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Factors affecting Health Promotion Behaviors among Korean Immigrant Women at Midlife

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Nursing

by

Sue Kim

2001

To my parents

To my husband, Gihong

To my daughter, Kyoung-Won Johanne

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VITA

January 27, 19[redacted]	Born, Seoul, Korea
1991	B.S., Nursing Ewha Womans University Seoul, Korea
1991-1993	Staff nurse Severance Hospital, Yonsei Medical Center Seoul, Korea
1992	Nurse of the Year Severance Hospital, Yonsei Medical Center Seoul, Korea
1996	Award of Academic Excellence School of Nursing Columbia University New York, New York
1997	M.S., Nursing HIV Subspecialty Program Columbia University New York, New York

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Choe, M. A., Padilla, G. V., Kim, S., & Chae, Y. R. (2001). The meaning of quality of life for diabetic patients in Korea. To appear in the International Journal of Nursing Studies

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ABSTRACT OF THE DISSERTATION

Factors affecting Health Promotion Behaviors among

Korean Immigrant Women at Midlife

by

Sue Kim

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Professor Jacquelyn H. Flaskerud, Chair

There are many areas of women's health at midlife in which little is known, such as their health promotion practices and the subsequent effects on their health and longevity. The purpose of this study was to describe the health promotion behaviors of Korean immigrant women at midlife. It examined the relationships among midlife changes, role quality, resources (income, time in the U.S., English proficiency, health care coverage, health services use), knowledge of midlife health, reflection on midlife and health, and health promotion behaviors (lifestyle, health screening, current health practices). The study employed a cross-sectional survey design of 120 Korean immigrant women between 45 to 64 years of age

living in Los Angeles County, who were not pregnant and had not had a hysterectomy. Women were recruited from a community health survey list, a health and social services clinic, and a church-sponsored group. They participated by one of three methods: mail survey, phone interview, or face-to-face interview. A subset of 26 women also participated in an exploratory qualitative interview. These women answered additional questions on reflection on midlife and barriers/facilitators to health promotion. Role integration, English proficiency, time in the U.S., health care coverage, and income were significant predictors of reflection on midlife. Role integration, English proficiency, and income were significant predictors of reflection on health. Use of health services and health care coverage were significant predictors of health promotion behaviors. Regardless of menopausal status or whether school-aged dependent children were in the household, women listed mental/psychological health, religious faith, exercise, and regular checkups as most important for midlife women in general. For Korean immigrant women like themselves, however, priorities shifted to the need for free or low cost health services, information on health problems, services available in the community, more time for themselves, and ways to increase their motivation to attend to their health. In order to affect women's reflection on midlife and health and encourage more health promotion practices, nursing interventions must facilitate women's sense of role integration and their access to resources. These will be more influential than interventions focused on assessing midlife changes or increasing knowledge.

CHAPTER 1

INTRODUCTION TO THE PROBLEM

Midlife is conceptualized as a developmental phase when a person reaches the expected half-point of life, encompassing a substantial time of 25-30 years of lifetime. Much research has been accumulated in other developmental phases of life such as early childhood and adolescence, with each recognized as having specific needs and challenges. More recently, with a huge proportion of the population aging, gerontology has also become a growing field. Midlife, however, is a time when little has been explored scientifically as a whole and overlooked as the in-between years, or often dissected into disease-oriented perspectives. For women, midlife has been studied mainly in terms of menopause and symptom management, as if these were synonymous with midlife health, despite many physiological changes becoming increasingly prevalent during and following the period of midlife. Pathophysiologic changes leading to health problems such as osteoporosis, cardiovascular disease, pulmonary disease, diabetes, arthritis, and cancer become manifest in the later years of life and present implications for women's health at midlife. There are many areas in which little is known, however, such as health promotion patterns in midlife women and their subsequent effects on health and longevity (Woods, 1993). Health promotion activities have the potential of interrupting or delaying some of the pathophysiologic changes notes above.

Moen and Wethington (1999) recommend that midlife research recognize the importance of locating lives in a structural context, follow role continuity and changes, acknowledge subjective definitions, and consider the interplay between macro-level social changes and individual lives. Such a life course perspective values the diversity that underlies midlife transitions, and emphasizes understanding how past experiences affect midlife and how midlife experiences subsequently shape aging.

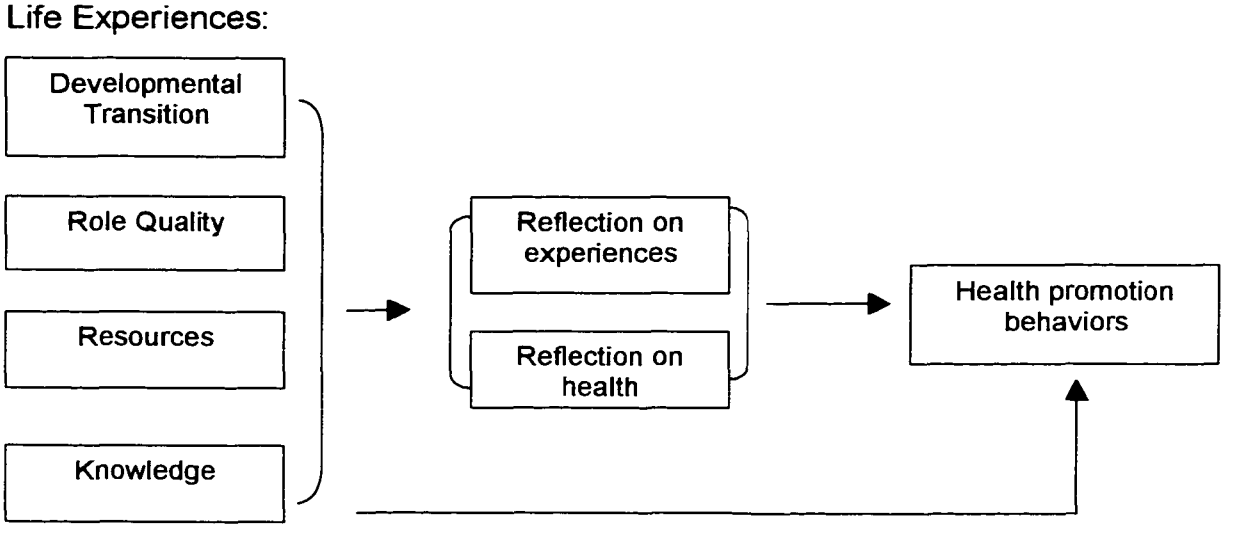
This perspective is particularly significant for a better understanding of immigrant women's experiences at midlife. Research on midlife women's health is limited by the lack of variation in ethnicity or social class as most studies have been conducted with samples of well educated Euro-American women (Duffy, 1988; Engel, 1987; Hartweg, 1993). The implications of these studies have often been accepted and applied in a reductionistic manner as relevant and prescriptive for all women regardless of ethnicity or social background.

Asian American and Pacific Islanders (AAPI) are the fastest growing population today, with Korean-Americans the fourth largest subgroup (Zane, Takeuchi & Young, 1994). Despite constituting 11% of the AAPI population, however, Korean-Americans are among the most understudied subgroups relative to their size, with only 5% of available research focused on them (Andersen, Harada, Chiu & Makinodan, 1995). Approximately one third of Korean-Americans reside in California, and of this number, 70% reside in Los Angeles and Orange Counties (Bureau of the Census, 1993). As a recent

immigrant population, the majority of Korean-American adults were born overseas, and subsequently are of marginalized status in terms of access to health care, language barriers, and availability of health insurance, etc (Kim & Rew, 1994; Noh & Avison, 1996; Shin, 1994).

The purpose of this study was to describe the health promotion behaviors of immigrant Korean women at midlife. It examined the relationships among developmental transition, role quality, resources, knowledge, reflection, and how each of these affect health promotion behaviors at midlife. (See Figure 1-1)

Figure 1-1. The Midlife Transitions Health Model
Construct level



1.1 Brief history of Korean immigration to the United States

The history of Korean immigration to the United States largely occurred in three periods (Yoon, 1997). The first immigrants were mostly single male laborers who came to Hawaii to make money between 1903 and 1944. The intermittent period of 1945-1964 drew Korean women entering as spouses of American military servicemen and children who were adopted into American families, as well as Korean students coming to seek higher education. With the immigration policy change of 1965 that enabled family reunification, immigration gained momentum, especially with the changing sociopolitical forces in Korea in the mid-1980s. The cohort of Koreans in this third wave of immigration were unlike their predecessors in that they immigrated as nuclear families, and came from urban, college-educated, and white-collar backgrounds (Yoon, 1997). While Korean immigration to the United States primarily has been a movement of middle-class Koreans, the last two decades have brought a declining proportion of professional and technical workers and an increase of immigrants from lower socioeconomic backgrounds (Yoon, 1997). According to 1990 census data, Koreans had a lower family income level than Whites or the total population, regardless of ethnicity, and were twice as likely as Whites to live below the poverty level (Yoon, 1997). The declining economic state of Koreans in the U.S. is seen also in comparison to Asian Americans as a group. While the poverty rate of Asian Americans has decreased from 14.3 in 1980 to 11.6 in 1990, the poverty rate among Koreans has increased from 13.1 to 14.7 during the same period

(Yoon, 1997). The majority of Korean immigrants has settled in California and constitutes a community that is becoming increasingly heterogeneous in age, occupation, and socioeconomic status (Kramer, Tracy & Ivey, 1999). Of the Korean population residing in California, more than half (53.9%) live in Los Angeles County (U.S. Census Bureau, 2 001).

1.2 Statement of the problem

There have been data-based studies examining health issues of Korean women in the U.S. during the past decade. Very few, however, directly describe midlife health promotion. Some studies have an epidemiologic focus on behavioral risk factors (Centers for Disease Control and Prevention (CDC), 1997b), or are topic-based on cancer screening (Kim, Yu, Chen, Kim & Brintnall, 1998; Maxwell, Bastani & Warda, 1998, 2000; Wismer et al., 1998a, 1998b), depression (Hurh & Kim, 1990; Kim, 1995; Kim & Rew, 1994; Shin, 1993; Shin 1994), marital satisfaction (Song, Bergen & Schumm, 1995), folk illness (Lin et al., 1992), caregiving burden (Lee & Sung, 1998), stress (Koh, 1998), and social support and adaptation (Kim & Grant, 1997). Other studies are age-specific to childbearing (Lee & Essoka, 1998; Mor, Alexander, Kieffer & Baruffi, 1993; Pritham & Sammons, 1993), or the elderly (Kim, 1999; Kim, Yu, Liu, Kim & Hohrs, 1993; Lee, Crittenden & Yu, 1996; Moon & Williams, 1993; Shin, 1999).

Many encompass a wide age range that makes it difficult to extract implications for women at midlife (Hurh & Kim, 1990; Kim & Rew, 1994; Maxwell,

Bastani & Warda, 1998, 2000; Shin, 1993; Shin 1994; Wismer et al., 1998a, 1998b). There is a lack of research devoted to this population with a focus on midlife health or factors affecting health promotion behaviors. The proposed study sought to better understand how health promotion behaviors among immigrant Korean women are affected by the experiences of midlife, quality of roles, availability of resources, and knowledge, and reflection on these multiple influences.

1.3 Purpose of the Study

Numerous studies on middle-aged women suggest that midlife is a time when physical, emotional, and social changes are frequently experienced. Physical changes such as hot flashes, night sweats, sleep disturbance, vulvovaginal thinning and dryness, weight change, joint aches, headaches, and so forth, are associated with the menopausal transition at midlife, and have implications for the maintenance of health within daily activities. Increased risk of heart disease and osteoporotic fractures are significant health issues for postmenopausal women at midlife as well. Pathophysiologic changes leading to cancers, diabetes, and arthritis also occur at midlife and may be related to changes in hormonal physiology.

Feelings of depression, irritability, emotional instability, and general distress have been traditionally associated with women at midlife (Kaufert & Syrotuik, 1981; Lax, 1988). However, recent studies using feminist and qualitative

approaches are revealing midlife to be a time of reevaluation and enjoying "my turn", feelings of greater self-esteem, and confidence (c.f., Kagawa-Singer et al., in press; Morgan, 1999). Both feelings of emotional distress and well-being may affect a woman's ability to be attentive to health needs as well as her motivation to take care of herself.

Midlife is also a time of social changes, such as children leaving the household, taking care of aging parents and other family members, reentering the work force, and status shifts at work. Women may experience altered role expectations, changes in the quality of roles within relationships, and different patterns of time utilization and availability along with shifts in tasks and responsibilities. These changes may affect women's well-being, patterns of health behaviors, and perception of health status (Bullers, 1994; Noor, 1995; 1996; Spurlock; 1995).

For immigrants, such experiences are framed in the context of limited resource availability within the changes required for adaptation. For example, the issue of language proficiency permeates all areas of immigrant life, including the capability to successfully apply human capital such as education and prior experience to new environments, as well as affecting access to and use of health information and services. The availability of adequate tangible resources has great significance for immigrants' health status and practices.

Level of knowledge affects the consideration of health-related situations as well as the capacity to make health-related decisions. Knowledge of symptoms

and illnesses and perceptions of health or degree of illness may influence motivation to undertake particular health promoting behaviors such as changing lifestyles or seeking preventive screening measures. An awareness of age-appropriate health care recommendations must preexist for appropriate utilization of specific services to occur. Depending on the level of knowledge of illness symptoms and health care recommendations, a woman's perception of her developmental experiences and health status may be viewed as normal, inevitable or as an opportunity to enhance health.

The interweaving influences among these multiple factors and the effects on health practices was revealed in a pilot study on immigrant Korean women's midlife health (Kim, 1999). This pilot study employed focus groups with immigrant Korean women living in Los Angeles and Orange Counties in 1998 (Kim, 1999). Twenty one immigrant Korean women who were between the ages of 44 and 64 participated in one of four focus groups to discuss conceptualizations of health and health promotion, midlife, expectations and experiences of changes associated with midlife, available resources, and ways to improve or better their health. Findings indicated that lack of time due to long work hours and balancing multiple roles, lack of health care coverage, language barriers, lack of knowledge of midlife health and accessible community resources all affected actions on improving or maintaining health (Kim, 1999). Language proficiency was a particular problem and it appeared to be the foremost reason that most of the

participants relied on Korean health care providers, despite dissatisfaction and distrust in their practice.

Research on health promotion among women has focused on interpersonal support, stress management, exercise, nutritional intake, regular health care screening and maintenance, and specific risk behaviors such as smoking and alcohol consumption, and their association with physical health and psychosocial well-being (Duffy, 1988; Gillis & Perry, 1991; Hartweg, 1990; Hartweg & Berbiglia, 1996; Thomas, 1990; Thomas, 1995). Most of the available studies are limited to Euro-American populations, from which implications may be applied cautiously to the immigrant Korean population. There is currently little empirical data on the characteristics and relationships among factors that may influence women's health promotion behaviors at midlife. Many studies lack or fail to describe a conceptual framework for health promotion, knowledge, beliefs, and practices as well.

It was proposed here that multidimensional experiences and quality of roles at the time of a developmental transition, in conjunction with the availability of resources and knowledge, are integrated to influence a cognitive process of introspection and reflection. Reflection of these circumstances, in turn, was proposed to affect decisions to practice health promotion behaviors. (Figure 1-1: construct level).

This study sought to examine: 1) the life experiences of the developmental transition of midlife, role quality, resources, and health knowledge; 2) reflection

on these multiple life experiences and health; 3) the relationships among midlife transition, role quality, resources, and knowledge; 4) the relationship of each of these life experiences to reflection and to health promotion behaviors; and 5) the significant predictors of health promotion behaviors.

1.4 Need for the Study

1.41 Needs of the Population

Recent studies of immigrant Korean women reveal patterns of morbidity that demonstrate their vulnerable status. A community health survey of Koreans living in Los Angeles County found that hypertension was the most frequently reported disease among middle-aged respondents, and that backache (lumbago), anemia, and gastroenteritis were reported more frequently than their Euro-American counterparts (Korean Health Education Information and Research Center (KHEIR), 1990). The incidence and mortality rate of breast cancer among Korean-American women is estimated to be lower than that of their Euro-American counterparts (Perkins, Morris, Wright & Young, 1995). However, when compared to Euro-Americans as well as other Asian subgroups, at time of diagnosis, Korean women have the lowest proportion of localized in situ stage and the greatest proportion of distant regional cancer stage (Perkins, Morris, Wright & Young, 1995). Such disproportionate figures may indicate a greater likelihood of mortality over time. This same pattern is accentuated with cervical cancer, a disease occurring among Korean-American women at a proportional

incidence of 8.4% compared to Euro-American women's rate of 1.9% (Taylor, Jackson, Schwartz, Tu & Thompson, 1996). However, mammography and Pap smear rates among Korean women have been low. In a1989 survey of immigrant Korean women, only 29% of Korean women over 18 had had a breast exam and only 35% had had a Pap smear within the previous year, compared to respective rates of 50% for all American women (KHEIR, 1990). More recently, Kagawa-Singer (1997) found that during 1992-1994 only 12% of Korean women residing in Southern California had practiced breast self exams, less than one third had a clinical breast exam, and only 35% had ever had a mammogram. In terms of physical activity, Korean women spent one-fifth the amount of times per week in exercise as compared to their Euro-American counterparts as well (KHEIR, 1990). Several studies also indicate a high level of depressive symptomatology among immigrant Korean women as measured by the Center for Epidemiological Studies – Depression scale (CES-D) (Hurh & Kim, 1990; Kim & Rew, 1994; Shin, 1994;).

Despite morbidity figures that warrant concern, patterns of seeking health care suggest that these health issues are not being adequately addressed. A 1989 survey of 345 households (1,162 Koreans) in Los Angeles County, found that middle-aged Koreans visited physicians only 2.3 times per person during the past year, which was only one-third that of Euro-Americans and African-Americans (KHEIR, 1990). Lack of health care coverage was a major problem for an estimated 50% of these respondents (KHEIR, 1990). A focus group study of

midlife immigrant Korean women conducted in 1998 found that 57% did not have any type of health care coverage, although 52.4% worked full-time (Kim, 1999).

In addition to barriers to access to health care, linguistic and system barriers further affect the health of Korean immigrants negatively. The most serious problem expressed by immigrant Korean women is the language barrier (Hurh & Kim, 1984; KHEIR, 1990; Miller, 1990; Nah, 1993). Lack of language proficiency inhibits access to health-related information and limits health-seeking behaviors. A second problem is the differences in the culture and social systems between Korea and the United States (Hurh & Kim, 1984; Kim, 1990; Lee & Lee, 1990; Nah, 1993). Incompatible role expectations and value systems may create tension within families and among social relationships, as well as inhibit immigrants, especially women, from becoming fully empowered to negotiate for services they need. For recent immigrants, their lack of familiarity with social systems such as the health care industry or social service organizations, may further deter appropriate utilization. The findings of these studies underscore that immigrant Korean women are a vulnerable population in critical need of attention and action to improve their health.

1.42 Advancement of Nursing Science

The purpose of research was to generate or to test theory and build knowledge that is relevant and amenable to implementation in nursing practice (Fawcett & Downs, 1992). This study aimed to test the conceptual framework

proposed, that is, relationships among midlife changes, role quality, resources, knowledge, reflection, and health promotion behaviors, identifying the strength and direction of the relationships. Based on Fawcett's (1993) criteria for analyzing and evaluating theories, the adequacy of the conceptual model guiding this study was evaluated.

The conceptual framework guiding the proposed study consists of seven concepts that pertain to factors at midlife that affect health promotion within the context of immigrant life. The model was assessed for adequacy of scope by determining whether all of the major nursing concepts of health, person, nursing, and environment, are present and confirmed to be significant from the study results. The proposed model was assessed for parsimony by whether findings from the study indicate that too many concepts are included. The proposed relationships of the model were tested through this research. The level of congruency of empirical evidence drawn from the research was used to determine the empirical adequacy of the conceptual framework and determine which of the proposed relationships were supported.

In addition to testing nursing theory, this study also aimed to contribute to the development of methodologies in nursing science. The study included development of a questionnaire in Korean that assesses not only the range of physical, emotional, and social changes associated with midlife but also the participants' reflection on such experiences. Most instruments used to assess physical, emotional, and social changes experienced by women at midlife

primarily pertain to the experiences of Euro-American women. Additional items were adapted and modified from the literature on Korean women and findings from a pilot study conducted by this investigator (Kim, 1999) to reflect experiences that were more relevant and appropriate for this ethnic group.

Findings from this study are expected to highlight significant factors that affect health promotion behaviors among immigrant Korean women at midlife as well as the nature of relationships among different factors. Findings may provide directions for future research, such as examining the influence of multiple roles, midlife changes, and reflection on such changes in relation to health promotion behaviors in further detail according to immigrant history, type of employment, and social support networks. Findings may also provide a framework for developing an intervention study focusing on significant predictive factors in order to increase the practice of health promotion behaviors among immigrant Korean women at midlife.

1.43 Advancement of Nursing Practice

Historically, identification and management of symptoms has taken priority in the clinical setting, following the biomedical perspective that views midlife as a period prone to estrogen deficient diseases as well as role changes resulting in undesirable outcomes such as empty nest syndrome and depression. There has been a lack of attention, however, on the significance of subjective reflection on midlife. There has also been an underlying assumption that women are

knowledgeable of illnesses, know how to seek care in the health industry, and are aware of available community resources. These assumptions may not apply to immigrant women. This study will highlight the factors that require further assessment and attention and may provide a guide to clinical practice for nurses. A core tenet of this practice may be nurses tailoring health education to address the range of physical, emotional, and social changes expected at midlife, that are framed in Korean women's immigrant experience and are inclusive of positive expressions as well as negative experiences. Common misconceptions of body changes that are generally expected as opposed to symptoms that are indicative of disease and warrant medical care, may be addressed, as well as emphasizing specific behavioral changes and screening guidelines that may enhance health and prevent diseases. An example may be the phenomenon of "the fifties shoulders (*oshipkyun*)," where shoulder stiffness and aching are expected to occur around the age of 50, as compared to degenerative changes. Explaining age-appropriate health screening recommendations in ways that will be of greater relevance to their self-identity as Korean women living in the U.S. may also be an important area of health education.

