
10. Diarrhea					
11. Difficulty concentrating					
12. Difficulty falling asleep					
13. Dizziness					
14. Eating more than usual					
15. Fatigue or tiredness					
16. Feelings of wellbeing					
17. Felt energetic					
18. Forgetfulness					
19. Generalized body aches					
20. Headache					
21. Heart racing or pounding					

Feelings or Behaviors	Not Present	Minimal	Mild	Moderate	Extreme
22. Hot flashes/sudden flushes					
23. Hostility					
24. Impatience					
25. Increased sexual desire					
26. Indigestion/upset stomach					
27. Irritability					
28. Joint pain or stiffness					
29. Loss of appetite					
30. Loss of interest in things					
31. Loss of sexual desire					
32. Nausea/upset stomach					
33. Nervousness					
34. Night sweats ____ (# per day)					
35. Numbness and tingling					
36. Mood swings					
37. Out of control feelings					
38. Painful or tender breasts					
39. Panic feelings					
40. Shortness of breath					
41. Skin breakout/acne					
42. Swelling of hands or feet					
43. Tearfulness/crying spells					
44. Tension					
45. Urinary frequency/leakage					
46. Vaginal dryness					
47. Waking up during the night					

48. Waking up too early					
49. Weight gain					
50. Weight loss					
51. Anything else:					

Of the questions #8, #22, #34, & #46 that you rated as moderate or extreme, how distressing on a scale of 0-10 is it? Write a number from 0-10 on the line provided that best describes how distressing it is to you.

52. _____ (0-10) for #8 (daytime sweats)

53. _____ (0-10) for #22 (hot flashes/flushes)

54. _____ (0-10) for #34 (night sweats)

55. _____ (0-10) for #46 (vaginal dryness)

56. Did you contact a health professional for any reason?
0 No (go to #57)
1 Yes (answer below 2 items)

Type of professional:_____

Reason:_____

57. Did you contact anyone else about your health? (friend, neighbor, husband, partner, etc.)
0 No (go to #58)
1 Yes (answer below 2 items)

Relationship of person contacted:_____

Reason:_____

58. Describe anything else you did about anything on the above list. (record item # and what you did about it. For example: 6. exercises, heating pad 4. listened to music)

_____

_____

59. Did you take any medicines, vitamins, minerals, or nutritional supplements today to alleviate your symptoms?
0 No (go to #60)

1 Yes (Please record # & amount)

_____ _____ _____
_____ _____ _____
_____ _____ _____

60. Please think about *your* day. How much time did you spend doing any of the following activities:

# days per week	Type of Activity	# days per week	Type of Activity
_____	Brisk walking	_____	Relaxation
_____	Running/jogging/biking	_____	Meditation
_____	Racquet sport	_____	Visualization
_____	Swimming	_____	Affirmation
_____	Aerobics (class/dancing)	_____	Prayer
_____	Stretching/conditioning	_____	Talking with friends
_____	Weightlifting	_____	Other_____
			_____

61. On a typical day, how many cigarettes do you smoke? _____ cigarettes

62. On a typical day, I go to sleep at _____am/pm; I wake up at _____am/pm.

63. On a typical day, how many servings of alcohol do you have? (wine, 3-4 oz; beer, 8-12 oz; hard liquor, 1½ oz)
_____ (# servings of alcohol/day)

64. On a typical day, how many servings of caffeine drinks do you have? (coffee, tea, 6-8 oz; soft drink, 8-12 oz)
_____ (# servings of caffeine drinks/day)

SELF-CARE RESPONSES QUESTIONNAIRE

Instructions: If you answered questions # 8, 22, 34, or 36 as either mild, moderate or extreme, please answer the following questions. If you did not answer either of # 8, 22, 34, or 36 as mild, moderate or extreme, you do not need to complete this questionnaire.

You have indicated that you experience daytime sweats, hot flashes, night sweats, and/or mood swings either mildly, moderately, or extremely. Of these symptoms, which is most bothersome to you?

[ ] Daytime sweats
[ ] Hot flashes
[ ] Night sweats
[ ] Mood swings

Please estimate how consistently you use the following ways of dealing with either or all of the above symptoms. Circle one number for each item and where indicated, please fill in the blanks.