The characteristics of immigrant life patterns include little spare time and having few instrumental resources. Nursing practice may be improved by finding new and creative ways to connect with established community groups, be more knowledgeable about community resources and needs, and strategically coordinate health services to be more accessible.

1.44 Advancement of Knowledge Base of Immigrant and Ethnic Studies

This study attempted to describe the role of language proficiency and length of time since immigration on factors affecting health promotion behaviors at midlife, e.g., midlife changes, knowledge of midlife health, and reflection on midlife and health status. Length of time since immigration has traditionally been equated with a greater likelihood of access to and use of health services. Immigrants who have lived longer in the U.S. are expected to have somewhat of an advantage in utilizing health services in comparison to recent immigrants, as they are expected to be more familiar with health service organizational structure, availability of specific services, and health information. However, longer duration of stay in the U.S. has also been associated with increases in morbidity and mortality patterns, that are similar to that of the general American population, such as risk of breast cancer, obesity, hypertension, and cardiac disease increasing with each generation. The role of language preference and ability in influencing specific health promotion behaviors of practicing age-appropriate health screening and modifying lifestyle features, remains ill-defined. This study aimed to contribute to the knowledge of the immigrant Korean community by providing further information on how differences in language preference, proficiency, and length of residence affect health promotion behaviors.

The development and testing of valid and reliable instruments specific to women with a Korean cultural and ethnic background is also expected to

advance intercultural learning by ascertaining which concepts translate conceptually as well as semantically, and what they mean from English to Korean. The instruments may facilitate other researchers' efforts in conducting descriptive, predictive, and prescriptive research. Comparative studies may be facilitated through translated versions of existing instruments as well. This research is expected to enhance the science and knowledge base of ethnic studies.

1.45 Advancement of knowledge of midlife health

This study attempted to examine women's health at midlife within a framework of health promotion. It is expected that findings will provide a clearer description of characteristics and correlates of women's health at midlife. Assessing positive as well as negative variations of physical, emotional, and social experiences at midlife will add to the knowledge of midlife health and illness. In addition, the role of reflection, experiential quality of roles in influencing health behaviors, and focus on health promotion is expected to foster proactive support and validation for women's health practices at midlife.

1.46 Advancement of social policy

Health disparities among racial and ethnic groups have become an area of increasing importance at the level of health care research, practice, and policy. Cultural competency has been suggested to be a potentially powerful tool to

reduce racial and ethnic health disparities. Specific cultural competency techniques have been identified to effectively accomplish this goal: ensuring interpreter services, recruitment and retention, training programs, coordinating with traditional healers, using community health workers, endorsing culturally competent health promotion, including family/community members, immersion into another culture, and administrative and organizational accommodations (Brach & Frasier, 2000). Five of these nine techniques require implementation at the health systems level to truly be effective, supported by appropriate policy measures. The findings of the study are expected to clarify the nature of factors that positively affect health promotion behaviors as well as preclude people from seeking appropriate health care. This study intends to inform social and health policy to recognize the needs of immigrants, provide basic services that address their health issues in a culturally competent manner, and improve their use of health care services.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND REVIEW OF THE LITERATURE

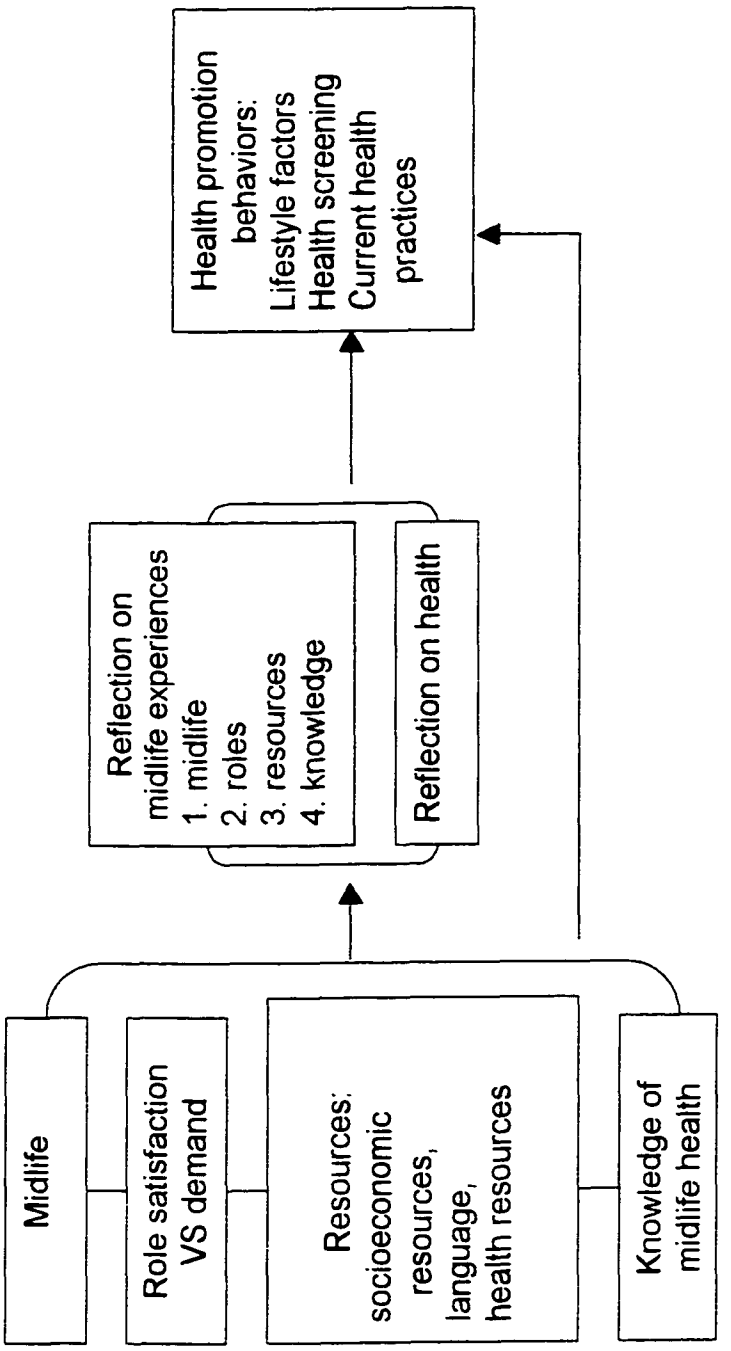
The development of the conceptual model for this study was influenced by the theory of transitions (Schumacher & Meleis, 1994), conceptualizations of health promotion (Bru aker, 1983; Downie, Tannahill & Tannahill, 1996; Green, 1985; Laffrey, 1985; Pender, 1996), and the Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998). The theory of transitions proposes that transitions are processes that occur over time, reflect a dynamic shift from one state to another, and involve changes in identities, role, relationships, abilities, and patterns of behaviors (Schumacher & Meleis, 1994). The conceptual framework of this study may be characterized as a health promotion model as it not only focuses on health promotion behaviors as the outcome of interest, but also adheres to core conceptualizations of health promotion research. Conceptually, behaviors aimed at maintaining and improving health are influenced by individual characteristics and experiences as well as cognitive and perceptual processes. The Vulnerable Populations conceptual model proposes that provision of socioeconomic and environmental resources decrease exposure to risk factors and results in positive health status (Flaskerud & Winslow, 1998).

2.1 Conceptual framework

The conceptual framework proposed a relationship among six broad constructs. These include the life experiences of developmental transition, role quality, resources, knowledge; reflection of these life experiences, and the resulting health practices. It is proposed that the multidimensional life experiences at a developmental transition in conjunction with role quality, availability of resources, and knowledge, will affect reflection on these experiences. Reflection, in turn, was considered to be associated with evaluating and choosing a pattern of health practices.

The Midlife Transitions Health Model (Kim, 1999) describes the concepts congruent with these broad constructs, and was the conceptual framework for the proposed study (Figure 2-1). In this model, midlife was seen as a developmental transition that portrays these characteristics and influences health behaviors. Among several factors that were postulated to be significant to health outcomes of a transition, the meaning and expectation of the transition and level of relevant knowledge and skills (Schumacher & Meleis, 1994) are related to the concepts of reflection and knowledge in the model. The concepts of midlife experiences, role quality, availability and use of resources, reflection, and health promotion behaviors are essential components of the model that uphold the central focus on health promotion. The inclusion of resource availability as a main concept with particular relevance for the health of immigrants, a vulnerable group, is also based on the basic premise of the Vulnerable Populations conceptual model (Flaskerud & Winslow, 1998).

Figure 2-1. The Midlife Transitions Health Model
Concept level



Philosophically the framework stems from a critical theory standpoint that seeks to integrate historical-hermeneutic and empirical-analytic approaches with the goal of empowering participants through the process of constructing and using their own knowledge. This approach encourages "a process of reflection in the consciousness" (Habermas, 1971) with the goal of creating knowledge that furthers autonomy and responsibility. Critical theory, therefore, aims at bringing self-knowledge and self-reflection to an individual whose perception of a situation is clouded by values imposed by society (Kim & Holter, 1995). This view is reflected in the model's focus on integrating contextual factors relating to midlife experiences with immigrant realities within a process of reflection and its effect on health promotion activities.

The model was developed by integrating personal experiences of participants and general experiences of non-participants, a strategy proposed for theory development with the critical theory approach (Meleis, 1997). It was initially constructed by concepts identified in the literature as being salient to midlife women's health promotion and the theoretical influences described above. Findings from a qualitative pilot study of immigrant Korean women at midlife (Kim, 1998) were relied on to revise the model, following the belief that women are legitimate sources of knowledge and full participants in research (Campbell & Bunting, 1991).

The Midlife Transitions Health Model focuses on midlife as the developmental transition for this study, and proposes that physical, emotional,

and social changes experienced at midlife may affect reflection on this stage as well as perceptions of health. Role satisfaction/demand corresponds to role quality, and was also proposed to affect reflection on midlife and health status. Sociodemographic characteristics, adaptive characteristics, and instrumental support correspond to resources, and along with knowledge of midlife health, were proposed to have additional influences on reflection on midlife and health status. In turn, reflection on midlife and health status were proposed to influence health promotion behaviors.

The following section describes and discusses literature findings for each of these concepts and their proposed relationships. Starting with an overview of health promotion and midlife research, discussion of the concepts of the Midlife Transitions Health Model will follow.

2.2 Overview of health promotion

Definitions of health and health promotion

Health is a broad and dynamic concept that differs widely from person to person, an integral foundation of ideas and actions that are affected by individual beliefs, cultural influences, and societal values. As interest in and emphasis on health is increasingly becoming visible and valued, health has evolved into a commodity itself (Liaschenko, 1997).

Tripp-Reimer (1984) analyzed conceptual approaches to health and categorized three schools of thought. The first perspective regards health to be

present in the absence of pathologic symptoms. This dichotomous perspective follows the biomedical model and values structural and functional wholeness. The second notion is a linear view of health that places health on a continuum of sequential states from optimal health to death. Finally, there is the eudaimonistic model of health, that extends health to encompass psychologic and social well being. Each perspective is seen as inadequate, especially when constructed solely based on an etic approach that espouses objective measures without consideration of personal interpretations (Tripp-Reimer, 1984). Goals for health promotion will vary widely according to whether the etic or emic approach of focusing on the viewpoint of the client is taken.

Downie and colleagues (1996) contend that despite various definitions and descriptions of health, most distinguish a positive and negative dimension to health, and expand on positive health as having the following two components: 1) Subjective well-being, that arises from and reflects empowerment and may be enhanced by the development of lifeskills; and 2) fitness, that focuses on physical attributes. The goal of health promotion, then, is "the balanced enhancement of physical, mental, and social positive health, coupled with the prevention of physical, mental, and social ill-health" (Downie, Tannahill & Tannahill, 1996, p26).

Some explicit distinctions have been made between health promotion and disease prevention (WHO, 1984; Brubaker, 1983), and health promotion and health protection (Pender, 1996, pp 33-35). Pender's (1996) concept of health

protection is essentially disease-specific and avoidance-based, with the aim of stabilizing health. The Health Belief Model (HBM) is given as an example of an approach that follows the concept of health protection. Health promotion, in contrast, is described as aiming for actualizing overall well being (Pender, 1996, pp33-35) and forms the basis of Pender's (1987; 1996) Health Promotion Model (HPM). The model is a modification of the HBM and aims to be action-oriented.

While these definitional distinctions appear to be different, both reflect the principle that health promotion is a different function aimed at actualizing overall well-being rather than being tethered to absence of disease. Many others, however, have used health promotion rather ambiguously as a convenient umbrella descriptor, resulting in blurry conceptualizations and confusion. Indeed, health promotion has been used interchangeably with disease prevention, health protection, and health education, and even considered synonymous with distant concepts of social engineering (Downie, Tannahill & Tannahill, 1996; Hibbard & Pope, 1987). Downie and colleagues (1996) argue that approaches that strictly define health promotion as being distinct from health protection or prevention, as well as approaches that consider health promotion to be capable of limitless boundaries, are inadequate in addressing enhancement of positive health sufficiently as well as concretely. As a resolution, the dimensions of health education, prevention, and health protection are all proposed to be intricately related to health promotion (Downie, Tannahill & Tannahill, 1996). Health education consists of efforts to influence beliefs, attitudes, and behaviors.

Prevention consists of measures to avoid disease or illness conditions. Health protection, is defined as comprising legal or fiscal controls, regulations, and policies aimed at enhancing positive health, such as in public health measures (Downie, Tannahill & Tannahill, 1996). Based on these dimensions, Tannahill (1985) frames health promotion as encompassing overlapping spheres of health education, prevention, and health protection for the aim of enhancing positive health and reducing the risk of illness. Other researchers have used similar expansive descriptions as well, reflecting the appropriateness and relevance of broadly conceptualizing health promotion (Green, 1985; Laffrey, 1985).

A pilot study that employed focus groups was conducted with immigrant Korean women on their conceptualization of midlife and health promotion, and experiences associated with midlife (Kim, 1999). The narratives of the 21 immigrant Korean women, who ranged from 44 to 61years of age and participated in one of four focus groups, form the foundations for the proposed study. Findings indicated that health is conceptualized as an integration and balance between mind (attitude, thoughts), body (physical state, functioning, lifestyle), and spirit. In particular, attitudinal and cognitive dimensions of health were noted foremost in the discussions of all four focus groups. Spirituality and relationship with God permeated the discussions as well.

Participants discussed various measures important for maintaining or improving their health. Maintaining a balance in daily life, exercise and physical activity, spiritual and religious measures (trusting in God), stress relief and

adequate rest, keeping focus/purpose in life, positive attitudes, regular checkups, and nutritional and dietary changes were noted in order of importance. The range of these health promotion measures addressed all areas of health that they had identified and indicates that both protective measures against specific illnesses, as well as general lifestyle approaches, are significant for enhancing health.

The proposed study aimed to build on an emic approach to health and health promotion based on what immigrant Korean women have identified. This study sought to recognize the dynamic nature of health but also encompass concrete indicators of positive health. It emphasized an expansive conceptualization of health promotion proposed by Tannahill (1985) that encompasses general lifestyle patterns, disease prevention measures, and health education.

Health promotion in women at midlife

In recent years social scientists have emphasized a life course perspective in approaching research on women. Such an approach broadens the scope of inquiry beyond child bearing and reproductive issues to all stages of women's lives. Women's health research has been redefined as moving beyond reproductive organs to include comprehensive health promotion, maintenance, and restoration (American Academy of Nursing Expert Panel, 1997).

Much of nursing research on health promotion has focused on Pender's HPM (1987 version). Researchers have attempted to integrate Pender's concept

of health promotion with Orem's concept of self-care (Hartweg, 1990; Hartweg & Berbiglia, 1996), and have developed instruments to measure health promotion behaviors, such as the Health Promoting Lifestyle Profile (HPLP) based on the HPM (Walker, Volkan, Sechrist & Pender, 1988). Among studies related to midlife women's health, nurse researchers have tested the empirical adequacy of the HPM (Duffy, 1988; 1997; Gillis, 1993; Gillis & Perry, 1991), and used the HPLP with various samples of midlife women (Ahijevych & Bernhard, 1994; Duffy, Rossow & Hernandez, 1996; Stuifbergen & Roberts, 1997). Other areas of health promotion research including women at midlife, consist of promoting physical activity (Evans & Nies, 1997; Masse et. al, 1998), well-being (Dennerstien, Smith & Morse, 1994), self-care (Bernhard & Sheppard, 1992), identifying psychosocial correlates of health (Thomas, 1995), and conducting qualitative exploration of the influencing process of health promotion behaviors (Morgan, 1999).

Health promotion is increasingly being recognized as an important area of research on Korean women's health as well. Lee and Park (1998) analyzed 390 masters and doctoral theses in Korea related to women's health, and found that the most commonly studied topic was health promotion behaviors, which had increased from 10.7% prior to 1992, to 15.7%. However, very few were found to be comparative or based on a developmental perspective. Researchers exploring women's health in Korea have adapted the HPM (Kim, Cha, Lim & Jang, 1999; Lee, Park & Park, 1996; Park, 1997) as well as the HPLP (Kim & Song, 1997;

Lee, Soh & Choi, 1999; Yoo, Kim & Kim, 1999) with Korean women of various age groups. Findings appear to be parallel to significant predictors of health promotion behaviors, such as perception of health, identified in research on Euro-American women using a HPLP approach. However, a different view of health promotion factors was found in Korean immigrants in the U.S. (Kim & Song, 1997). A correlational survey of 425 immigrant Korean adults in New York City examined anxiety in relation to health promotion behaviors. State anxiety was a significant factor affecting health promotion behaviors, with uneducated women of low income who were recent immigrants presenting highest anxiety scores. Health promotion scores from the HPLP were positively related to age (older than 55 years), education (more than graduate school), monthly income (more than $6,000), length of immigration (more than 15 years), health insurance, and absence of health problems. More descriptive and exploratory research is needed to identify and explain significant factors that affect health promotion behaviors among immigrant Koreans.

Despite its wide use, the HPM has several drawbacks. The complexity of the HPM (1987) makes it very difficult to test the entire model with all 13 main variables (Mitchell, 1995). Critical analyses of empirical studies have shown that several main concepts have not been supported as significant predictors of health promotion behaviors (Gillis, 1993) and that the HPM is inadequate in explaining the role of modifying factors in health promotion activity, e.g.,

sociodemographic and biologic characteristics, interpersonal influences, situational, and behavioral factors (Duffy, 1997).

Although revised in 1996 as a model consisting of ten main variables, this revised version is still short of empirical support. Theoretical developments of an expansive idea of health promotion suggest that the HPM's narrow definition of health promotion as relating to lifestyle patterns and self-actualization that is distinct from disease prevention activities may be a disadvantage as well. Health education and nursing interventions based solely on the HPM's unidimensional approach to health promotion may be shortchanged, because opportunistically incorporating the need for disease management and prevention would be of greater benefit to clients. It is also questionable whether concepts such as self-efficacy, a central tenet of the HPM, are truly relevant to or congruent with cultural values that differ from those in the U.S., where independence, self-reliance, and individualism are greatly prized.

Limitations of other health promotion studies done to date are related to single-site design and sampling restrictions. Most of the findings of these studies are potentially inadequate in application to women who are not of European-American descent, due to sampling restrictions.

In recognition of these shortcomings recent research involving community-based midlife women, such as the Seattle Midlife Women's Health Study (SMWH), the Women's Health Initiative (WHI), and the Study of Women Across the Nation (SWAN), are of multi-site design and are comprised of multiethnic

samples that include Asian populations. The WHI and SWAN are currently ongoing. SWAN's focus on Asian women include women of Chinese and Japanese heritage at two of its seven sites and conducts separate analyses accordingly. However, for the SMWH and WHI, it is unclear how the Asian subgroup will be comprised, whether separate analysis of the Asian subset is feasible, or whether it is planned. Without separate analyses comparison of research implications between Asian and Euro-American women cannot be done.

2.3 Overview of midlife

Definition and meaning of midlife

The literal definition of midlife is a period when a person reaches the half-point of his/her lifetime. Despite this seemingly simple definition, research on midlife for women involves several markers that have been used to delineate this period. Chronologic age, the first and simplest marker, has traditionally been used to determine midlife. The current Western notion usually associates the start of midlife with 35 years of age (Brooks-Gunn & Kirsch, 1984). As women live longer than men, however, there has been a case for an upward shift to age 39 years (Brooks-Gunn & Kirsch, 1984). There appears to be a general agreement with the chronologic ceiling for midlife as 65 years of age. Persons older than this age-point are widely referred to as "old" or "older adults" in census categories, clinical settings, and academic research. Korean researchers such as

Lee and colleagues (1997) have proposed developmentally categorizing women 40 to 65 years of age as the midlife phase.

Other markers of midlife include changes in parenting status, child-rearing, and work life events. However, with increasingly diverse reproductive patterns, shifting societal norms, and fluctuating patterns of employment among women, these may not be applicable to normative definitions for today's midlife women (Brooks-Gunn & Kirsch, 1984). Indeed, the definition of midlife may not be clear any longer (Thomas, 1997).

Immigrant Korean women participating in a pilot study conducted in Southern California identified midlife as generally starting at approximately 45 to 50 years of age, and described it as "a time of thinking about Autumn (*sachoogi*)" that was marked by maturity, patience, a sense of comfort, and more time for themselves (Kim, 1999). "*Sachoogi*" is a parallel expression of the standard Korean term for adolescence, "*sachoongi*," that literally means "a time of thinking about Spring." This description implies the perception of midlife as a time of many changes, new realities, and perhaps, adjustments. Midlife was also framed in the realization of aging, accompanied by emerging doubts about their health and abilities.

Midlife health and the perimenopausal transition

Menopause has often been depicted as the prominent conspicuous experience associated with midlife and aging for many women. Numerous

studies have focused on the perimenopausal transition as central to midlife changes. Currently, researchers appear to agree on a multidimensional definition of the perimenopause as a period that encompasses all aspects of a woman's life. Yet, researchers have not approached perimenopausal issues comprehensively but generally followed one of three limited perspectives: biomedical, psychologic, and sociocultural.

Within the biomedical model, perimenopause is defined as ovarian atrophy with the resulting gradual decline of estrogen and concluding with the cessation of menstrual periods. This perspective emphasizes perimenopausal symptoms, that are due to lack of estrogen. Treatment is designed to address symptoms, replace estrogen, and counteract inevitable negative health outcomes. Perimenopause is essentially reduced to a deficiency disease that requires medical management.

A contrasting approach to perimenopause that was identified in Posner's (1979) classic analysis, denies the significance of physical symptoms in preference to psychological processes. Whatever symptoms are present are viewed as originating from psychological disintegration. This "it's all in your head" perspective alludes to a lack of positive attitude and purpose of life as being the cause of somatic symptomatology. While seemingly outdated, remnants of this thought process are still found, such as thinking that women with idle time claim more symptoms at this time of life.

Another approach to perimenopause emphasizes larger forces such as changes in roles and social status, and cultural attitudes towards aging and menopause and implies that they are the cause of midlife women's ailments (Dickson, 1990; Robinson, 1996). The empty nest phenomenon, for example, is based on the assumption that the mothering role takes priority over all other roles a woman may have, and the loss of the mothering role makes women feel useless and devalued (Robinson, 1996). The construction of a "Midlife crisis" where husbands leave their wives for younger women, also reflect cultural attitudes toward aging. The assumption that sociocultural influences determine the experience a woman has during menopause potentially ignores the physiologic changes that occur.

These three approaches encompass the evolving field of midlife research over the last three decades. The unconscious assumptions and propositions of each approach are reflected by the metalanguage of menopause embedded within the literature (Dickson, 1990) and tend to compete with one another in viewing the midlife transition. Not only does the concept of the menopausal transition differ by discipline, but the methodologies of research differ as well (Kaufert, 1990). Indeed, an underlying oppositional stance among the differing viewpoints has been pointed out as an issue that has deterred research on the midlife transition (Flint & Samil, 1990; Mansfield, Jorgensen & Yu, 1989). Each perspective, however, has inherent limitations and is incapable of covering the whole experience of midlife.

Recognizing the inadequacy of these perspectives researchers have recently embraced a developmental approach that recognizes menopause as a naturally occurring transition along the life course (c.f., Carolan, 1994; Fogel & Woods, 1995). This view does not mandate symptomatology or difficulty with the midlife experience, nor does it trivialize perimenopause as a non-event. Rather, all emotional, social, and physical experiences are seen as constituting an integrated pattern according to both chronologic age as well as social age. The transition is viewed as interrelated with phases prior to and following its occurrence. Evolving roles of women and life event trajectories are significant aspects in the developmental approach.

The majority of perimenopausal studies done to date have been framed in a Euro-American or Western model, based on data primarily from clinical samples of mostly middle-class Euro-American women (Avis, Kaufert, Lock, McKinlay & Vass, 1993; Brenner, 1988; Neugarten & Kraines, 1965). The results, such as hot flashes and sweats being the predominant experience (65-85%) among Euro-American women (Brenner, 1988; Neugarten & Kraines, 1965; Oldenhave, Jaszmann, Haspels & Everaerd, 1993), have been applied as a universal phenomenon by clinicians and social scientists, despite a lack of empirical data. A growing body of literature, however, reveals that the perception, experience, and construction of the perimenopausal transition are highly dependent upon culture and context.

Several studies have explored differences among women of different Western cultural groups (Beyenne, 1986; Kay, Voda, Olivas, Rios & Imle, 1982; Robinson, 1996). The seminal work by Lock, Kaufert, and Gilbert (1988) indicated a unique pattern of physiologic parameters of the perimenopause experiences for Japanese women. Vasomotor symptoms such as hot flashes (experienced by 9.5%), night sweats (3.2%), dizziness (7.2%) and nausea (6.1%) were experienced with low frequency among Japanese women. This compares to the high incidence of hot flashes (experienced by 65 to 85%) among Euro-American women in the U.S. (Brenner, 1988; Oldenhave, Jaszmann, Everaerd & Haspels, 1993). The most prevalent symptoms among Lock's sample of Japanese women were stiff shoulders (experienced by 51.7%), headache (27.7%), and back pain (22.4%).

Since then, more studies on the perimenopausal experience of Asian and Pacific Islander women have been conducted. The perception of and experiences associated with perimenopause among specific ethnic groups of Chinese (Chang & Chang, 1996; Haines, Chung & Leung, 1994; Haines, Rong, Chung & Leung, 1995; Tang, 1994), Japanese (Rosenberger, 1986; 1987;) Korean (Lee, 1997), Filipina (Ramoso-Jalbuena, 1994), Singaporean (McCarthy, 1994), Indonesian (Flint & Samil, 1990; Samil & Wishnuwardhani, 1994), Malaysian (Ismael, 1994), Thai (Chirawatkul & Manderson, 1994; Punyahotra & Dennerstein, 1997; Punyahotra, Dennerstein & Lehert, 1997; Sukwatana, Meekhangvan, Tamrongterakul, Tanapat, Asavarait & Boonjitrpimon, 1991)

Hmong (Rice, 1995), Canadian Sikh (George, 1988a; 1988b), and Southern Indian women (George, 1996) have been examined. A comparison of women in south-east Asian countries (Boulet, Oddens, Lehert, Vemer & Visser, 1994) using the same set of instruments has also been done.

The majority of these studies, however, follow the biomedical approach to midlife and menopause, focusing on prevalence of physical and psychologic perimenopausal symptoms. Most also fail to assess perceptions of the woman's overall midlife experience and do not inquire of positive experiences at this time of life or changes associated with the perimenopausal transition that may differ from changes expressed among Euro-American women.

Among Asian women in the U.S., two studies examined Filipina-American women's perimenopausal transition, and depicted it as a time of changing womanhood (Hautman, 1996) with low prevalence of menopausal symptoms but increased risk of osteoporosis morbidity and depression (Berg, 1998). Descriptions of the menopausal transition as a natural process that is interchangeable with midlife and distinct from medicalized views of menopause as a discrete, biological entity were shared by Chinese-American (Adler et al., 2000) and Japanese-American women (Kagawa-Singer et al., in press). For these women menopause was generally perceived an indicator of old age but also considered a new opportunity and second chance at life

Kim (1998) surveyed 264 Korean women between the ages of 40 to 59 in Soonchun City, Korea, on their perimenopausal symptoms and spiritual well

being. Sixty percent of the sample were premenopausal, 20.1% were perimenopausal, and 19.3% were postmenopausal. Neugarten' s (1965) menopausal questionnaire modified through in-depth interviews with Korean women was used to identify perimenopausal symptoms. Overall, 95% of the women experienced one or more perimenopausal symptom, with psychosomatic symptoms (mean score 1.97, SD 1.05) and emotional symptoms (1.62, SD 1.11) perceived as more severe than physical symptoms (1.32, SD 0.89). Aches and pains in arms and legs (2.60, SD 1.52), nervousness (2.41, SD 1.60), loss of memory (2.30, SD 1.58), and exhaustion (2.25, SD 1.55) were rated as the most severe symptoms. Among physical symptoms, headaches (2.14, SD 1.56) were the most severe and hot flashes (1.47, SD 1.60) only rated as the fourth severe symptom. Spiritual well being was measured as religious or existential well being. Higher scores of existential well being were positively related to pre-menopausal status, and negatively related to perimenopausal psychosomatic, emotional, and physical symptoms, whereas religious well being was not statistically significant in any area. Recommendations for support and interventions to increase feelings of worth, purpose, and connectedness were proposed. This study suggests that Korean women associate a wide variety of experiences with their midlife transition and experience patterns of symptom prevalence that differ from Euro-American women.

Over the past decade, only one data-based study on the perimenopausal transition of immigrant Korean women in the U.S was found. Im and colleagues

(1999) conducted a survey of 119 low socioeconomic status immigrant Korean women between the ages of 40 to 60 years on perceived symptoms during the past 6 months. A Korean version of the Cornell Medical Index for women was used to identify general symptom experience, supplemented by 14 questions on perimenopausal symptoms based on previous studies done on western and Korean populations. Open-ended questions on perceived causes and management strategies also were asked. The most prevalent symptom experienced was declining vision (58%), followed by aches in back of neck and skull (55.1%), and feelings of complete exhaustion (47.9%). Pre and perimenopausal women noted a wider range of symptoms as compared to postmenopausal women. The mean number of symptoms also differed significantly according to length of time in the U.S. and work satisfaction, although the directions of the relationships were not specified. Participants tended to believe their symptoms were due to aging, psychological stressors, and physical overwork, and rarely attributed them to menopause. Symptoms such as "urinating every night," "pains in the back," "gum bleeding," and "frequent urination," were perceived to be due to poor postpartum care. The 20 most prevalent symptoms did not include vasomotor symptoms of hot flashes and sweats (experienced by 12%) or night sweating (experienced by 8%). The 20 most prevalent symptoms were distinct from the vasomotor symptoms most commonly expressed among Western women, and suggest a different perspective of the perimenopausal transition.

Management strategies differed according to the perceived cause. For symptoms due to aging, endurance and living with the symptom, Korean traditional medicine, and self-help measures of diet control, exercise, keeping cool, layered clothing, avoiding alcohol and strong emotions, and taking nutritional supplements were employed. For work-related causes, rest, avoiding overwork, changing jobs, adjusting body positions, and over-the-counter analgesics were used. Management strategies for symptoms related to psychological stress and tension included cognitive strategies, optimistic thinking, prayer, and diverting attention to other activities. The study, however, focused on incidence or prevalence of symptoms and neglected to report perception of the significance or severity. Positive aspects of the transition were not assessed. The study also failed to address other measures beyond symptom management aimed at promoting health.

Midlife health: Beyond menopause

Menopause has often been depicted as the prominent conspicuous midlife experience for many women. Prior to general interest in menopause, however, midlife was long overlooked and considered a static period, despite progressive physiologic changes that occur throughout midlife in many areas. As these changes intermingle with lifestyle and environmental risk factors, they tend to become manifest as pathophysiologic incidents and illnesses over time if health promotion activities are not practiced. For instance, women's risk of developing

and dying from cardiovascular disease increases after menopausal age. Among many factors associated with cardiovascular disease, obesity is insidiously prevalent among midlife women, and increases with age (Fogel & Woods, 1995). Women in their reproductive years often gain excess weight with each pregnancy and may never lose it. Decreasing lean body mass and skin elasticity also occur with aging (Fogel & Woods, 1995). The proportion of overweight women in the United States has steadily increased, and more than 35% of all midlife women are overweight (Fogel & Woods, 1995). Increased thickening of the heart wall and resultant decreased contractility correlate with the onset of hypertension in advancing age as well (Diamond, 1995). This, in addition to increased levels of blood cholesterol, contribute to greater risk of coronary heart disease among older women.

Midlife is also a period when bone density changes occur. Peak bone mass is thought to be reached between the ages of 25 to 35 years, with irreversible bone loss occurring after 35 years of age (Fogel & Woods, 1995). As estrogen levels decrease following menopause, bone osteoclasts trigger greater levels of bone resorption, greater amounts of calcium are excreted in the urine, and calcitonin production is decreased, further adding to bone breakdown (Bond, 1992). One in four women over the age of 45 years are estimated to have progressive significant loss of bone predisposing them to fractures (Fogel & Woods, 1995). Women of Asian heritage with small, thin frames are considered

to be at increased risk of osteoporosis, as well as those who smoke and do not have sufficient calcium intake.

Other changes that occur with aging include decreased immune function and a steady decline in functions such as creatinine clearance time (Diamond, 1995). While the degree of such changes due to the aging process will differ from person to person, they reflect the dynamic shifts in health that are occurring during the midlife years. Approaching midlife as an opportunistic period of such changes may facilitate reevaluating health decisions and adapting new health behaviors at midlife with subsequent implications for later health at an older age.

2.4 Role quality and health

As women are increasingly experiencing multiple types of roles and shifting role transitions, researchers have taken great interest in the nature of multiple role demands, commitments, and their health consequences. The experiential quality of a role, established by the degree of balance between positive and negative experiences, has been postulated as a more significant predictor for distress and well being than the mere number of roles enacted by a person (Baruch & Barnett, 1986). In a landmark study, Meleis and colleagues (1989) studied the effects of personal characteristics, role identity, role integration, and sex-role orientation on perceived health status and psychological symptoms. Eighty-seven multiethnic women clerical workers were recruited from four work sites and interviewed. Role identity was defined as role occupancy and

role involvement and measured by a grid determining the number and degree of involvement among twelve types of roles. Role integration was defined as a balance between perceived role distress and role satisfaction for three primary roles women commonly experience, i.e., the roles of employee, spouse, and mother. Each role was respectively rated on two 10 point scales, from 1 (not stressful/satisfying) to 10 (very stressful/satisfying). Higher scores indicated greater role integration. Sex-role orientation was defined as women's understanding of the female role, and was measured by the Index of Sex-Role Orientation (ISRO). The ISRO consists of 16 items rated on a five point Likert scale, with higher scores indicating greater non-traditional sex-role orientation. Perceived health status was measured on a 10-rung ladder ranging from 1 (worst health) to 10 (best health). Finally, the Brief Symptom Inventory was used to measure psychological symptoms. Neither number of roles nor role involvement predicted psychologic symptoms, although greater role involvement accounted for a more positive perception of health status. Role integration, however, was significantly associated with both perceived health status and psychologic symptoms. Meleis and colleagues (1989) concluded that these findings refute the scarcity theory that additional roles result in role overload, and supported the enhancement or expansion theory that postulates greater potential for rewards and resources with additional roles. While the study lacked exploration of a limit, beyond which role overload may occur, it underscored the importance of perceived role satisfaction and demand in affecting health status.

Immigrants are prone to various role changes as they adapt. For many Korean women who immigrate to the U.S., participating in the work force is an economical necessity to support their families. Many Korean women had not worked outside of the home while in Korea, but upon immigration had to find labor-intensive jobs of lower level occupations such as sewing, maintenance and laundry, and attending hamburger-stands, or join their husbands in running small family businesses (Srole, 1987; Um & Dancy, 1999).

Korean family life is typically based on Confucian philosophy and ethics that determine the roles and values of family members within a patriarchal framework. The traditional roles of husband as breadwinner and decision-maker and wife as the nurturer responsible for the household are distinct (Lee & Lee, 1990). These rigid roles may be challenged when Korean women work outside the home. Immigrant women in particular, may face shifting social expectations of family and work-related roles and subsequent personal conflicts.

Kim and Hurh's 1979 study of 615 Korean immigrants over age 20 in the Los Angeles area, identified a burden of double roles, i.e., housewife and full-time employee, among the women respondents (n=334) who worked (n=163, 67.9%) (Kim & Hurh, 1988). More than two-thirds of the women who were gainfully employed worked nine or ten hours a day or more, and 86.7 per cent also worked on Saturdays. Their level of education was unrelated to their individual earnings, which was less than $17,000 annually. Both husband and wife respondents identified, however, that women primarily undertake most of the

household tasks regardless of employment status, and had matching role expectations that women perform and manage all household tasks.

Gender-role ideology appears to affect differences in health outcomes. Hurh and Kim (1990) surveyed 622 Korean immigrants over age 20 years residing in the Chicago metropolitan area on structural and situational variables related to mental health status, i.e., depression, psychologic impairment, and life satisfaction. The overarching finding was that differences existed between immigrant Korean men and women. Work-related variables and family life satisfaction were strong correlates of mental health among men. Women's mental health was influenced to a lesser degree by family life satisfaction and ethnic attachment variables such as church affiliation, kinship, and neighborly contacts. Employment was positively associated with mental health in both men and women. Women with higher individual earnings had more somatic impairment than those with lower individual earnings. Kim and Hurh proposed that a persistent traditional gender-role ideology for Korean immigrant women may frame employment as entailing additional work but offering few intrinsic rewards.

The issue of double burden continues to underlie studies conducted nearly two decades after Kim and Hurh's research. Um and Dancy's (1999) cross-sectional survey on coping strategies and depression among employed immigrant Korean wives found that they worked an average of 44.5 hours per week (range 20-84 hours) while managing household tasks and taking care of

children. Depression was not significantly associated with demographic variables such as education, income, or number of children. However, it was significantly related to coping strategies of working harder to clean house ($t = 2.15$, $p < .05$), negotiating with husband ($t = -.2.43$, $p < .02$), and taking care of children ($t = -2.61$, $p < .01$). A pilot study of immigrant Korean women who had lived in the United States an average of 15 years (range 3 - 25 years), also identified a double burden of stressors (Kim, 1999). Over half worked full-time and spoke of the stressors of 10 to 12 hours of work each day and simultaneously balancing family and housekeeping responsibilities. They believed that their distress was unique in comparison to their Euro-American counterparts, whom they perceived as having an easier time due to different cultural expectations of women's roles. The double burden was felt also when compared to women in Korea, who generally do not have to work. Many of the focus group participants reported that "everyone starts from scratch here" regardless of their level of education and felt that women in Korea are more likely to find work that matches their level of education or experience and gain respect in their work.

Since Kim and Hurh's study, only one study has examined the importance of role balance and quality in the lives and health of immigrant Korean women. Kim and Rew (1994) studied the relationships among ethnic identity, role integration, quality of life, and experience of *Hwa-Byung*, a culture-specific syndrome, to depression among immigrant Korean women. Seventy-six women in a U.S. southern city, who were between 25 to 60 years of age, married, had

children, and had lived in the U.S. for at least 6 months, were interviewed using four instruments. The translated version of Marmot's (1975) Ethnic Identity Questionnaire (EIQ) is a 40 item measurement rated on a four point Likert scale (strongly agree to strongly disagree), with high scores indicating non-traditional identity. Meleis and colleague's (1989) Role Integration Questionnaire (RIQ) was used to determine the degree of distress and satisfaction for the three primary roles of employee, spouse, and mother. The Quality of Life Index (QLI) (Ferrans & Powers, 1985), used to measure satisfaction of various domains of life and the importance of these domains, is a 68 item measure rated on a six point scale. Respondents were asked also about symptoms of *Hwa-Byung*, a culture-specific syndrome commonly associated with epigastric pain, and somatic, psychologic, and social features. Finally, depression was measured by a translated version of the Center for Epidemiological Studies –Depression scale. In this study, most of the Korean women perceived their three key roles as more positive than negative. Role integration was positively associated with quality of life ($r = .68$, $p < .01$), and both role integration and quality of life were negatively and significantly associated with depression ($r = -.59$ and $r = -.72$, $p < .01$, respectively). *Hwa-Byung* was positively associated with depression ($r = .24$, $p < .05$) and negatively with quality of life ($r = -.39$, $p < .01$). Some weaknesses of this study include methodological issues, such as no reports of the results of pilot testing for reliability and validity of the EIQ and RIQ, although both were used for the first time with immigrant Korean women. Another limitation relates to lack of

description of the role of language barriers, a significant factor that primarily affects all areas of immigrant life. Language issues do not appear to be included in the EIQ, and are not addressed throughout the study.

2.5 Resources and health

Economic resources and health status

Economic resources affect health status on several levels. Lack of income is the most consistent predictor of morbidity and mortality in the U.S. (Adler, Boyce, Chesney, Folkman & Syme, 1994; Blank, 1995; Cooper, Yuan, Landfeld & Rimm, 1996; Hamburg, 1996; Singh & Yu, 1996). Regardless of their level of education and work experience, immigrants tend to start at low-prestige and low-income occupations that pose greater health risks, yet all too often do not provide health care coverage. Immigrant women, in particular, tend to work in the lowest-paying jobs that may expose them to occupational hazards such as work place toxins (Ivey, 1999).

Socioeconomic status may be more influential in informing health practices and decisions on seeking health care than cultural influences and beliefs. A survey of 102 immigrant Korean patients in the U.S. explored the relationships among education, socioeconomic status, levels of cultural and structural assimilation, and health care seeking patterns (Miller, 1990). Cultural assimilation was measured by food preference and ability to speak and read English, and structural assimilation was measured by ethnicity of the

respondents' social and professional organizations, friends, neighbors, and frequency of inviting non-Koreans to home. Education was significantly related to preferring American foods and better ability to speak and read English, but was not significantly related to changing Korean immigrants' health beliefs and health practices. The study also found that family income level, not assimilation measured by preservation of traditions and contacts, was related to use of western versus traditional Korean medicine based health care. Higher income families made more visits for traditional Korean medicine services while lower income families made more visits to Western physician offices. It was not clear, however, how availability or type of health care coverage or length of immigration related to health practices or choice of health care services.

For immigrants, length of immigration appears to affect knowledge of health screening practices and use of health care services. In a study of 229 predominantly low income Korean women over age 50, longer duration of residency in the United States was significantly and positively related to ever having had a screening mammogram (Maxwell, Bastani & Warda, 1998). Length of residence was also significantly related to having heard of a digital rectal exam in a study of colorectal cancer screening with 263 urban Korean men and women in the U.S. (Kim, Yu, Chen, Kim & Brintnall, 1998).

Language barriers and health status

Immigrant women tend to stay in their own ethnic enclaves, and subsequently have fewer opportunities to develop language skills or the ability to

navigate and negotiate complex organizations, including the health care industry, of American society (Ivey, 1999). Language proficiency has been associated with mental health outcomes of immigrants. Hurh and Kim's (1990) community survey found that immigrant Korean women with lower English proficiency experienced greater somatic impairment than women with higher proficiency although the level of correlation was not high (r = -.18, $p < .05$).