****

1 = Never 2 = Rarely 3 = Sometimes 4 = Usually 5 = Always

****

1.	Worry about it/them?	1 2 3 4 5
2.	Accept what you are experiencing as legitimate and real?	1 2 3 4 5
3.	Pay more attention to grooming, hair, dress?	1 2 3 4 5
4.	Take vitamins?	1 2 3 4 5
5.	Drink alcoholic beverages?	1 2 3 4 5
6.	Smoke?	1 2 3 4 5
7.	Eat?	1 2 3 4 5
8.	Think through different ways to handle the experiences?	1 2 3 4 5
9.	Do anything just to do something, even if you're not sure it will work?	1 2 3 4 5
10.	Seek counseling, therapy?	1 2 3 4 5
11.	Keep a calendar or journal?	1 2 3 4 5
12.	Allow yourself to cry?	1 2 3 4 5

1 = Never 2 = Rarely 3 = Sometimes 4 = Usually 5 = Always

13. Set specific goals to help handle the situation? 1 2 3 4 5

14. Have faith? 1 2 3 4 5

15. Throw yourself into your work? 1 2 3 4 5

16. Look for meaning in the experience? 1 2 3 4 5

17. Put it out of your mind; ignore it/them? 1 2 3 4 5

18. Prepare for the worst? 1 2 3 4 5

19. Express anger? 1 2 3 4 5

20. Accept changes in your body? 1 2 3 4 5

---

21. Isolate yourself; withdraw from others? 1 2 3 4 5

22. Believe in yourself; forgive yourself; place more value on yourself? 1 2 3 4 5

23. Take better care of yourself; pamper yourself? 1 2 3 4 5

24a. Keep busy, productive? 1 2 3 4 5
(If "Never", skip to Question 25a)
24b. How?_____

25a. Improve my diet? 1 2 3 4 5
(If "Never", skip to Question 26a)
25b. How?_____

26a. Seek prescription medicine to make me feel better? 1 2 3 4 5
(If "Never", skip to Question 27a)
26b. What kinds?_____

27a. Take over the counter medicine to make me feel better? 1 2 3 4 5
(If "Never", skip to Question 28a)
27b. What kinds?_____

28a. Increase physical activity? 1 2 3 4 5
(If "Never", skip to Question 29a)
28b. What kind of physical activity do you do?_____

1 = Never 2 = Rarely 3 = Sometimes 4 = Usually 5 = Always

29a. Increase recreational activities? 1 2 3 4 5
(If "Never", skip to Question 30a)
29b. What recreational activities do you do?_____

30a. Practice body comfort activities? 1 2 3 4 5
(If "Never", skip to Question 31a)
30b. What body comfort activities do you do?_____

31a. Avoid difficult situations? 1 2 3 4 5
(If "Never", skip to Question 32a)
31b. How do you avoid difficult situations?_____

32a. Find ways to gain control? 1 2 3 4 5
(If "Never", skip to Question 33a)
32b. What do you do to gain control?_____

33a. Do housework? 1 2 3 4 5
(If "Never", skip to Question 34a)
33b. What kinds?_____

34a. Reduce workload? 1 2 3 4 5
(If "Never", skip to Question 35a)
34b. How do you reduce your workload?_____

35a. Educate yourself. Learn about what to expect? 1 2 3 4 5
(If "Never", skip to Question 36a)
35b. How do you educate yourself or learn what to expect?_____
_____

36a. Find ways to feel good about myself? 1 2 3 4 5
(If "Never", skip to Question 37a)
36b. How do you find ways to feel good about yourself?_____

1 = Never 2 = Rarely 3 = Sometimes 4 = Usually 5 = Always

37a. Participate in a "support group"? 1 2 3 4 5
(If "Never", skip to Question 38a)
37b. Which support group?_____

38a. Go shopping, for example: window shop, just spend money, buy things for me? 1 2 3 4 5
(If "Never", skip to Question 39a)
38b. Which?_____

39a. Seek information from someone? 1 2 3 4 5
(If "Never", skip to Question 40a)
39b. Who do you seek information from?
- Nurse 1 2 3 4 5
- Family 1 2 3 4 5
- Significant other or partner 1 2 3 4 5
- Physician 1 2 3 4 5
- Friend 1 2 3 4 5
- Someone else who had it 1 2 3 4 5
- Others (specify)_____ 1 2 3 4 5

40a. Seek support from someone? 1 2 3 4 5
(If "Never", skip to Question 41a)
40b. I have sought support from:
- Nurse 1 2 3 4 5
- Family 1 2 3 4 5
- Significant other or partner 1 2 3 4 5
- Physician 1 2 3 4 5
- Someone else who had it 1 2 3 4 5
- Others (specify)_____ 1 2 3 4 5

41a. Seek advice from someone? 1 2 3 4 5
(If "Never", skip Question 41b)
41b. I have sought advice from:
- Nurse 1 2 3 4 5
- Family 1 2 3 4 5
- Significant other or partner 1 2 3 4 5
- Physician 1 2 3 4 5
- Someone else who had it 1 2 3 4 5
- Others (specify)_____ 1 2 3 4 5

University of California San Francisco

School of Nursing

PILIPINA AMERICAN MIDLIFE WOMEN'S HEALTH STUDY

Please provide short answers to the following questions:

1. How did you learn about menopause?

2. Who do you talk to about menopause symptoms or issues?

3. At what age does a woman become menopausal?

4. How do women in your culture feel about menopause?

5. How do men in your culture feel about menopause?

6. What are the most reported health complaints of midlife women in your culture?

7. What would stop you from seeking health care for a health problem that you might be having?

8. Where do you usually get care for health problems?

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