Nah (1993) conducted face-to-face interviews with 90 immigrant Korean families in the U.S. about their perceptions of adjustment problems of the general immigrant Korean community as well as personal problems encountered. Four sets of open-ended questions were asked that went from general to specific. The first two questions dealt with general and personal adjustment problems, and the last two sets probed the family's current sources of worry and unhappiness. Language (55.8%) was rated as the most significant problem affecting the immigrant Korean community. This problem was followed by concern for children (15%), mental health (9.2%), employment (7.5%), and general health issues such as illness and burnout (5.8%).

The language barrier is evident in other studies of Korean communities in different geographic locations as well. The 1994 Korean Health Survey of two Northern California counties found that 75% of the women interviewed did not speak English well or fluently. The 1989 Korean Health Survey of Los Angeles County found that only one quarter of Koreans visit non-Korean physicians, with language difficulty cited as the most frequent barrier to seeking care from non-

Korean providers (KHEIR, 1990). Miller's (1990) study of 102 immigrant Koreans in the Los Angeles area found that while 57% had some college or more, only 2% claimed they spoke English fluently while 24% could not speak English at all and nearly half of the respondents never read English publications or newspapers.

Access to health care coverage and health status

Several studies suggest that lack of health care coverage is negatively associated with self-perception of health status and health behaviors. A telephone survey of the general population per state during 1994-95 found that, in most states, more persons without health care coverage considered themselves to be in poor or fair health than those who have some type of health care coverage (CDC, 1998a). Higher levels of physical inactivity and tobacco use were reported among those without health care coverage as well (CDC, 1998a).

Having no regular source of care is common among persons lacking health care coverage (CDC, 1998b), and it has been linked to lower access to services of all types in the Behavioral Risk Factor Surveillance Survey as well (CDC, 1995; 1999b).

Self-care health practices also appear to vary by health care coverage. Uninsured Koreans in a community health survey used more inexpensive analgesics, while Koreans with health insurance used more costly traditional tonic medications (*boyak*), typically concocted from herbs such as ginseng, and

other medicinal ingredients such as dried antler pieces (KHEIR, 1990). According to a national comparative survey of minority health care, more Asian American and Pacific Islanders lack health care coverage than the total U.S. population average, with Koreans estimated as most likely to be uninsured of all Asian groups (Asian and Pacific Islander American Health Forum, 1999). Miller (1990) found that 28% of the 102 immigrant Koreans she interviewed did not have any type of health care coverage, despite 63% being gainfully employed. A pilot study on immigrant Korean women at midlife in the Los Angeles Area found higher rates of deficient health insurance (Kim, 1999). Although 52.4% of the participants worked full-time, 57% lacked health care coverage.

Utilization of health services and health status

Patterns of community health service utilization are complex and are affected by knowledge, acculturation, and socioeconomic status. Use differs from Euro-Americans by type of services used and by degree of use, i.e., under-utilization. Korean immigrants appear to use a combination of Western and traditional health services according to nature of the illness and in shifting patterns that vary by sociodemographic characteristics. Both Western trained physicians and traditional medical doctors are sought mainly for treatment purposes (KHEIR, 1990). About one third of Western trained physician visits are for regular check-ups while one quarter of visits to traditional doctors are to purchase tonic medications (*boyak*) (KHEIR, 1990). Korean immigrants tend to prefer Western-

oriented health care for illnesses such as cancer, heart disease, respiratory disease, and diabetes, and have split preferences for using both Western and Eastern-oriented traditional health services for arthritis and hypertension, but prefer to seek traditional health care for strokes (Miller, 1990). Income is also associated with health service utilization as Koreans with higher family income tend to use traditional Korean health services for acupuncture and herbal medicines more often than Western-oriented health care, while lower income families tend to use more Western health care (Miller, 1990). Among western-oriented health visits Korean immigrants who lived in the U.S. less than 5 years seek public health facilities 50% more frequently than those who had lived in the U.S. more than 10 years (KHEIR, 1990). This is despite the increase of knowledge of public health services with longer stay in the U.S. and is perhaps due to lower cost of public health services or no insurance.

Immigrant Koreans are also more likely to under-utilize health services. Health People 2000 objective 16.11 is to "increase to at least 60 percent those aged 50 and older who have receive mammograms in the preceding 1 to 2 years" (Public Health Service, 1991). In 1997, an age-adjusted total of 71.3% of women reported receiving mammograms within the previous two years (CDC, 1999b). Cross-sectional surveys of immigrant Korean women in several California Counties, however, found low rates of having a mammogram in the past two years varying from 34% (Wismer et al., 1998a) to 36% (Maxwell, Bastani & Warda, 1998). In the latter study, 49% of the women surveyed had

never had a mammogram. For colorectal cancer screening, only 11.3% and 8.8% of immigrant Korean women interviewed in the Chicago area reported ever having a digital rectal exam and fecal occult blood testing, respectively (Kim, Yu, Chen, Kim & Brintnall, 1998).

2.6 Knowledge of midlife symptoms and health care recommendations

Health care practices among Korean immigrants are often a pluralistic combination of Western biomedicine, Korean traditional medicine (Hanbang), and the shamanistic approach (Chin, 1992; Im, Meleis & Lee, 1999; KHEIR, 1990; Miller, 1990). A community survey found that medications brought in from Korea, such as antibiotics and traditional tonic medications (*boyak*), and over-the-counter medications were frequently used among Korean households (KHEIR, 1990). Im and colleagues (1999) found that while some women were taking hormone replacement therapy to manage symptoms related to menopause, Korean traditional medicine and self help measures such as diet control, exercise, nutritional supplements, and over-the-counter analgesics were used by most women for menopausal symptoms. These patterns of symptom management may be related to lacking the knowledge to differentiate signs indicative of disease from general changes occurring with the midlife transition or aging.

Studies have shown also that immigrant Koreans to the U.S. are unaware of health care recommendations for cancer screening and risk profiling and

subsequently underestimate the importance of such tests. Immigrant Koreans in the U.S. have been shown to have inaccurate knowledge of the seven cancer warning signals, are less likely to have ever heard of colorectal cancer screening tests (Kim, Yu, Chen, Kim & Brintnall, 1998), and have misconceptions of breast cancer risk factors (Maxwell, Bastani & Warda, 1998).

2.7 Reflection on midlife experiences and health

Most of the studies on midlife have been framed in a biomedical viewpoint and focus on the incidence or presence of symptoms with lack of attention to positive experiences, symptom severity, or reflection on such experiences. Korean immigrant women in a focus group pilot study conducted by this investigator expressed a wide range of physical, emotional, and social changes that included insightful and positive expressions (Kim, 1999). Physical changes included stiffness and pain in joints, weakness and tiredness, decreased vision, hot flashes and sweating, weight gain, heaviness in chest, sleep problems, headaches, menstrual changes, wrinkles, graying hair, and increased levels of cholesterol. Joint pain and stiffness was particularly common in the shoulder and neck area, and referred to as "the fifties shoulders (*oshipkyun*)." Emotional changes included feeling lonesome, empty, wistful, distressed, sad, and angry more often, to opposite sentiments of feeling more relaxed and free, not as anxious, more tolerant of others, and less likely to become angry. Relationship changes with husbands reflected ambivalence, from feeling wistful and wanting

more supportive understanding from husbands, to feeling more compassion towards their husbands. Changes in relationships with others tended to indicate becoming more tolerant, understanding, or indifferent to differences with fewer conflicts.

Despite experiencing a wide range of symptoms, however, immigrant Korean women do not appear to be seeking medical treatment for these symptoms. Because of their reluctance to seek medical treatment, they also may not be offered or exposed to health promotion activities that might be suggested by their health care providers. Several other issues may contribute to this pattern, including the lack of resources, knowledge, and language ability, as discussed in above sections. Ideas and attitudes formed by cultural influences and individual experiences may be the deeper engrained factors that underlie the reticence among immigrant Korean women to participate in recommended health screening for their age. Ideas that health care is only sought for life-threatening illnesses and that symptoms are relatively trivial and may be self-treated effectively with over-the-counter medications and/or traditional medicines are examples of such factors. Women may also believe it is too bothersome to find time to seek care in the current health care delivery system as they will have to wait long hours only to be seen briefly without sufficient time for consultation or explanation, a problematic combination. The influence of Confucian traditions and value credited to Korean women enduring and prevailing in silence may also hinder women from seeking appropriate health care as necessary.

Information is limited on the role of reflection on midlife to health behaviors. It may be proposed that women who experience more extreme physical, emotional, or social changes and perceive their midlife experiences as health-threatening may be more likely to seek health services for treatment and health promotion than women with a perception of midlife as uneventful, manageable, or healthy. Women who perceive themselves to be capable of managing their multiple role demands and available resources, and who perceive themselves to be knowledgeable about midlife health issues may be more likely to enact healthy lifestyle changes and seek health screening services than women without such perceptions. Although these dimensions of reflection may appear distinct, this study proposes that they are interrelated and integrated, flowing from a subconscious process to influence decision-making regarding health promotion activities at this time of life.

2.8 Assumptions of the study

Based on the literature review and the conceptual framework the following assumptions were made:

1. Participants will have the cognitive capability to recall, evaluate and reflect on their experiences.
2. Participants will give honest accounts of their experiences.

2.9 Research Questions

Based on the conceptual framework and the review of the literature, the following research questions were addressed:

1. What are the relationships among midlife changes, role satisfaction/demand, availability of resources, knowledge of midlife health, reflection on midlife experiences, reflection on health status, and health promotion behaviors?
2. What are the significant relationships with reflection on midlife experiences among midlife changes, role satisfaction/demand, resources, or knowledge of midlife health?
3. What are the significant relationships with reflection on health status among midlife changes, role satisfaction/demand, resources, or knowledge of midlife health?
4. What are the significant relationships with health promotion behaviors among midlife changes, role satisfaction/demand, resources, knowledge of midlife health, reflection on midlife experiences, or reflection on health status?

2.10 Operational definitions

Korean immigrant woman at midlife was considered a woman born in Korea, self-identifying as being of Korean heritage, and between the ages of 45 to 64 years. Midlife changes were considered physical, emotional, and social (interpersonal relationships) experiences associated with this time of life.

Role quality was considered the perceived balance between role distress and role satisfaction for the roles of mother, grandmother, wife, employee, housekeeper, and roles related to other social activities such as volunteering and church involvement.

Resources were considered socioeconomic resources of income and length of immigration, language proficiency, availability of health care coverage, and utilization of health services.

Knowledge of midlife health was considered knowledge of general symptoms commonly related to midlife and whether they warrant seeking health care, as well as knowledge of age-appropriate health care recommendations.

Reflection on midlife was considered an integration of reflection of specific midlife changes, roles, resources, and knowledge.

Reflection on midlife changes was considered descriptors of midlife changes experienced and rated on a five-point scale (1=not notable at all, to 5=very notable), as well as evaluative descriptions given in response to qualitative questions on the overall experience of midlife.

Reflection on roles was considered perceived capability of managing roles in comparison to other women of similar age and earlier adulthood, as better, same, or worse.

Reflection on resources was considered perceived capability of making the most of resources in comparison to other women of similar age and earlier adulthood, as better, same, or worse.

Reflection on knowledge was considered how knowledgeable respondents perceived themselves to be overall, as well as in comparison to other women of similar age.

Reflection on health was considered the perception of current health status and capability of managing health in comparison to other women of similar age and earlier adulthood, rated as better, same, or worse.

Health promotion behaviors were considered 1) lifestyle patterns such as nutritional practices, exercise, stress management, calcium supplementation, use of tobacco, alcohol, and over-the-counter medications; 2) age-specific health screening practices for cancer, hypertension, cardiac disease, and diabetes; and 3) responses to open-ended questions on current practices to maintain or improve health.

CHAPTER 3

METHODOLOGY

3.1 Design

The study used a cross-sectional correlational design to measure the variables identified in the Midlife Transitions Health Model and discover relationships among them. Triangulated methods, i.e., a community-based survey (phase 1) and exploratory qualitative interviews with a subset of the sample (phase 2) were used to gather the data.

3.2 Sample and sampling

Phase 1: Community survey

The sample included women who self-identified as being a Korean immigrant, were between the ages of 45 to 64 years, and lived in Los Angeles County. Women who were pregnant or had a hysterectomy were excluded. Sample size was based on multiple linear regression estimation using the statistical software program, NQuery Advisor. A target sample size of 119 was expected to allow detection of medium correlation effects (R squared=0.13) with power of .80 when testing the model predicting health promotion behaviors from 10 independent variables (predictors) at alpha = .05.

Sampling was done by three methods: 1) women who met study criteria selected from respondents to the Korean American Health Survey (KAHS) 2000; 2) women recruited from the waiting room area shared by the Korean Health

Education, Information, and Research Center (KHEIR) health care clinic (western medicine), *Hanbang* clinic (acupuncture and *Qi* therapy services), and social services office; and 3) women recruited from a church-sponsored cancer screening health fair and a separate church site.

The KAHS 2000 is a large community survey of the health status and needs of Korean-Americans in Los Angeles County, that is based on the National Health Interview Survey (KHEIR, 1999). Using Kim's random sampling method (Shin & Yu, 1984), persons with the uniquely Korean surname "Kim" were randomly selected from a telephone directory. As approximately 22% of Koreans have the surname "Kim" it was assumed that a randomly selected subgroup of Kims would be representative of Korean-Americans in general. Questionnaire sets were sent to selected Kims to be completed for themselves as well as for all other household members. The first Korean Health Survey done in 1989 used this sampling method to recruit 1, 162 Korean-Americans from 345 households under the surname "Kim." For the KAHS 2000, every 5th Kim was selected from the telephone directory of Los Angeles County using the software program PhoneDirect, version 1998. After eliminating persons with no address, questionnaire sets were mailed to approximately 1,600 Kim households. A self-addressed stamped envelope was provided and telephone follow-ups by trained bilingual personnel were made up to four times to maximize questionnaire return. An estimated 800 households had moved, were disconnected, or refused to participate upon telephone follow up. Data was collected from approximately 500

households during November, 1999 to March, 2000.

A list of women who met the study criteria was compiled from the KAHS 2000 database. A letter describing the purpose of the study, procedures of participation, incentive information, and principles of anonymity and confidentiality was sent to selected women (Appendix A). Women were given the opportunity to choose their preferred method of participation, either telephone, face-to-face interviews, or completing the questionnaire set by mail. A toll-free phone number was provided should the women have questions or choose not to participate. A follow-up phone call was made 1-4 weeks following the initial letter to women who had not called to indicate a refusal to participate, to identify their preferred method of participation. The purpose of the study, procedures of participation, incentive information, and principles of anonymity and confidentiality were explained once more at that time and an interview appointment was made or a questionnaire set was mailed. Participants were recruited from November 28th, 2000, to February 28th, 2001.

The waiting room of the KHEIR health services center, a community-based organization, was used as a second site to recruit participants. Flyers were posted in the waiting area, which was shared by the KHEIR health care clinic (western medicine), *Hanbang* clinic (acupuncture and *Qi* therapy services), and social services office (Appendix A). Recruitment was done from January 16th to February 28th, 2001, three days a week. The client population was almost exclusively Korean immigrants. The sign in sheet for the health care clinic was

reviewed to identify women who met eligibility criteria by age and zip code, and these women were approached before and/or after their appointments to participate in the study. Women in the waiting area who appeared to be older than the investigator were also approached with a flyer explaining the study and invited to participate. Interested women could choose to be interviewed in the waiting room, by phone, or take the questionnaire set with a postage-paid self addressed return envelope to complete at home and mail in.

Another sampling mode included women recruited from a Korean church-sponsored cancer screening health fair and a Korean church located in Los Angeles County, from June 7th to August 27th, 2000. A flyer explaining the study was posted at a cancer screening health fair sponsored by a local Korean church and the study was explained to women who came for Pap smears and mammograms. At the same time flyers were also posted on the announcement board of a large Korean church in Los Angeles County to seek participation from interested members. Snowball sampling was the mode of recruitment from this site.

Phase 2: Exploratory qualitative interview

A subset of the survey participants who were capable of and willing to share more information on their experiences were included for further interview, sampled according to menopausal status (pre-/peri-, and post-menopausal), and groups of women who have dependent school-age children and grown children

who are relatively independent.

3.3 Procedures

Phase 1: Community survey

Women were given the opportunity to choose their preferred method of participation, i.e., either a telephone interview, face-to-face interview, or completing the questionnaire set by mail. A one-time interview was conducted in Korean according to the participant's preference, although interviews in English were also offered. A subset of the women recruited at the church sites (n=9), however, were interviewed 1-4 weeks later to establish stability of the instruments.

Face-to-face interviews were conducted at the home, workplace, or church of the participant, or at the clinic waiting area, according to the participant's preference. Although personal interviews were the preferred method of data collection, many participants cited long work hours and practical difficulties in setting aside time to meet for a face-to-face interview and preferred to be interviewed by telephone or completing the survey by mail. A time was set aside for women who chose phone interviews and questionnaire sets were mailed or given to participants who chose to complete the survey by mail.

Structured questionnaires soliciting information on sociodemographic background, changes associated with midlife, role satisfaction/demand, language, availability of health care coverage, use of health services, knowledge

of symptoms and health care recommendations, perception of midlife experiences, perception of health status, and health promotion behaviors were used in the interview. A subset of the instruments was in a self-administered format and given to participants to be completed. Items included those developed to be self-administered, e.g., the revised Health Promoting Lifestyle Profile and the Social Desirability Scale, as well as items on hormone therapy use, knowledge on midlife health, health screening questions, and health promotion practices questions. For face-to-face interviews, participants were given time to complete the self-administered portion. A postage-paid return envelope was provided when the participant preferred taking the instrument home and consented to the investigator following up with a phone call as necessary. For phone interviews, the self-administered portion was sent to the participant prior to the set interview time.

Prior to the interview the purpose of the study, procedures of participation, incentive information, and principles of anonymity and confidentiality was explained once more and an information sheet describing the study was given. Consent was then obtained. Interviews proceeded at a pace that was comfortable to participants and breaks were offered as needed in order to prevent them from becoming overly fatigued. The length of the interviews ranged from 25 minutes to 1 hour and 20 minutes.

Following the interview participants were given small gifts congruent with cultural practices and informative to promoting their health as a token of

appreciation for their time. Each participant received a Concern ® mini breast, a silicone breast model with breast lumps embedded to illustrate and encourage the need for breast self exams as well as screening mammography. American Cancer Society Korean brochures on breast self examination and common cancers in women and educational booklets on cancer of the cervix, breast, and stomach were also given. In addition, a booklet in Korean on healthy decisions at midlife describing age-appropriate health promotion and screening activities, common health problems at midlife, space allotted for keeping track of dates and results of exams and check ups, and contact information for community resources was given to each participant.

Phase 2: Exploratory qualitative interview

A subset of the survey participants who were capable of and willing to share more of their experiences were asked to contribute further information on their reflection of midlife, health promotion practices, and barriers and facilitators of health promotion. Participants preferred to extend their time to expand on information already shared throughout or following the time of the interview, as opposed to setting an additional time. Open-ended questions on overall reflection on midlife, health promotion needs at midlife, and barriers and facilitators for health promotion were used to elicit responses, with probes as necessary. These questions took 5-15 minutes to complete and women who participated in phase 2 were given a stationary set as a token of appreciation for their time in addition to

the incentives described in phase 1.

3.4 Human Subjects Protection

Approval for research with human subjects was sought for the study prior to its initiation. The purpose and procedures of the study, as well as measures to ensure voluntary and confidential participation were described in detail. Copies of the recruitment script, flyers, information sheet on the study, and instruments to be used were submitted in both English and Korean for approval.

The study asked women to share their personal experiences and thoughts about physical, emotional, social changes, role-related experiences at midlife, knowledge of symptoms and health care recommendations, information on health care coverage, use of community services, reflection on midlife experiences and health status, and health promotion practices. The study did not pose any major risks to participants. Women were given the option of refusing to answer any items that make them uncomfortable, and could withdraw participation at any time without worry of penalty. Expected benefits from the study included having the opportunity to reflect on their experience of midlife and health promotion practices and seek additional measures to better their health. The mini breast model and educational brochures and booklets on various cancers that participants received as an incentive may have been a benefit in helping women to be more aware of the importance of a thorough self examination and having regular screening. The booklet on healthy decisions at

midlife may have offered additional benefits of empowering participants to seek better health care for themselves, through obtaining accurate health that is age-appropriate and relevant, becoming knowledgeable of local community resources, and more aware of their own health screening practices. Social benefits of the study included using study findings to help researchers and health care providers to better understand factors that significantly affect health promotion behaviors among immigrant women and to focus on allocating time and resources accordingly.

Participants were not asked for information on their legal immigration status at any time, and their names were not documented in any part of the questionnaire sets. All completed questionnaires were stored in a secure file in the investigator's office. Data generated from the study was reported as an aggregate group to prevent identification of individual participants.

3.5 Instruments and psychometric evaluation

Instruments were selected to measure each of the major concepts identified as significant in the study. Table 3.1 contains the concepts, variables, and instruments that were used to answer study questions.

Phase 1: Measurement of variables

Midlife changes

Physical, emotional, and social changes associated with midlife were measured by the 63 item Midlife Health Questionnaire (MHQ), a questionnaire

Table 3.1 Concepts, variables, and instruments

Concept	Variables	Instrument
Midlife	Midlife changes (physical, emotional, relationship/role changes)	Midlife Health Questionnaire
Role satisfaction/dem and	Degree of balance among the roles of wife, mother, grandmother, employee, and housekeeper	Items developed by modifying format of RIQ (Meleis, Norbeck & Laffrey, 1989)
Knowledge of midlife health	Knowledge of symptoms, Health care recommendations	Midlife Health Knowledge Questions
Resources	Income, years in the U.S.	Sociodemographic items
	Language proficiency	Items from the Korean American Health Survey (KAHS) 000 (KHEIR, 1999)
	Availability of health care coverage	
	Use of health services	Items from the KAHS 2000 +Questions developed for this study
Reflection on midlife experiences	Perception of midlife	Midlife Reflection Questions: comparative questions + MHQ + open-ended phase 2 questions
	Perception of roles	
	Perception of resources	
	Perception of knowledge	
Reflection on health status	Perceived current health status, capability of managing health in comparison to other women of similar age, and to earlier adulthood	Health Reflection Questions
Health promotion behaviors	Nutrition, Physical exercise, Stress management	HPLP-II (Walker, Sechrist & Pender, 1995) + open-ended questions
	Calcium supplementation, use of tobacco, alcohol, over-the-counter medication	Items developed following format of HPLP-II
	Health screening practices	Health Screening Questions: Questions on BSE, mammography, Pap smears, cholesterol level, BP, blood sugar, and bone scan developed

developed by the investigator for this study. Thirty items were about physical experiences, 12 items were about emotional experiences, 17 items were about social/relationship changes, and 4 items were about demographic information that provided contexts for emotional and social experiences. Items were constructed from the Menopause-specific Quality of Life Questionnaire (MEN-

QOL), an instrument on menopausal symptoms, literature on Korean women's experiences at midlife (Im, Meleis & Lee, 1999; Kim, 1998) and findings from a focus group study on the midlife experiences of immigrant Korean women (Kim, 1999). The MEN-QOL is a self-administered questionnaire developed to assess changes in women's quality of life, and consists of 29 items on perimenopausal symptoms that respondents rate on a seven-point scale (0=Not bothered at all, 6=Extremely bothered) (Hilditch, Lewis, Peter, van Maris, Ross, Franssen, Guyatt, Norton & Dunn, 1996). It has been evaluated to have good face validity, content validity, construct validity, and test-retest reliability (Hidlitch et al., 1996). Items based on previous studies on Korean women include descriptions of general health status associated with this time of life. Both positive (14 items) and negative (35 items) aspects of experiences were assessed.

Role satisfaction/demand

Measurement of role satisfaction/demand was based on the Role Integration Questionnaire (RIQ), developed by Meleis and colleagues (1989). The RIQ consists of two 10 point rating scales measuring the degree of distress and satisfaction for the primary roles of spouse, mother, and employee. It was translated into Korean in 1990 and tested among 180 nurses, nurse educators, and graduate students. The Korean RIQ was found to have high idiomatic equivalence (r= .93) between translated and back-translated versions, and good

internal consistency (alpha coefficient= .87) (Personal communication, 1999). It has been used with immigrant Korean women in a study of quality of life and depression (Kim & Rew, 1994). Items were added to include the grandmother role, household management, and other social activities such as volunteering or church activities. These were based on data from the focus group study (Kim, 1999) that showed the grandmother role was of substantial significance for immigrant Korean women at midlife, many of whom took care of grandchildren full-time and without visible compensation. Participants in the focus groups also recognized household management requiring a considerable level of time and energy, as well as church activities, spending almost all day on Sundays actively involved in church activities.

A five-point scale was used for this study instead of a 10-point scale, in order to simplify response format and calculation of balance scores by subtracting distress ratings from satisfaction ratings (Meleis, Woods & Laffrey, 1989). The five balance scores were averaged to obtain a total integration score, with a higher score indicating greater role integration.

Resources: sociodemographic characteristics, language, health resources

Participants were asked structured questions about income and years since immigration. Income was measured by annual family income. When the participant was reluctant to reveal the amount she was asked an alternative question whether it was more or less than $ 38,900, the mean household income

in 1998 rounded up (U.S. Census Bureau, 1999).

Language proficiency was self-rated on a five-point scale (0= none at all, to 5= quite fluently) for ability to speak, understand, read, and write in English, following items used in the KAHS 2000. An additional item on daily use of English was self-rated on a four-point scale (1= none at all, to 4= quite frequently). Responses were averaged, with a higher score indicating greater proficiency in English.

Availability of health care coverage was measured by items 34, 35-a, 35-c, and 36 from Section I of the Korean American Health Survey 2000 (KHEIR, 1999). Use of health services was measured by modifying items 24-30 from the same survey that assesses care sought from Western physicians, traditional Korean medical doctors (*haneuisa*), chiropractors, and dentists during the past year. Additional items were developed for type of community health facility (e.g. county facilities, non-profit services), and reason for seeking services (e.g., treatment, checkup, health screening, etc.).

Knowledge of midlife health: symptoms & health care recommendations

The Midlife Health Knowledge Questions (MHKQ) were developed to measure knowledge of symptoms and knowledge of health screening recommendations. The MHKQ assessed symptoms associated with health risks at midlife, such as cardiac disease, cancer of the breast, cervix, and colon, and arthritis. The format is similar to that of the Health Services Study modified from

an instrument initially developed by Adey and Anderson (1975) (Kviz & Flaskerud, 1984). This instrument lists symptom descriptions and asks respondents whether s/he think a person their age should seek medical care about such a problem (1=yes 0=no). Two items on general health problems, insomnia and incontinence, were also assessed but were not included in scoring for knowledge of midlife health.

Knowledge of the health care recommendations were measured by asking respondents to answer true (=1) or false (=0) for a set of statements on health for women their age. Statements were based on health screening recommendations for early detection of breast cancer, cervical cancer, colon cancer, as well as risk assessment of heart disease and diabetes. Items 2, 3, 5, and 8 were scored oppositely as true=0 and false=1. The total number of correct responses indicated a higher level of knowledge of midlife health.

Reflection on midlife experiences

The Midlife Reflection Questions (MRQ) were developed to measure reflection on midlife experiences that includes perceptions of midlife changes, roles, resources, and knowledge. Perception of midlife changes were measured by rating responses to specific changes experienced on a five-point Likert type scale, ranging from not notable at all to extremely notable. Perception of midlife overall was measured by a five-point scale (1= wonderful/exciting, to 5= overwhelming). Perceptions of capability in comparison to other women of the

same age and to earlier adulthood for midlife, roles, resources, and knowledge, were measured by a three-point scale (1= better, 2= about the same, and 3= worse). Responses were summed and averaged to obtain a global score, where higher scores indicate a more negative perception of midlife experiences.

Reflection on health status

The Health Reflection Questions (HRQ) were developed to measure perception of health status. The HRQ asked participants to choose from a three point scale to rate their perceived overall health status (1= good, 2= fair, 3= poor), capability of managing health in comparison other women of same age, and in comparison to earlier adulthood (1= better, 2= about the same, and 3= worse). Responses to these three sets of questions were averaged to get a general score, where higher scores indicate a more negative perception of health.

Health promotion behaviors

Health promotion behaviors were measured by 1) the revised Health Promoting Lifestyle Profile (HPLP-II, Walker, Sechrist & Pender, 1995) with additional items for lifestyle behaviors relating to tobacco, alcohol, and over-the-counter medication use; 2) health screening activities; and 3) current health practices to maintain or improve their health.

The HPLP-II is a 52 item scale scored as four response sets, and has six subcategories of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management (Walker, Sechrist & Pender, 1995). Scoring for response sets are as follows: 1=Never, 2=Sometimes, 3=Often, and 4=Regularly. The use of means rather than sums of the items is recommended to allow meaningful comparisons across subscales (Walker, Sechrist & Pender, 1995). Greater scores indicate better health promotion behaviors. The HPLP-II has evidence of high internal consistency as seen in alpha coefficients ranging from .79 to .82 among the six subscales, and an alpha coefficient of .94 for the total scale in a community sample of 712 adults (Berger & Walker, 1996). A study of 42 adults with Parkinson's disease found comparable Cronbach's alpha coefficients of .94 for the total score, and values of .80 to .92 for the subscales (Fowler, 1997). Concurrent criterion-related validity was found to be moderate in correlating responses with scores for perceived health status (r=.27) and quality of life (r=.47), and test-retest reliability was high (r= .892) among 26 nursing students at a 3-week interval (Berger & Walker, 1996). Items were added on current calcium supplementation as a measure of health promotion, use of tobacco and alcohol, and over-the-counter medication use. Response options followed the HPLP-II for consistency.

Over-the-counter medication use was assessed by frequency of use over the past month, for categories of analgesics, sleep aids, digestive medications,

flu/cold medications, allergy medications, medications to aid bowel movements, and use of supplementary calcium, vitamins, and/or other dietary supplements.

The Health Screening Questions (HSQ) were developed to measure health screening practices. The HSQ measured whether the following age-appropriate health screening recommendations were followed: clinical breast examination, mammography, Pap smear, cholesterol check, blood sugar check, blood pressure check, weight, and height, fecal occult blood testing, and sigmoidoscopy, if the woman is over 50 years of age. Questions were developed to measure these practices, with response options of 0=Never had it; 1=Yes, I have had it, followed by an additional question on date of previous exam/checkup; and 9=Don't know what it is. Responses for this last option were calculated as a score of 0, and responses were averaged to get a total health screening practice score. Greater scores indicated better adherence to health screening practices.

Open-ended questions were asked for other methods used to maintain or enhance health. Example questions on spiritual and cultural practices that may not be covered in standardized scales include "What are some of the things you do to maintain your health or become healthier?" with probes such as "How about spiritually? How about traditional or alternative practices?"

Sociodemographic information

Questions on sociodemographic information, such as age, place of birth, years in the U.S., education, income, religion, menopausal status, and hormone use were also asked, in order to identify the personal characteristics of the respondents. Participants recruited from the KAHS 2000 had data collected on most of this information through their participation in that survey and were not asked redundant questions. Menopausal status was identified by asking respondents to indicate whether they had regular periods (premenopausal), irregular periods and/or changes in flow for the past three months or more (perimenopausal), or had no periods or spotting for more than 12 months (postmenopausal).

Response bias

As traditional Korean cultural values uphold being courteous and agreeable it was possible that participants would feel obliged to provide neutral answers that "save face" and avoid responses that they may fear to be extreme or challenging to the researcher. The Marlowe-Crowne Social Desirability Scale (M-C SD) (1980) was used to inform the interpretation of responses. This 33-item scale assesses the response bias of social desirability and has response options of "yes" or "no." Although it has been tested among different age groups and social groups, no information was available on its use with Asian populations nor on its cross-cultural validity or efficacy in use with Asian women.

Translation of instruments

The HPLP-II and MC-SD were not available in Korean and were initially translated by the investigator, who is bilingual and bicultural. The goal in this translation process was idiomatic or conceptual translation rather than word-for-word translation (Varricchio, 1997). An independent bilingual person back-translated the items into English to ensure the equivalent meaning in both languages. Following translation and back-translation, Korean women from the community were consulted to verify the accuracy and clarity of translated instruments and to establish content validity. A bilingual middle-aged Korean-American nursing scholar with experience working with and conducting research among Korean immigrants, initially reviewed the two versions for accuracy, clarity, and appropriateness. Suggestions for revision included response format (yes/no rather than true/false for the M-C SD) as well as Korean phrases focused on idiomatic equivalence and use of every day phrases. Upon revision, questionnaires were reviewed by a Korean immigrant woman in her early fifties who had similar characteristics to the sampling frame, and a 32 year-old Korean woman with a masters degree in psychology. The panel purposely consisted of women, as the study targeted women. Overall agreement was 87%, indicating good content validity.

Establishing reliability and validity

The instrument set was pilot-tested to establish reliability and validity,

initially administered to 18 women recruited at the church sites. Efforts were made to recruit a wide range of women in terms of income, age, menopausal status, and duration of immigration. The instrument set was administered 1-4 weeks later to establish stability over time. This time interval was based on the interval used for the HPLP-II to establish test-retest reliability (r= .90). Responses were not expected to change drastically over this time period. Internal consistency testing using Cronbach's alpha was used for instruments consisting of items measuring a single variable. Following the interview, participants were also asked about the questionnaire's relevance to and focus on midlife experiences and ways to maintain or improve their health in the context of their immigrant life. No suggestions were made regarding areas of pertinence that they felt were not covered adequately, suggesting acceptable content validity.

Internal consistency reliability was done separately for negative and positive categories of physical, emotional, and social experiences at this time of their life. Reliability was acceptable for positive items (α = .50) and to a lesser degree, negative items (α = .42). Items on midlife symptom knowledge was shown to have high internal consistency reliability (α = .96) and good test-retest reliability (r = .72). For reflection on midlife, internal consistency reliability was good (α = .68) and test-retest reliability was acceptable (r = .57). For the HPLP-II, internal consistency reliability was high for its original 52 items (α = .90) as well as when the four additional items were included (α = .90). Test-retest reliability was also high for both 52 items (r = .93) and 56 items (r = .93). The MC-SD had

high internal consistency reliability (α = .83) and good test-retest reliability (*r* = .70).

Following completion of the study, reliability was examined with responses from the total sample (n = 120). Internal consistency reliability did not improve for the negative or positive categories of physical, emotional, and social experiences. For all other instruments, however, internal consistency reliability measures increased and were high: reflection on midlife (α = .80), HPLP-II 52 items (α = .93), HPLP-II 56 items (α = .93), midlife symptom knowledge (α = .99), and MC-SD (α = .99).

Phase 2: Exploratory qualitative interviews

Qualitative questions on the overall reflection on midlife, such as "What are your feelings about this time of life?" "What is it like overall?" and "What other things are important to you at this time?" were used to assess reflection on the overall experience of midlife. Probes such as "How about in terms of any changes you might have experienced? Physical changes? Emotional changes? Social/relationship changes? Role changes? Economic changes?" were used to solicit open responses.

Other example questions included "What things do you think are most important for women your age in order to stay healthy or become healthier? How about in terms of emotional health or spiritual health?" "What are some of the things that keep you from taking care of your health?" and "What would help you

personally to take better care of yourself?" (Appendix C).

3.6 Missing data

Personal and telephone interviews were used to minimize the possibility of incomplete responses. Follow-up phone calls were attempted up to four times at different hours of the day and weekdays and weekends to resolve incomplete responses. The average response of items was substituted for missing data. One participant refused to answer the MC-SD despite several contacts. In this case analysis was done without substituting and only with what was available.

3.7 Data analysis

Phase 1: Community survey

Descriptive statistics were produced for all variables to summarize the characteristics of the sample and their pattern of responses. Bivariate correlation coefficients were produced to discover inferences about the relationships among the variables. Hierarchical simultaneous regression and stepwise regression was conducted to draw inferences about the nature of the relationships among the predictor variables in relation to the three main outcome variables, reflection on midlife, reflection on health, and health promotion behaviors. The assumptions of normality and equality of variance, independence, and linearity were evaluated. Table 3.2 describes the statistical procedures conducted for each research question.

Table 3.2 Statistical procedures to address research questions

Research question	Statistical procedure
1. What are the relationships among midlife changes, role satisfaction/demand, resources, knowledge of midlife health, reflection on midlife, reflection on health, and health promotion behaviors?	Bivariate correlation matrix
2. What are the significant relationships with reflection on midlife among midlife changes, role satisfaction/demand, resources, and knowledge of midlife health?	Regression of reflection on midlife against midlife changes, role integration, resources, and knowledge of midlife health : comparison of hierarchical & stepwise
3. What are the significant relationships with reflection on health among midlife changes, role satisfaction/demand, resources, and knowledge of midlife health?	Regression of reflection on health against midlife changes, role integration, resources, and knowledge of midlife health : comparison of hierarchical & stepwise
4. What are the significant relationships with health promotion behaviors among midlife changes, role satisfaction/demand, resources, knowledge of midlife health, reflection on midlife, and reflection on health?	Regression of health promotion behaviors against all variables of interest submitted : comparison of hierarchical & stepwise regression

Phase 2: Exploratory qualitative interviews

Responses to the open-ended questions on reflection on midlife, health promotion practices, and barriers and facilitators for health promotion were transcribed verbatim in Korean and analyzed in Korean line by line in order to identify trends and response categories. Response clusters were then grouped to identify underlying themes.

Quantitative and qualitative date was examined for areas of congruence, disparity, and for new information. Congruence was interpreted as supporting and enriching the validity of findings. Disparity was considered to form the basis for future research questions or the use of other methods. New information was considered the generation of knowledge.

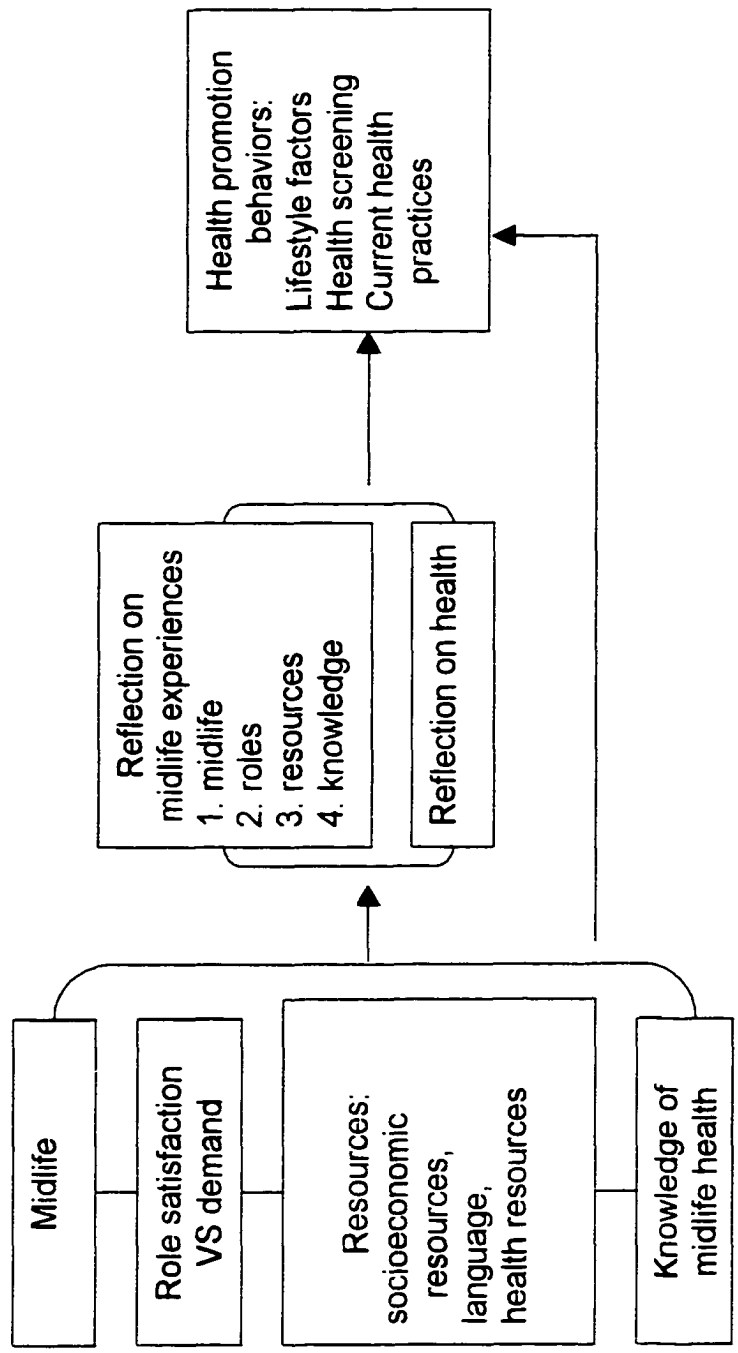
CHAPTER 4

RESULTS

4.1 Introduction

This study sought to examine the midlife experiences, role quality, availability of resources, level of midlife health knowledge, reflection on midlife and health, and the relationships of each of these to health promotion behaviors among Korean immigrant women at midlife. The study had two phases: a cross-sectional community survey using structured instruments, and semi-structured interviews with a subset of the survey participants. This chapter is arranged in sections on sampling and sample, descriptive statistics, and the findings as they relate to the following four research questions (RQ) according to the theoretical framework (figure 4 –1) : RQ 1) What are the relationships among midlife changes, role satisfaction/demand, availability of resources, knowledge of midlife health, reflection on midlife, reflection on health, and health promotion behaviors?; RQ 2) What are the significant relationships with reflection on midlife among midlife changes, role satisfaction/demand, availability of resources, and knowledge of midlife health?; RQ 3) What are the significant relationships with reflection on health among midlife changes, role satisfaction/demand, availability of resources, and knowledge of midlife health?; and RQ 4) What are the significant relationships with health promotion behaviors among midlife changes, role satisfaction/demand, availability of resources, knowledge of midlife health, reflection on midlife, and reflection on health?

Figure 4-1. The Midlife Transitions Health Model
Concept level



Phase 1 and Phase 2 are discussed separately in each section.

4.2 Sampling and the Sample

Phase 1 Participants

A total of 120 Korean immigrant women participated in this study. Fifty-nine women were respondents to the Korean American Health Survey 2000 (KAHS 2000) and 43 women were recruited from the waiting room area shared by the KHEIR health care clinic (western medicine), *Hanbang* clinic (acupuncture and *Qi* therapy services), and social services office. The remaining 18 were women recruited from a church-sponsored cancer screening health fair and a separate church site.

For the survey group letters of invitation to participate in the study were sent to 214 Korean immigrant respondents to the KAHS 2000 who would be between of the ages of 45 and 64 years as of November, 2000, lived in Los Angeles County, and were not currently pregnant. Information about hysterectomy status, an exclusion criterion, was not available from the KAHS 2000. Upon follow up phone contact 4 were found to be ineligible as they had had a hysterectomy, one woman had passed away, and three did not meet study criteria (not of Korean heritage, or did not meet age range). Eighteen women refused to participate and there were 2 sets of duplicate case numbers for the same woman. Follow up phone contacts were attempted a minimum of 2 times at different hours of the day. Among the 98 women contacted by phone for follow

up the first week, 12 (35.2%) were found to be either a wrong number, fax tone, or disconnected. Eighteen (52.9%) of the 34 women spoken to preferred mailed questionnaires to phone or face-to-face interviews and 5 (14.7%) women could not recall having received the letter of invitation although their address information was correct. Considering this pattern of preference and number of misplaced or ignored letters, questionnaire sets were mailed along with a second letter explaining the study, and a postage paid return envelope to women who could not be reached by the phone contact attempts. A follow up postcard was mailed 3 to 7 days following mailing of the questionnaire set, with an additional postcard mailed 7 to 14 days later. Twenty women overall could not be reached by either phone or mail (wrong address, or mailings were returned marked as forwarding orders having expired). One hundred and seven women did not respond to the invitation to the study despite efforts to increase participation such as up to 2 mailings of the questionnaire set, 3 follow up postcards, and telephone contact attempts made during morning and late evening hours as well as weekends. As another method to increase interest and participation, 26 women during a period of the contact process were sent two informational cancer booklets, part of the incentive package for participants, along with the second mailing of the questionnaire sets. However, response was minimal (only 3 returned over the next few weeks).

Of the 167 questionnaire sets mailed, 58 were completed and returned (response rate of 34.7%). Eight of the questionnaires received were excluded

due to the women having had a hysterectomy and an additional woman was excluded as she was found to be younger than 45 years of age. Fourteen women chose to be interviewed by phone and the self-administered questionnaire section was mailed to them to complete and return. Four of these 14 women did not complete the self-administered section and were also excluded from analysis. In summary, 59 women participated from the KAHS 2000 sampling frame.

Among the women approached in the waiting room area located between the social and health services offered by KHEIR, 55 initially agreed to participate. Twenty-four women preferred to take the questionnaire home with them to complete and return by mail, of which 14 were completed and returned (response rate 58.3%). At least two reminder phone messages were left for the ten women who did not return questionnaires. Two of these ten withdrew their participation due to sudden personal circumstances (mother's death, visitors from abroad). Thirty-one women preferred face-to-face interviews in the waiting room area, of which 12 chose to take home the self-administered questionnaire section to complete and return by mail. All but two of the self-administered questionnaires were returned. In summary, a total of 43 women were recruited from this site.

For the church group, 20 women were recruited from a Korean church-sponsored cancer screening health fair and a Korean church located in Los Angeles County and interviewed in person either at the church or in their home, according to their preference. Two women did not complete the self-administered portion of the questionnaire and were excluded from analysis.

A comparison of sociodemographic characteristics of participants based on methods of sampling found there were no statistically significant differences in age ($F(2,117) = 2.4$, $p = .10$), number of children ($F(2, 117) = 1.8$, $p = .17$), menopausal status ($\chi^2 = 7.38$, $df = 4$, $p = .12$), religion ($\chi^2 = 4.33$, $df = 2$, $p = .12$), work status ($\chi^2 = 2.94$, $df = 2$, $p = .23$), current hormone replacement therapy (HRT) use ($\chi^2 = 2.52$, $df = 2$, $p = .28$) and body mass index (BMI) ($\chi^2 = 1.25$, $df = 2$, $p = .54$) among the groups. Years of education, however, differed significantly among participants based on methods of sampling ($F(2, 117) = 5.89$, $p= .00$), as did marital status ($\chi^2 = 8.74$, $df = 2$, $p = .01$), income ($\chi^2 = 7.19$, $df = 2$, $p= .03$), and health care coverage status ($\chi^2= 16.80$, $df = 2$, $p = .00$). The church group was most likely to be highly educated. The clinic group was less likely to be married and more likely to have an annual household income below the national average, and the KAHS 2000 survey respondents were most likely to have health care coverage. The three groups were combined as a total of 120 for analysis.

The sociodemographic profile of study participants is summarized in Table 4.1. The mean age of the women was 53.2 years (SD = 5.91); 63.3% of the women were postmenopausal (n = 76), with almost equal numbers of women who were either premenopausal (n = 21, 17.5%) or perimenopausal (n = 23, 19.2%). Ninety (53.3%) had some college education or more and 40 (33.3%) were high school graduates. The majority of the women were married (n = 106,

Table 4.1 Sociodemographic profile of research participants

Category	Community survey participants (n = 120) N (%)	Exploratory substudy participants (n = 26) N (%)
Age		
45 to 49 years	41 (34.2)	15 (57.7)
50 to 54 years	30 (25)	6 (23.1)
55 to 59 years	23 (19.2)	2 (7.7)
60 to 64 years	26 (21.7)	3 (11.5)
Age (Mean/Standard Deviation)	53 (5.91)	50.27 (5.46)
Education		
6 years	4 (3.3)	0
7 years	2 (1.7)	0
8 years	1 (.8)	0
9 years	7 (5.8)	0
10 years	1 (.8)	0
12 years	39 (32.5)	4 (15.4)
14 years	40(33.3)	9 (34.6)
15 years	7 (5.8)	4 (15.4)
16 years	13 (10.8)	7 (26.9)
17 years	2 (1.7)	1 (3.8)
18 years	3 (2.5)	0
19 years	1 (.8)	1 (3.8)
Education (Mean/Standard Deviation)	13.06 (2.56)	14.69 (1.67)
Number of children		
None	5 (4.2)	2 (7.7)
1	15 (12.5)	4 (15.4)
2	56 (46.7)	13 (50)
3	38 (31.7)	6 (23.1)
4	4 (3.3)	0
5	2 (1.7)	1 (3.8)
Number of children (Median/Mean/Standard Deviation)	2 / 2.23 (.92)	2 / 2.04(1.04)
Family income		
< $38,900	79 (65.8)	16 (61.5)
> $38,900	39 (32.5)	10 (38.5)
missing	2 (1.7)	0
Marital Status		
Married	106 (88.3)	24 (92.3)
Not married	14 (12.7)	2 (7.7)
Current HRT		
No	89 (74.2)	21 (80.8)
Yes	31 (25.8)	5 (19.2)
Menopausal status		
Pre	21 (17.5)	7 (26.9)
Peri	23 (19.2)	5 (19.2)
Post	76 (63.3)	14 (53.8)

Table 4.1 Sociodemographic profile of research participants (cont.)

Category	Community survey participants (n = 120) N (%)	Exploratory substudy participants (n = 26) N (%)
Religion		
Christian	103 (85.9)	25 (96.2)
Other groups	14 (11.6)	0
missing	3 (2.5)	1 (3.8)
Work status		
Working	56 (46.7)	12 (46.2)
Not working	64 (53.3)	14 (53.8)
BMI index		
Normal (< 25)	85 (70.8)	14 (53.8)
Abnormall (≥ 25)	35 (29.2)	12 (46.2)
Health care coverage		
No	65 (54.2)	19 (73.1)
Yes	55 (45.8)	7 (26.9)

88.3%), had children (n = 115, 95.8%), identified themselves as Christians (n = 103, 88%), and were not current HRT users (n = 89, 74.2%). Slightly more women were working out of the home (n = 56, 46.7%) as compared to being housewives (n = 43, 35.8%) and 79 (65.8%) identified their annual household income for 1999 as more than the national average of $38, 900. More than half of the women (n = 65, 54.2%) did not have any form of health care coverage.

Phase 2 Participants

A subset of 26 women from Phase 1 participated in answering exploratory open-ended questions on reflection on midlife and barriers and facilitators for health promotion. The sociodemographic characteristics of Phase 2 participants differed significantly from Phase 1 participants in age ($F(1,144) = 5.52$, $p = .02$) and years of education ($F(1,144) = 9.67$, $p = .00$), with Phase 2 participants more

likely to be younger and more educated (see Table 4.1). There were no significant differences between Phase 1 and 2 participants for the following sociodemographic characteristics: number of children ($F(1, 144) = .84$, $p = .36$), marital status ($\chi^2 = .35$, $df = 1$, $p = .56$), menopausal status ($\chi^2 = 1.30$, $df = 2$, $p = .52$), HRT use ($\chi^2 = .50$, $df = 1$, $p = .48$), work status ($\chi^2 = .00$, $df = 1$, $p = .96$), religion ($\chi^2 = 3.32$, $df = 1$, $p = .07$), BMI status ($\chi^2 = 2.83$, $df = 1$, $p = .09$), income ($\chi^2 = .28$, $df = 1$, $p = .60$), and health care coverage ($\chi^2 = 3.13$, $df = 1$, $p = .08$).

Midlife spans a long period of time and when health and health promotion among midlife women are the focus it may be divided into phases represented by menopausal status and the presence of dependent children in the home. Therefore analyses were done with Phase 2 participants divided into four groups, as presented in table 4.2, by menopausal status (pre/perimenopausal or postmenopausal) and how dependent the children in the household would be (school-aged dependent children or grown, independent children/no children).

Table 4.2. Participant profile by menopausal status and children for exploratory substudy (n = 26)

		Children		Total
		Dependent N (% of total)	None & grown (> 19 y-o) N (% of total)	
Menopausal status	Pre/peri	7 (26.9)	5 (19.2)	12
	Post	3 (11.5)	11 (42.3)	14

Ten (38.5%) women had school aged children under the age of 18 years, five (19.2%) had no children in the household, and 11 (42.3%) had grown

children over the age of 19 years. More pre/perimenopausal women had school-aged dependent children in the household for whom they provided direct care (n = 7), whereas more postmenopausal women had either none or grown, independent children in the household (n = 11).

4.3 Description of study variables

Means, standard deviations, and ranges for all study variables are shown in table 4.3. The number of midlife changes ranged from 3 (few negative

Table 4.3 Mean, standard deviation, and range of scores for study variables in the community survey (n = 120)

	Mean	Mode	SD	Range	Possible range
Midlife changes	18.51	19	6.72	3 – 35	0 – 35
Role integration	5.52	6	5.70	-9 – 23	-24 – 24
Resources					
Health service use	5.62	2	7.54	0 – 38	>0
English proficiency**	6.71	4	3.58	0 – 15	0 –19
Years since immigration*	16.31	20	7.94	2 months – 33 years	>0
Knowledge of midlife health ***	18.3	21	4.11	6 – 23	0-23
Reflection on midlife	33.7	30	6.64	22 – 63	18 – 54
Reflection on health	5.30	5	1.51	3 – 9	3 – 9
Health promotion behaviors	11.6	9.38	2.81	4.79 – 18.14	1 – 19

* n = 117 ** n = 118 *** n = 119

changes) to 35 (many negative changes). The ten most frequently experienced physical problems were identified in the following order: poor memory and decreased vision (each n = 96, 80%), changes in color or texture of hair (n = 88, 73.3%), muscle or joint aches (n = 87, 72.5%), cramping feeling in hands, feet, or

legs (n = 86, 71.7%), drying skin (n = 85, 70.8%), shoulder stiffness and pain (*oshipkyun*) (n = 84, 70%), back pain (n = 77, 64.2%), and feeling tired or worn out and flatulance (wind) or gas pains (each n = 76, 63.3%). For emotional changes, feeling depressed or blue (n = 86, 71.7%) was most frequently mentioned, followed by feeling dissatisfied with personal life (n = 78, 65%). Conflict felt with children was the most frequently listed negative social change (n = 40, 34.5%). The most common physical, emotional, and social (interpersonal relationships) problems associated with this time of life in general were parallel with their personal experiences, although shoulder pains shifted higher in priority and was listed as the fourth most common physical change expected at this time of life. More participants associated negative physical, emotional, and social experiences as occurring more often among other women their age in comparison to what they were experiencing at this time of life. For positive physical, emotional, and social experiences, however, fewer participants felt that other women at this age had such experiences in comparison to how they themselves were feeling.

Role satisfaction/demand scores ranged from –9 (poor role integration) to 23 (high role integration). The main roles of mother, wife, and grandmother, were more satisfactory rather than felt as demanding. Household work was perceived as slightly more demanding than satisfying, while work outside the household was perceived as slightly more satisfying than demanding.

Resources included income, health care coverage, use of health services, English proficiency, and years since immigration. Thirty-nine (32.5%) participants declined to answer when asked the amount of their annual household income but indicated whether it was more or less than $38.900, the national average for 1999. Seventy-nine (65.8%) made less than this amount. More than half (n = 65, 54.2%) had no health care coverage, and 50.8% (n = 33) of these women identified cost as the main reason they lacked health care coverage. English proficiency ranged from 0 (poor proficiency) to 15 (high proficiency) and use of health services within the past year ranged from none to 38 visits. These visits were for medical check-ups (including X-rays, lab tests, consultations, health education appointments), cancer screening, *hanui* services (i.e., traditional Korean medicine, including check-ups, acupuncture, *hanyak*), chiropractic or dental treatment or check-up, or other services used for their health (e.g., health fairs, therapeutic treatments combining heat and pressure). Time since immigration ranged from 2 months to 33 years, with an average of 16.31 years spent in the U.S.

Knowledge scores of midlife health ranged from 6 (little knowledge) to 23 (great knowledge). From 13 items on signs and symptoms among women their age that they felt needed a physician's attention, participants were most knowledgeable about items that could suggest a heart attack, breast cancer, and cervical cancer. From 10 items on health screening guidelines and recommendations for women over 40 years of age, participants were most

knowledgeable about the need for regular pelvic exams with Pap smears and annual mammograms. Whether bone scans were routinely recommended for detection of osteoporosis, and recommendations on colorectal cancer, however, were areas where participants lacked appropriate knowledge.

Reflection scores on midlife ranged from 22 (negative reflection) to 50 (positive reflection). Reflection scores on health ranged from 3 (negative reflection) to 9 (positive reflection).

Overall health promotion behavior scores ranged from 4.79 to 18.14 with a mean score of 11.6 (SD 2.81). The mean score for the HPLP-II in its original form of 52 items was 2.36 (SD .46) and 2.32 for 56 items (SD .43). Among a list of 10 health screening practices generally recommended for midlife women, participants reported ever having been checked for six on average. Blood pressure screening was the most common (94.2%), followed by mammography (85%) and Pap smears (84.2%). Rates of mammography and Pap smear testing within the past two years were 69.2% and 66.7%, respectively. Women reported never being screened for colon cancer most frequently (78.3%). Eighty-five percent (n = 102) of the women acknowledged currently utilizing more than three types of specific practices to maintain or improve their health at least on occasion. Nutritional practices were the most common (93.3%), followed by physical practices (80%), psychological/mental practices (77.5%), and spiritual practices (71.7%). Nutritional practices included focusing on content and amount of diet, and taking calcium or vitamin supplements. Psychological/mental

practices included writing, gardening, and trying to have positive thoughts. Spiritual practices included praying, reading or studying spiritual literature, and listening to songs/sermons. Thirty-seven women (30.8%) also noted use of miscellaneous practices such as taking prescription medications, alternative supplements (e.g., shark cartilage), acupuncture, and heat massage therapy.

Social desirability scores were higher (median = 19, SD = 4.75) than median scores reported in other populations, ranging from 15.4 to 16.04 (Crowne & Marlowe, 1980). It is possible that participants may have felt obliged to respond differently than they would have due to influences of Korean cultural values upholding being courteous and agreeable. However, as testing for the MC-SD among Korean populations has not been reported, the efficacy of the scores may not be directly comparable to previous studies.

Descriptive statistics were produced for all variables and Pearson product moment correlations were used to examine the relationship among socio-demographic variables and the major outcome variables, i.e., reflection on midlife, reflection on health, and health promotion behaviors. There were no significant correlations among sociodemographic variables of age, menopausal status, marital status, number of children or current HRT use on either reflection on midlife, reflection on health, or health promotion behaviors. Education had a significant positive correlation with reflection on midlife ($r = .28$, $p < .01$), reflection on health ($r = .29$, $p < .01$), and health promotion behaviors ($r = .25$, $p < .01$). Income had a significant positive correlation with reflection on midlife ($r =$

.34, p < .01), reflection on health (r = .20, p < .05), and health promotion behaviors (r = .31, p < .01). Women with more education and household annual income levels above $38,900, the national average for1999, had a more positive reflection on midlife and health, and practiced more health promotion behaviors than less educated, low-income women. BMI had an indirect significant correlation with reflection on midlife (r = -.23, p < .05) and reflection on health (r = -.25 p < .01), with overweight or obese women having a more negative reflection on midlife and health. Work outside the home had a significant positive correlation with reflection on midlife (r = .24, p < .01) with working women having a more positive reflection than those who were housewives, retired, or had never worked. Health care coverage had a significant positive correlation with reflection on midlife (r = .27, p < .01), with women with health care coverage having a more positive reflection on midlife. Religion had a significant positive correlation with reflection on health (r = .20, p < .05), with Christians having a more positive reflection on health than those with other or no religion.

4.4 Research Question 1: What are the relationships among midlife changes, role satisfaction/demand, availability of resources, knowledge of midlife health, reflection on midlife, reflection on health, and health promotion behaviors?

Bivariate correlation analysis was done to examine the relationships among the 11 variables. The correlation matrix, as presented in table 4.4, reveals statistically significant positive correlations among role integration and

Table 4.4 Correlation matrix for all variables proposed in the conceptual model

		Health promotion behaviors	Reflection on midlife	Reflection on health	Midlife changes	Role integration	Knowledge	Income	English proficiency	Time in the U.S. (years)	Health service use
Health promotion behaviors	Pearson Correlation		.328**	.287**	.168	.164	.152	.261**	.128	.135	.365**
	Sig. (2-tailed)		.000	.001	.066	.073	.096	.004	.168	.147	.000
	N		120	120	120	120	120	118	118	117	120
Reflection on midlife	Pearson Correlation			.346**	-.178	.217*	.145	.340**	.317**	.397**	.091
	Sig. (2-tailed)			.000	.052	.017	.113	.000	.000	.000	.322
	N			120	120	120	120	118	118	117	120
Reflection on health	Pearson Correlation				-.177	.239**	.109	.203*	.259**	.074	.136
	Sig. (2-tailed)				.054	.009	.238	.027	.005	.430	.139
	N				120	120	120	118	118	117	120
Midlife changes	Pearson Correlation					-.167	.001	-.041	-.060	-.064	.199*
	Sig. (2-tailed)					.068	.988	.661	.519	.491	.030
	N					120	120	118	118	117	120
Role integration	Pearson Correlation						.051	.015	-.190*	-.137	.026
	Sig. (2-tailed)						.577	.876	.039	.142	.776
	N						120	118	118	117	120
Knowledge	Pearson Correlation							.176	.243**	.012	.013
	Sig. (2-tailed)							.057	.008	.899	.887
	N							118	118	117	120

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.4 Correlation matrix for all variables proposed in the conceptual model (cont.)

		Health promotion behaviors	Reflection on midlife	Reflection on health	Midlife changes	Role integration	Knowledge	Income	English proficiency	Time in the U.S. (years)	Health service use
Income	Pearson Correlation								.316**	.082	.139
	Sig. (2-tailed)								.001	.381	.133
	N								116	115	118
English proficiency	Pearson Correlation									.475**	-.011
	Sig. (2-tailed)									.000	.907
	N									116	118
Time in the U.S. (years)	Pearson Correlation										.026
	Sig. (2-tailed)										.779
	N										117
HCC status	Spearman's rho	.324**	.302**	.076	.058	.070	.167	.138	.374**	.398**	.160
	Sig. (2-tailed)	.000	.001	.407	.533	.446	.069	.136	.000	.000	.081
	N	120	120	120	120	120	120	118	118	117	120

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

reflection on midlife (r = .22, $p < .05$), reflection on health (r = .24, $p < .01$), and health promotion behaviors (r = .26, $p < .05$). Income was also statistically directly correlated to reflection on midlife (r = .34, $p < .01$), reflection on health (r = .20, $p < .05$), and health promotion behaviors (r = .27, $p < .01$).

A significant negative correlation between role integration and English proficiency (r = -.19, $p < .05$) was observed, with women less proficient in English having a more positive integration of their multiple roles. A significant positive correlation was found among reflection on midlife and reflection on health (r = .35, $p < .01$), English proficiency (r = .32, $p < .01$), immigration time (r = .40, $p < .01$), and health promotion behaviors (r = .36, $p < .01$). A significant positive correlation was also found among reflection on health and English proficiency (r = .26, $p < .01$) and health promotion behaviors (r = .42, $p < .01$). Knowledge of midlife health was directly correlated with English proficiency (r = .24, $p < .01$) and health promotion behaviors (r = .19, $p < .05$). English proficiency and immigration time (r = .48, $p < .01$), and health service use and health promotion behaviors (r = .21, $p < .05$) were also found to have a significant positive correlation. Midlife changes had a significant positive correlation with use of health services (r = .20, $p < .05$).

Most of the relationships observed for the main outcome variables were in the expected direction and are summarized here. Women who had spent more time in the U.S., had higher income, were more proficient in English, had health care coverage, and had a positive integration of their roles had a more positive

reflection of their midlife. Women with a more positive reflection of their health were those with greater English proficiency, positive role integration, and higher income. More health promotion behaviors were practiced among women with higher income, positive role integration, who frequently used health services, were more knowledgeable on midlife health, and had health care coverage. An unexpected finding was that less proficiency in English was related to positive role integration.

Although English proficiency and immigration time were closely related (r = .48) the latter had a stronger direct relationship with reflection on midlife. English proficiency, however, had a significant positive correlation with reflection on health, whereas time spent in the U.S. did not.

4.5 Research Question 2: What are the significant relationships with reflection on midlife among midlife changes, role satisfaction/demand, availability of resources, and knowledge of midlife health?

The conceptual framework for the study proposed that the following eight independent variables were related to reflection on midlife and reflection on health, respectively: midlife changes, role integration, resources (immigration time, English proficiency, health care coverage, income, education, and health service use), and knowledge of midlife health. From these variables, only those that were significantly correlated to the outcome variable were included for hierarchical regression analysis. Data were examined for outliers. The majority of

the predictor variables were approximately normally distributed with skewness and kurtosis values within acceptable ranges. Health service use was skewed to the right (skewness 2.49, kurtosis 6.52) and was recategorized as fewer or more than 2.95 (median number of visits) visits within the past year. None of the variables were highly correlated ($r > .5$) and could be safely included in regression analyses.

A hierarchical regression analysis was done with reflection on midlife as the dependent variable using five independent variables proposed in the conceptual framework that had significant correlation coefficients with reflection on midlife: role integration, time in the U.S., English proficiency, health care coverage, and income. The five independent variables, presented in table 4.5, explained 42.4% of the variance in reflection on midlife (Adjusted R^2).

Table 4.5 Hierarchical regression of Reflection on midlife (n =114)

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	23.80	1.27		18.68	.00
Role integration	.40	.081	.37	4.99	.00
Income	3.56	1.00	.28	3.58	.00
English proficiency	.36	.16	.21	2.31	.02
Time in the U.S.	.21	.07	.28	3.23	.00
Health care coverage	1.19	.99	.10	1.21	NS

Role integration (beta = .37, p = .00), time since immigration (beta = .28, p = .00), income (beta = .28, p = .00), and English proficiency (beta = 21, p =.02), were found to be significant predictors of reflection on midlife. Women with higher role integration scores had the greatest relative influence on a positive reflection on midlife, followed by longer time in the U.S. and an annual household income greater than $38,900, followed by proficiency in English.

As a comparison, stepwise regression was conducted with the following variables that included three additional sociodemographic variables that had significant correlations with reflection on midlife: role integration, English proficiency, time since immigration, health care coverage, income, education, and BMI status. These variables explained 25.5% of the variance in reflection on midlife when entered into the regression based on statistical significance. Education (beta = .23, p = .01), income (beta = .22, p = .01), role integration (beta = .21, p = .01), health care coverage (beta = .20, p = .02), and BMI (beta = -.18, p = .03) were significant predictors of midlife.

The stepwise regression based on statistical significance supported significant variables identified in the hierarchical regression analyses based on theoretical significance. Role integration, health care coverage, and income were strong predictors of reflection on midlife. In addition, education and BMI status were significant predictors.

To test the scope of the theoretical model the following 8 variables used in stepwise regression analyses were entered simultaneously for reflection on midlife as the dependent variable: role score, English proficiency, time in the U.S., health care coverage, income, education, work status, and BMI status. These variables explained 42.5% of the variance in reflection on midlife. Role integration (beta = .35, p = .00), time in the U.S. (beta= 28, p = .00), and income(beta = .25, p = .00) were significant predictors of reflection on midlife. This regression model had the highest adjusted R^2 with higher beta values suggested more influential relationships.

Reflection on midlife through a cultural lens

Among phase 2 participants, pre/perimenopausal women with school-aged dependent children in the household (n = 7) were concerned foremost about their children and their education (n = 4), followed by increased interest in and concern about their own health (n = 3). Two women, however, reported that they could not take more interest in their own health as family responsibilities were still too demanding. Other priorities included achieving financial stability (n = 2) and wanting to be able to put more priority in their own interests (n = 2). In comparison, postmenopausal women with school-aged dependent children in the household (n = 3) were concerned foremost with their health due to physical changes experienced with midlife.

Among women who had no children or grown, independent children in the household, physical changes at this time of life and increased concern with health was mentioned foremost in both pre/perimenopausal women (n = 3 out of 4) and postmenopausal women (n = 3 out of 7). Pre/perimenopausal women's next concern was seeing their children get married, whereas postmenopausal women expressed hopes of staying focused and living the rest of their lives meaningfully (n = 3).

In talking about what they felt was important to them at this time of life, a negative tone was generally expressed among women with dependent children in the household as compared to women who had no children or grown, independent children in the household. Among pre/perimenopausal women (n = 4) feelings of decreased confidence, regrets, anxiety, loneliness, and frustration with things not going smoothly were expressed more often than positive feelings (n = 1) when talking about this time of life. Reflective responses were also expressed (n =1), such as speaking more kindly to others since becoming aware of how fretful she felt. Postmenopausal women also expressed feelings of decreased interest, motivation, and confidence, and concern with financial instability (n = 2).

In comparison, among women with no children or grown, independent children in the household, a positive tone was expressed overall regardless of the women's menopausal status. Pre/perimenopausal women in this group expressed feeling more giving toward others, matured, and satisfied (n = 4),

while postmenopausal women expressed feeling more comfortable with less responsibilities, a sense of maturity, and felt that others put more trust in them as they aged (n = 3). Postmenopausal women also expressed reflective statements such as looking back on how they lived their lives and wanting to live without regrets, helping others (n = 3).

4.6 Research Question 3: What are the significant relationships with reflection on health among midlife changes, role satisfaction/demand, availability of resources, and knowledge of midlife health?

A hierarchical regression analysis was done with reflection on health as the dependent variable using three independent variables proposed in the conceptual framework that had significant correlation coefficients with reflection on health: role integration, English proficiency, and income. These variables, as presented in table 4.6, explained 15% of the variance in reflection on health.

Table 4.6 Hierarchical regression of Reflection on health (n =114)

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	3.93	.33		11.87	.00
Role integration	8.360E-02	.02	.31	3.49	.00
Income	.33	.30	.10	1.13	NS
English proficiency	.12	.04	.29	3.09	.00

Only role integration (beta = .31, p = .00) and English proficiency (beta = .29, p = .00) were predictive of reflection on health. Higher role integration scores and proficiency in English had an influence on reflection on health at this time of life.

As a comparison, stepwise regression was conducted with the following variables that included three additional sociodemographic variables that had significant correlations with reflection on health: role integration, English proficiency, income, education, BMI status, and religion (Christian or other). These variables explained 22% of the variance in reflection on health when entered into the regression based on statistical significance. Role integration (beta = .28, p = .00), education (beta = .24, p = .01), BMI (beta = -.21, p = .01), and English proficiency (beta = .19, p = .05) were significant predictors of reflection on health.

The stepwise regression based on statistical significance supported significant variables identified in the hierarchical regression analyses based on theoretical significance. Role integration and English proficiency were strong predictors of reflection on health. In addition, education and BMI status were significant predictors.

To test the scope of the theoretical model role score, English proficiency, income, education, BMI status, and religion (Christian or other) were entered simultaneously for reflection on health as the dependent variable. Role integration (beta = .27, p = .00), education (beta = .23, p = .02), and BMI status

(beta = -.21, p = .02) were significant predictors of reflection on health. This regression model, however, was not as predictive as the stepwise regression model (Adjusted R^2 = .21).

4.7 Research Question 4: What are the significant relationships with health promotion behaviors among midlife changes, role satisfaction/demand, availability of resources, knowledge of midlife health, reflection on midlife, and reflection on health?

First, a hierarchical regression analysis was done with the number of health promotion behaviors practiced as the dependent variable using the following three theoretically proposed independent variables that had significant correlation coefficients: health care coverage, income, and health service use. These variables explained 21.9% of the variance in health promotion behaviors, with health service use (beta = .32, p = .00) , health care coverage (beta = .22, p = .01), and income (beta = .19, p = .03) being significant predictors. Next, reflection on midlife and reflection on health, both significantly correlated with health promotion behaviors, were entered into the regression. Both had significant beta values and together explained 12.7% of the variance in health promotion behaviors. Finally, from all the independent variables that were proposed to influence health promotion behaviors, only variables that demonstrated significant beta values as described above were entered into the regression: health care coverage, income, health service use, reflection on

midlife, and reflection on health. These variables, as presented in table 4.7 explained 26.9% of the variance in the number of health promotion behaviors. Health service use (beta = .31, p = .00) and health care coverage (beta = .18, p = .04), were influential variables, i.e., more frequent use of health services and having health care coverage influenced the practice of more health promotion behaviors.

Table 4.7 Hierarchical regression of Health promotion behaviors using only significant beta variables (n = 118)

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	6.12	1.26		4.86	.00
Health service use	1.71	.46	.31	3.75	.00
Health care coverage	.98	.47	.18	2.09	.04

R^2	Adjusted R^2	R^2 Change	F	p
.300	.269	.031	9.59	.00

Following hierarchical regression analyses, a stepwise regression was conducted in the following order. First, the following variables that included one additional sociodemographic variable that had significant correlations with health promotion behaviors were entered into the regression: health care coverage, income, health service use, education, and self-identification as Christian or other. These variables explained 22.9% of the variance in health promotion behaviors when entered into the regression based on statistical significance. Use

of health services (beta = .35, p = .00), health care coverage (beta = .21, p = .01), and education (beta = .20, p = .02) were significant predictors of health promotion behaviors. Next, health promotion behaviors was regressed stepwise on reflection on midlife (beta = .26, p = . 01) and reflection on health (beta = .20, p= .03). Finally, of all the independent variables that were proposed to influence health promotion behaviors, only variables that demonstrated significant beta values as described above were entered into the regression: health care coverage, health service use, education, reflection on midlife, and reflection on health. (Table 4.8).

Table 4.8 Stepwise regression of Health promotion behaviors using only significant beta variables (n = 118)

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	4.78	1.46		3.28	.00
Reflection on health	Excluded			1.59	NS
Health service use	1.74	.45	.31	3.86	.00
Reflection on midlife	8.608E-02	.04	.20	2.41	.02
Health care coverage	.99	.47	.18	2.13	.04
Education	.19	.09	.17	2.10	.04

R^2	Adjusted R^2	R^2 Change	F	p
.282	.257	.025	11.31	.00

These variables explained 25.7% of the variance in health promotion

behaviors and contained more of the theoretically driven variables. Health services use (beta = .31, p = .00) had the greatest influence, followed by reflection on midlife (beta = .20, p = .02), health care coverage (beta = .18, p = .04), and education (beta = .18, p = .04). More frequent use of health services, a more positive reflection on midlife experiences, having health care coverage, and higher education influenced the practice of more health promotion behaviors than fewer use of health services, a negative reflection on midlife, lacking health care coverage, and few years of education.

To test the scope of the theoretical model the following five variables used in stepwise regression analyses were entered simultaneously for number of health promotion behaviors as the dependent variable: health care coverage, income, use of health services, education, and self-identification as Christian or other. These variables explained 24.8% of the variance in number of health promotion behaviors. Health services use (beta = .32, p = .00) and health care coverage (beta = .20, p = .02) were significant predictors of health promotion behaviors. This regression model had the highest adjusted R^2 although beta values suggested slightly weaker relationships.

The hierarchical regression explained more variance in health promotion behaviors when only significant beta values were used, while the stepwise regression based on statistical significance contained more of the theoretically driven variables with comparable beta values for the common variables, health care coverage and health services use.

4.8. Cultural influences: barriers and facilitators of health promotion

Four questions were asked to explore how the experiences and cultural outlook of Korean immigrant women frames their views of need, barriers, and facilitators of health promotion: What they felt was most important for A) midlife women in general to promote their health, as well as for B) Korean immigrant women to be able to take better care of themselves, and what the personal C) barriers, and D) facilitators were in taking care of themselves.

Regardless of menopausal status or whether there were school-aged dependent children within the household, women listed mental/psychological health, religious faith, exercise, and regular checkups as most important for midlife women in general in relation to promoting their health. Example statements are presented in tables 4.9.a and 4.9.b.

When asked about other Korean immigrant women like themselves, however, priorities identified shifted to the need for free or low cost health services and information on health problems and services available in the community, as presented in tables 4.10.aand 4.10.b.

The two personal barriers to taking better care of themselves that were shared among the women regardless of menopausal status or age of the children in the household were financial burden (lack of health care coverage) and lack of interest and motivation in seeking health care. Pre/perimenopausal women also mentioned business and/or family responsibilities and fear of being diagnosed with a disease if health services were sought. Postmenopausal women with more

Table 4.9.a. Phase 2, Question A: Responses to what is most important for midlife women to promote their health
Women with dependent children in household

Menopausal status (N)	Category (N)	Example statements
Pre/peri (7)	Mental/psychological health (3)	"The most important thing is to love yourself and do what you enjoy. Your heart has to allow it first [for you to be healthy]" "First of all, being healthy mentally. You have to be at ease" "Finding a sense of stability in one's mental state. You can't do anything when you're stressed"
	Religious faith (3)	"You have to have religious faith" "Most people here in the U.S. have religious faith, you need to rely on that" "You have to have religious faith, because the time to meet God is nearing"
	Regular checkups (3)	"Women our age can bring physical health problems to a doctor" "I see many women with osteoporosis, cholesterol, and problems with their reproductive organs. You can't just be careful [but] have to go for treatment and regular checkups"
	Exercise (2)	"Exercising a lot. Having a balance in mental health and exercising"
Post (3)	Mental/psychological health (2)	"In everything you have to rid yourself of greediness. Materialism and *chaemyun* (losing face) is useless"
	Religious faith (1)	"Having religious faith"
	Regular checkups (1)	"Regular checkups"
	Exercise (1)	"Exercising at least 4 times a week"

Table 4.9.b. Phase 2, Question A: Responses to what is most important for midlife women to promote their health
Women with no children or grown, independent children in household

Menopausal status (N)	Category (N)	Example statements
Pre/peri (5)	Mental/psychological health (4)	"You can get cancer screening tests and watch what you eat, but first of all is your mental health. When you have peace your body will also be healthy. Bad health comes from stress" "Inner peace" "Not getting stressed" "Mental health and spiritual health, they're the same category. You have to be able to take/accept everything comfortably"
	Religious faith (2)	"Faith"
	Other (each 1)	"Exercising and harmony within the family" "I wish medical services were more accessible, finding services with good benefits"
Post (11)	Exercise (5)	"Physical activity daily. You don't have to exercise strictly, but do it as your situation allows" "Exercise, taking care of your body. But above that is mental and spiritual health"
	Mental/psychological health (4)	"Not worrying and always having joy in your heart. Positive thoughts. Then also exercising" "Your heart has to be at peace" "Accepting everything positively, having peace. If you worry a lot and are too cautious your health will suffer"
	Religious faith (4)	"Spiritual health is fundamental. Living by God's words" "Religious faith. I used to insist on Christianity, but now I don't think it matters which faith" "Faith is more important than medicine. I try to avoid taking any medicine"
	Other (each 1)	"Women need education [on] how to stay healthy, not relying on other's help, and to be able take care of themselves" "You have to feel the need intensely [to take care of your health]" "[You need to] set priority in life" "A regular lifestyle" "watching your weight"

Table 4.10.a. Phase 2, Question B: Responses to what is most important for Korean immigrant women to be able to take better care of themselves: Women with dependent children in household

Menopausal status (N)	Category (N)	Example statements
Pre/peri (7)	Health services of benefit (3)	"Health services that we can benefit from. Like cancer screening tests at churches" "Health insurance is too expensive, I'd like free tests" "Health services offering affordable tests. But it needs to be connected also to affordable treatment options. Health fairs usually end in themselves with nothing following. Health information and follow up services should be integrated"
	Information (3)	"Health information in the newspapers and TV. People with small family businesses especially lack information on health services" "Usually Koreans can't use American [English-based] systems effectively. We need information [on health] that's within the Korean community, what is available, when and where"
	Other (each 1)	"Everyone is so busy. Even though you know you have to take care of yourself there's not enough time" "Health problems are from stress. You have to remember your creator and rely that God is in charge" "You have to live with confidence, become perfect in English and know the mainstream American way. Don't worry about *chaemyun* (losing face). However demanding immigrant life is you can use your time effectively, enjoy hobbies, get rid of stress, volunteer"
Post (3)	Health services of benefit (3)	"Financial aid for health services. Most people don't have health insurance" "Health insurance" "Cheaper medical fees"
	Other (1)	"Exercising, also harmony in the family is important. Many families have problems"

Table 4.10.b. Phase 2, Question B: Responses to what is most important for Korean immigrant women to be able to take better care of themselves: Women with no children or grown, independent children in household

Menopausal status (N)	Category (N)	Example statements
Pre/peri (5)	Health services of benefit (2)	"Affordable medical fees" "Health insurance"
	Information (2)	"There doesn't seem to be much health information available" "More information"
	Other (each 1)	"Exercising as possible with your schedules and situations" "Regular checkups and having peace in your heart"
Post (11)	Information (4)	"Free health seminars about health problems for people over 50 would help to motivate and provide information" "Detailed information on available health services" "Group education programs on diseases and ways to take care of yourself that's applicable to each individual" "People don't know what is available"
	Health services of benefit (3)	"The biggest problem is health insurance. It's too burdensome financially. We need programs that offer free health services" "Most people don't have health insurance"
	Regular checkups (2)	"Frequent checkups"
	Other (each 1)	"Immigrant life doesn't allow you enough time. Time management is needed" "Exercising and watching what you eat" "It's hard to find translation services when you need it"

independence from children also identified family responsibilities as a continuing barrier, and cited lack of appropriate health information and time as additional barriers.

Facilitating factors to taking better care of their health were parallel to issues identified as barriers. The wish for basic health care coverage was cited foremost, followed by desiring appropriate health information and services, more time for themselves, and ways to increase their motivation (seeking an exercise partner, participating in social activities, etc).

Scores on midlife evaluation, reflection on midlife, and reflection on health were compared among the four groups, as presented in table 4.11. Women with no children or grown, independent children in the household had higher scores, i.e., a more positive outlook, than women with dependent children. Scores among women with dependent children in the household were higher among pre/perimenopausal women, while among women with no children or independent children, postmenopausal women scored higher.

Table 4.11. Score profile of exploratory qualitative substudy participants

Meno-pausal status	Grouped by children (N)	Midlife evaluation scores		Reflection on midlife scores		Reflection on health scores	
		Median	Range	Mean	Range	Mean	Range
Pre/ peri	Dependent (7)	2	2-5	29.71	24-43	5.29	4-9
	Independent (5)	3	3-4	33	30-36	5.2	5-7
Post	Dependent (3)	3	2-3	29.67	26-31	4.33	4-5
	Independent (11)	3	1-5	35.09	29-42	6.27	4-8
Total	26	3	1-5	32.62	24-43	5.69	4-9

CHAPTER 5

DISCUSSION

The purpose of the study was to examine the midlife experiences, role quality, availability of resources, level of midlife health knowledge, reflection on midlife, reflection on health, and the relationships of each of these with health promotion behaviors among Korean immigrant women at midlife.

The following sections discuss and interpret both quantitative and qualitative findings within the framework of the Midlife Transitions Health Model and the research questions addressed.

5.1 Summary of the research

The major significant findings of the study were that role integration, English proficiency, time since immigration, and income best explained reflection on midlife. These were theoretically proposed variables. Adding statistically significant sociodemographic variables to the regression model did not improve the variance explained. Additionally, reflection on health was significantly related to role integration and English proficiency. These again were theoretically proposed variables. In this case, however, the variance in reflection on health was better explained when significantly related sociodemographic and risk variables (education, body mass index status) were included. Health service use and health care coverage best explained health promotion behaviors. These were theoretically proposed independent variables and they explained greater

variance in health promotion behaviors than did the set of variables identified by statistical significance. The latter model, although explaining less of the variance in health promotion behaviors, contained more of the theoretically proposed variables, including health services use, reflection on midlife, and health care coverage.

5.2 Midlife changes

The participants experienced a wide range of physical problems at midlife. The ten physical problems reported most frequently in the order of highest to lowest frequency were: poor memory, decreased vision, changes in hair texture or color, muscle or joint aches, cramping feeling in hands, feet, or legs, dry skin, shoulder stiffness and pain (*oshipkyun*), back pain, feeling tired or worn out, and gas pains. The prevalence of these problems is similar to symptoms identified in the literature for middle-aged low-income Korean women in the U.S. (Im, Meleis & Lee, 1999). The problems that caused the greatest concern among participants were ordered differently. The five problems causing greatest concern were decrease in vision, aching muscles/joints, shoulder stiffness and pain (*oshipkyun*), poor memory, and changes in hair. These were measures of how notable each experience was in the women's daily lives and not necessarily how severe the symptoms were. Patterns of response in this study were parallel to Kim's (1999) findings of symptom severity among middle-aged women in Korea.

Vasomotor symptom prevalence and severity were not identified as a central experience among this sample. These findings support previous research that Korean women associate a wide range of experiences with their midlife transition and experience patterns of symptom prevalence that differ from the vasomotor symptoms commonly experienced among Euro-American women (Im, Meleis & Lee, 1999; Kim, 1998). This difference in core experiences associated with midlife may be attributable to cultural conceptualizations of the normative experiences at midlife. It is common to associate *oshipkyun* ("the fifties shoulders") with midlife for both men and women of Korean ethnicity. Indeed, 83.3% of this sample associated *oshipkyun* with this time of life. Stiffness and fatigue have been identified as common symptoms of midlife Korean women in other studies as well (Im, Meleis & Lee, 1999; Kim, 1998).

One of the propositions of the study was that the nature and degree of midlife changes would affect reflection on midlife and health, as well as influence health promotion behaviors at this time of life. There was a direct correlation between the number of negative midlife changes reported and each of the main outcome variables. That is, experiencing more negative midlife changes was correlated with a more negative reflection on midlife and health, and with practicing fewer health promotion behaviors. Both negative and positive areas of physical, emotional, and social changes were experienced at midlife. Examples of negative experiences included aches and pains, fatigue, feeling anxious, nervous, or depressed, feeling it was harder to get respect, and feeling greater

conflict with family members. Positive experiences reported by the women included feeling energetic, sleeping well, feeling confident, satisfied, enthusiastic, feeling that they were growing and changing in positive ways, feeling able to and more comfortable with prioritizing their own desires, and greater tolerance towards others.

Traditional Korean culture is deeply rooted in Confucian ideology that values collectivism and the "triple duty" (*sam jong*) of Korean women, emphasizing sacrificial service to her family, i.e., that women first serve their father, after marriage serve their husband, and third serve their son. The positive expressions of this sample associated with this time of life may be related to the force of such cultural influences waning because family responsibilities becoming less demanding at midlife. They may be influenced also by "American" values of gender equality and individuality. Respecting and valuing the elderly is another important Korean cultural value. The women may have seen their own aging as an opportune time to experience maturity and to receive, respect, and greater recognition. Japanese-American women reported similar positive expressions of their midlife transition, a sense of relief and feeling that this time of life was a new reality that offered them an opportunity to "graduate" from the duties of motherhood and actualize their personal desires (Kagawa-Singer et al., in press).

The range of physical, emotional, and social experiences at midlife is highly individual and complex. Attempts to collapse them into measuring a single category of negative or positive experiences may need to be refined to include

the number of changes as well as the nature and weight of each experience, in order to be a relevant and effective measure of midlife experiences. For instance, women mentioned physical problems such as poor memory and decreased vision most frequently and shoulder stiffness was rated as seventh in the order of frequency. However, in terms of greatest significance in their daily lives, the order of problems shifted. While decreased vision was still rated as a very significant problem, shoulder stiffness was reported as the third most notable problem, more significant than poor memory. Therefore integrating these problems into a single index was difficult.

5.3 Role integration

Role integration was conceptualized as the perceived balance between role distress and satisfaction for the roles of mother, wife, grandmother, employee, housekeeper, and other social roles such as church involvement. The findings on role integration demonstrated a complex example of the double burden experienced by Korean immigrant women. Kim and Hurh (1990) reported that Korean immigrant women bear a double burden of balancing family and work roles. This double burden is influenced by a persistent gender-role ideology that emphasizes employment as additional work for women with few intrinsic awards (Kim & Hurh, 1990). Women are expected to continue their household and child care work and to add employment to their other workloads. In contrast to Kim and Hurh's findings, although nearly half of the participants worked while

managing their household and caring for their families, their feelings about work outside the household were slightly more satisfying than demanding. Household work, however, was perceived as slightly more demanding than satisfying. Women worked an average of 45.74 hours per week (SD 20.21), ranging from 3-132 hours of work per week. These hours were comparable to findings from previous studies of Korean immigrant women (Kim, 1999; Um & Dancy, 1999).

An unexpected finding was the significant negative correlation between role integration and English proficiency. Women less proficient in English scored higher on role integration. A possible explanation is that women less proficient in English may be more immersed in their ethnic enclaves and have fewer contacts with contrasting cultures or ideologies. For these women, the likelihood of cultural comparison and internal conflict may be less than for women proficient in English, who may be more directly exposed to shifting societal expectations and cultural ideologies of individualism and gender equality in the division of labor. If lack of English proficiency is considered an indicator for greater ethnic and cultural association, women less proficient in English may have a more traditional cultural view that affirms the role of "wise mother and good wife (*hyunmo yangcheo*)" and values sacrificial responsibility and adaptability. These experiences and values may explain the more positive integration of their roles.

5.4 Resources

A general lack of resources and barriers to health care were revealed among respondents. More than half of the sample had a household income less

than the national average of $38,900 and did not have any health care coverage. Among women employed outside the home, a substantial proportion (39.3%) did not have health care coverage. Rates of employment outside the home were comparable to prior studies of Korean immigrants in the Los Angeles County area (Kim, 1999; Miller, 1990). The proportion of this study sample that did not have health care coverage was similar to that found in a focus group study of Korean immigrant women conducted by the investigator (Kim, 1999) but higher than that reported in other studies (Miller, 1990).

Use of health services was low, with an average of 6.43 visits made to medical doctors, traditional Korean doctors (*hanuisa*), chiropractors, dentists, or other sources of health care within the past year. This is fewer than the number of health care services visits among a sample of primarily Euro-American women that was reported by Bertakis and colleagues (2000). For this latter group, women made an average of four primary care visits, 10 diagnostic service visits, 2.8 specialty clinic visits, and 0.31 emergency room visits in the past year (Bertakis, Azari, Helms, Callahan & Robbins, 2000).

Despite having spent an average of 16.32 years in the U.S., the mean English proficiency score was low, 6.71 (SD 3.58), out of a possible score of 19. This score indicates low to less than average self-rating of English skills. Nine women (7.5%) reported not being able to speak, understand, read, or write English at all. The women reported lack of language proficiency as the second most important barrier to Korean immigrants in seeking health care or taking care

of themselves. Other studies have also supported the significance of language (KHEIR, 1990; Miller, 1990; Nah, 1993). The general lack of socioeconomic, language, and health-related resources among this sample may be attributable to the respondents' immigrant status. Immigrants have been found in other studies to lack income, language skills, and access to health care (Kim, Yu, Chen, Kim & Brintnall, 1998; Snyder, Cunningham, Nakazono & Hays, 2000).

Lack of the resources detailed above exerted significant influence on the three main outcome variables. Household income, length of time in the U.S., and English proficiency were significant predictors of reflection on midlife. English proficiency was also a significant predictor of reflection on health. Use of health services and availability of health care coverage were significant predictors of practicing health promotion behaviors.

5.5 Knowledge

Knowledge of preventive services and of signs and symptoms that require medical attention is considered essential to health promotion behaviors. Participants were quite knowledgeable about midlife health screening recommendations and of signs and symptoms that might be considered dangerous. More than half of the participants correctly identified more than 20 out of 23 items (54.9%). This percentage is higher than rates for knowledge of colorectal cancer and breast cancer risk factors reported by other investigators (Kim, Yu, Chen, Kim & Brintnall, 1998; Maxwell, Bastani & Warda, 1998). This

variation may be attributable to the differences in general knowledge of overall midlife health asked about in this study as compared to detailed knowledge of specific health problems queried in other studies. This high level of knowledge may also be due to the sites from which participants were recruited. Many of the participants were recruited from sites offering health services where women may have received information and emphasis about health care recommendations. Knowledge about bone scan for osteoporosis screening, however, was low, with less than one third of the women having appropriate knowledge about recommended standards for women their age.

5.6 Reflection on midlife and health

The role of reflection as a subjective evaluative process affecting health promotion behaviors has not been clearly examined in the literature. This study is among the first to consider reflection as a predictor of health promotion behavior. The study found that both reflection on midlife and reflection on health were significantly related to role quality, income, English proficiency, and health promotion behaviors. Women who 1) had resources available to them, 2) were more knowledgeable about health issues, 3) perceived themselves as more capable of managing their roles, and 4) had a positive reflection on their midlife experiences, were more likely to practice health promotion behaviors. The same was true of women with a positive reflection on their health. When the participants compared themselves to Euro-American women, they viewed

themselves as being at a disadvantage not only in lacking resources, knowledge, and language ability, but also in time pressures on them from long work hours and household responsibilities. They viewed their status and experiences as immigrants as an influence on their lack of time.

The exploratory open-ended question on reflection on midlife offers an interpretative framework for their responses. An interest in and concern about health was a significant priority among the respondents. The desire for financial stability, seeing their children get married, wanting to put a greater priority into their own interests, and leading focused and meaningful lives were also expressed. Women with no children or independent children in the household expressed a more positive tone in comparison to women with dependent school-aged children. It appeared that although midlife was a time of complex changes it was viewed as an opportune time for achieving their personal goals. This was especially true when family responsibilities were not as much of a constraint for women with no children or independent children in the household. The findings in this study are comparable to those of other investigators in which Chinese-American women described their midlife transition as a new opportunity and a second chance at life (Adler et al., 2000). It also echoes the responses of Japanese-American women who described this time of life as a time of "graduating from womanhood," stepping free from the responsibilities of motherhood and family roles to seeking their own priorities (Kagawa-Singer et al, in press). These priorities were framed in a collective, altruistic sense of purpose.

5.7 Health Promotion Behaviors

Although developed and made available for use in 1995, there are few published studies using the revised Health Promoting Lifestyle Profile (HPLP-II). The HPLP-II measures six subcategories of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management (Walker, 1997). The mean score of the HPLP-II was slightly lower in this study when compared to a study of adults with Parkinson's disease, who were mainly elderly men (Fowler, 1997). As the two samples differ considerably (men vs. women, sick vs. healthy, Euro-American vs. Korean) a direct comparison is not likely to be meaningful. Further use of the HPLP-II among Korean groups is needed to establish a norm for practice of Korean practice of health behaviors.

Comparisons of specific health promotion behaviors between this sample and other Korean samples can be made. Only a small portion of the sample reported never having received a mammogram (15%) or Pap smear (15.8%). Rates of mammography (69.2%) and Pap smear (66.7%) within the past two years met the national objectives proposed in Healthy People 2000 (Public Health Service, 1991). The Pap smear rate for this sample was higher than Maxwell and colleagues' (2000) for Korean immigrants (41%). Mammography rates were higher than reported by Maxwell and colleagues (1998, 2000) and Wismer and colleagues (1998a) for Korean immigrant women over age 50 years,

36%, 25%, and 34% respectively. The higher use of mammography may be attributable to recruitment sites including those that offered screening services for breast and cervical cancer. It is possible that rates are inflated because of such recruitment sites.

The practice of preventive screening was lower, however, in the area of colorectal cancer screening. For colorectal cancer screening, only 21.5% of women over age 50 years reported ever having been screened, and only six (5%) women reported being screened within the past year. Screening rates within the past year were lower than Kim and colleagues' (1998) report of 8.8% of the Korean women surveyed in Chicago being screened for a fecal occult blood testing (FOBT) within the past year. The rate of ever being screened is also lower than national survey results of ever having had a FOBT (39.7%) or sigmoidoscopy (41.7%) (CDC, 1999a).

Other health promotion activities were prominent. Eighty-five percent of the women currently practiced specific measures to maintain or improve their health at least on occasion. Among such measures, psychological/mental practices and spiritual practices were commonly identified and captured dimensions of health promotion that were not readily addressed in the HPLP-II items on lifestyle-related factors or health screening practices. The acknowledgement of these practices reflected also the importance of psychological/mental and spiritual dimensions of health and health promotion

that were identified in a focus group study of Korean immigrant women at midlife (Kim, 1999).

Although knowledge of midlife health was directly related to health promotion behaviors, it was not a significant factor in influencing health promotion behaviors. This finding suggests that knowledge in itself does not change the practice of health promotion behaviors in this population. The limited role of knowledge in affecting health behaviors has been suggested in studies of other health areas such as HIV/AIDS and diabetes. In the case of HIV/AIDS, knowledge is widespread but does not in itself affect sexual or drug use behaviors (CDC, 1997a; May 1997; Denning & Fleming, 1997; Wells & Mayer, 1997). Among people with diabetes and their families, knowledge alone does not change diet, exercise or medication management activities (Foreyt & Poston, 1999; Lipton et al., 1996; Lipton, Losey, Giachello, Mendez & Girotti, 1998). Rather, change in behavior requires a complex set of factors, including the provision of resources, and attention to cultural beliefs and practices. It is possible that providing and/or enhancing available resources within the context of culture may also be more powerful in prompting Korean immigrant women to increase their health promotion and disease prevention activities. This supports the premise of the Vulnerable Populations Model, which proposes that provision of adequate resources is vital in affecting health behaviors (Flaskerud & Nyamathi, 2000; Flaskerud & Winslow, 1998).

5.8 Health and social policy

The findings of this study add perspective to the nature of factors that positively affect health promotion behaviors as well as those that preclude people from seeking appropriate health care. Findings can inform social and health policy decisions to recognize the needs of immigrants and provide basic services that address immigrant health issues in their immediate transition into U.S. society as well as over a longer period of time. An example of services needed that would better prepare immigrants on an individual level is providing orientation classes to introduce immigrants to the various and fragmented components of the U.S. health care industry. In addition, providing English language classes at several levels of proficiency would assist new immigrants in access to health care, jobs, and schooling as well as facilitate their transition into American life. These services may be enacted as federal or State government level initiatives, as well as through community-based organizations that are comprised of members of the Korean community. Policy and legislation that is directed at improving immigrants' use of health care services is also needed. Providing universal health care coverage as a fundamental right is crucial to ensure access to preventive health services and medical treatment. The provision of health insurance and access to care was of highest priority among several recommendations and strategies for improving the health of immigrant women in this study and has been proposed by others as well (Meleis, Lipson, Muecke & Smith, 1998).

Providing high quality translation services on a national level is another area of health policy and legislation that is needed. Although there are standards for linguistic competence they are rarely enforced (Carneiro, 2001). Examples of services needed include establishing a national network of translation services to assist in health care services, setting a standard of a quota system of translators per district that reflects the size of the Korean community and other immigrant communities within the area, and providing funds to recruit and train bilingual translators. Other examples of health policy and legislation that are needed are establishing a national clearinghouse for multilingual health materials, rated for clarity and appropriateness of translation. These would assist immigrants to obtain health information in their own language.

5.9 Limitations of the study

This study is limited by sampling method and recruitment sites. Participants for the Phase 1 survey were recruited from three different sites and sources. One group was drawn from respondents to the KAHS 2000 survey, a health survey of the Korean community in Los Angeles County. Another group was recruited from the waiting room area of a community-based health and social services clinic. The third group was recruited from a church site and a church-sponsored cancer screening outreach event. This difference in recruitment site and sources may account for the variation noted in sociodemographic variables such as years of education, marital status, income, and health care coverage that occurred among the three groups. Participants for

the phase 2 substudy were not randomly selected from phase 1 participants and this may account for the differences in sociodemographic characteristics between phase 1 and phase 2 participants

Convenience sampling resulted in only volunteers and restricts generalization to a larger population. Women who were willing to participate may have been those with a particular interest in health and health promotion. Some of the women were recruited through a church sponsored cancer-screening event and others through a waiting room area of a community-based health and social services clinic. A number of these women had appointments for medical checkups, Pap smears, or mammograms. Women attending a health fair or a clinic may have been more knowledgeable about midlife health issues and recommendations, particularly those surrounding cancer screening.

The setting of the study in Los Angeles County resulted in participants from a large urban area with one of the largest Korean populations in the U.S. These participants generally had access to many services available within and around Korea Town, a focal business and coethnic support area. Results may differ when applied to Korean immigrant women residing in suburban areas or different social environments without coethnic support.

5.10 Implications for nursing research

This study made contributions to research methodology and psychometrics. The development and testing of valid and reliable instruments specific to women with a Korean cultural and ethnic background contributes to advancing

intercultural learning. Ascertaining which concepts translate conceptually as well as semantically, and what they mean in the translation from English to Korean adds to our knowledge of cross-cultural use of instruments.

While most of the instruments had good internal consistency and test-retest reliability, negative and positive categories of physical, emotional, and social experiences at midlife had relatively low internal consistency reliability values. Low internal consistency may be due to a number of reasons. First, items may be measuring more than one concept. Second, translation of the items into the Korean language may result in more than one concept. Third, the various physical, emotional, and social experiences at midlife may be highly individual and complex. Attempts to collapse items into measuring a single category of negative or positive experiences may not adequately capture the number of changes experienced by women individually. The nature and weight given to each experience may be complex, making it difficult to construct a relevant and effective measure of midlife experiences.

The instruments are expected to facilitate other researchers' efforts in conducting descriptive, predictive, and prescriptive research. Cross-cultural applicability to other populations needs to be tested further. The HPLP-II and the Marlowe-Crowne Social Desirability scale must be used in studies of other Korean immigrant groups before anything definitive can be said about their applicability and appropriateness.

5.11 Implications for future research

The study resulted in identifying several additional areas of study. Recommendations for future research include conducting the research with Korean immigrant women residing in suburban areas or different social contexts in which a coethnic enclave does not exist. Comparison of Korean immigrant and non-immigrant women on similarities and differences in factors affecting health promotion behaviors may clarify the relationship between role integration, resources, reflection on midlife, reflection on health, and health promotion behaviors in Korean-Americans. Comparison to non-Korean groups would also be instructive. Role integration and resource availability were important predictors in this study. Further study is needed to design strategies to validate and strengthen the influence of role integration and resource availability in studies of health promotion behaviors.

5.12 Implications for nursing theory building

The Midlife Transitions Health Model appears to add to the knowledge of health promotion behaviors at midlife in the context of midlife experiences, role quality, resources, knowledge, and reflection on midlife and health. It was highly predictive in explaining reflection on midlife and health promotion behaviors, indicating the adequacy of the scope of the model. The model would be strengthened if education were included as an additional resource variable and body mass index as a risk variable that may influence reflection on health and health practices.

The operational adequacy of the model was met as concepts were operationally defined, instruments were valid and reliable measures of the concept, and sample size was adequate. Empirical adequacy, established by congruence found between theoretical claims and the empirical evidence, was generally supported in this study. The relationships between role quality and reflection on midlife and reflection on health were supported. Resources such as English proficiency, time in the U.S., and income were also found to be significant predictors of reflection on midlife and health practices. Neither the range of midlife experiences nor level of knowledge of midlife health were influential in explaining reflection or health promotion behaviors.

5.13 Implications for Nursing Practice

Interventions to assess and manage symptoms and increase knowledge of health behaviors have been a focus in nursing practice. This study, in addition, highlights the role of reflection on health promotion behaviors over variables traditionally thought to be influential in affecting health behaviors, such as knowledge, and demonstrates areas toward which nursing interventions may be directed. Reflection was found to be influenced by the perception of role integration and quality and the availability and development of resources. The provision of resources and social emotional support of role changes may enhance Korean women's health and health practices. Qualitative findings of the study revealed that health is reported as an important concern and priority by

Korean immigrant women at midlife. Despite this importance, family demands and responsibilities, and lack of time may interfere with women being able to take health action. Responses to items asking them to reflect on themselves in comparison to non-Korean American women of the same age showed that Korean immigrant women tend to view themselves as disadvantaged due to language limitations, less access to health resources, and lack of time. Nurses should be sensitive to expanding their health education practices. They can invite women to reflect on their midlife experiences, their access to resources, and their lack of time and help them problem solve in these areas. Nurses can also value initiatives and interest of Korean immigrant women in taking better care of their health and recognize the limitations they face in their daily lives. Explaining health recommendations in ways that will be of greater relevance to the self-identity of Korean immigrant women living the U.S. may be another area of sensitive health education.

Quantitative and qualitative findings illustrated also the lack of health care coverage for immigrant women and the need for assistance in finding health information and accessible tangible resources and services within the community. Nurses can expand their interest and scope of practice to find new and creative ways to connect with established community groups and be more knowledgeable about community resources and needs. They can coordinate health services strategically to make them more accessible to immigrant women. Examples of resource provision that nurses could be involved in include

supporting community outreach health fairs and arranging affordable mobile health screening services. Other resources that nurses could be involved in are health education workshops at local Korean churches after Sunday services and establishing nursing partnerships with Korean churches to continue the care for needy members of their community. The use of core groups to provide health education has been used extensively in HIV/AIDS prevention (Katz & Gerberding, 1997; McKirnan, Ostrow & Hope, 1996). Korean churches may fit the role of a core group. Outreach interventions connected with the Korean church as a core group may be especially appealing to Korean immigrant women who have limited time in their lives. Churches would also provide for the mental/psychological and spiritual dimensions of health that were identified by the participants as important to maintaining and improving health. The potential role of Korean churches as a source of promoting accessibility and acceptability of health education and services has been suggested in other research as well (Chen et al., 1997; Kim, Yu, Chen, Kim & Brintnall, 1998).

Appendix A.

Recruitment material

LETTER OF INVITATION

November 2000

Dear Mrs. Kim,

Although research on Korean immigrants has been growing in various areas, there is a lack of research focused on Korean immigrant women at midlife, particularly in terms of factors related to their health promotion. Midlife is an important time that is often accompanied by various changes, especially as a time of increased awareness of health changes and efforts to prevent disease. You are invited to participate in a study that focuses on the factors that relate to **health promotion behaviors among Korean immigrant women**.

You have been chosen from a list of **respondents** to the **Korean American Health Survey 2000** conducted by the Korean Health, Education, Information, and Research Center (KHEIR) during late 1999 to early 2000. Selection criteria were being a woman between 45 and 64 years, currently not pregnant, and not having had a hysterectomy. This new study is being conducted by Sue Kim, RN, MS, as part of her doctoral program at the School of Nursing, UCLA. Ms. Kim is part of the survey team at KHEIR that conducted the Survey 2000 project. This new study will **generate data on women's health**, especially health in the context of midlife and health promotion, **in addition to** the data collected by KHEIR.

You may **choose to participate** by one of three methods: 1) be interviewed by phone, 2) be interviewed in person, or 3) completing mailed questionnaires. Questions will focus on physical, emotional/mental, social changes experienced at this time of life, your thoughts on these experiences, knowledge on midlife health, and things that you do for your health. Interviews will take 30 to 45 minutes and will be scheduled at a time according to your preference. A portion of the questionnaire is meant to be self-administered and can be mailed to you beforehand. A subset of women who are able and willing will be asked additional open-ended questions on their reflection on midlife, and facilitators and barriers to health promotion. This is expected to take an additional 15 to 20 minutes. Participation in this study is **voluntary** and your personal information will be kept **confidential**. You may choose to stop participation at any time.

As a token of appreciation for your time, you will receive a Concern ® Mini breast model and a health educational booklet in Korean. The mini breast model simulates breast lumps and is intended to aid you in effectively practicing breast self-exams. The health booklet covers information on various cancers, common health problems and strategies, as well as space to document health check ups. If you are asked the open-ended questions, you will also receive an additional gift of a note set or calcium supplements.

If you have any questions and would like to contact Ms. Kim, please call [redacted] **(TOLL FREE)**. If you do not wish to be contacted with further information about the study, please call this number within 10 days. Otherwise, a follow up phone call will be made within a few days to verify which participation method you prefer.

Thank you in advance for your interest.

Sincerely,

Korean Health Education, Information, and Research Center

BECOME A PARTICIPANT IN A UCLA STUDY ON **Korean Immigrant Women's Health at Midlife !**

- YOU MAY BE ELIGIBLE TO PARTICIPATE IF YOU ARE:
  A Korean woman between 45 and 64 years-old
  Are not pregnant
  Have not had your uterus taken out by surgery
  And live in Los Angeles County

- YOU MAY CHOOSE:

To be interviewed by phone
OR be interviewed in person
OR complete a mail questionnaire

This is expected to take 30 to 45 minutes. Questions will focus on physical, emotional/mental, social changes experienced at this time of life, your thoughts on these experiences, knowledge on midlife health, and things that you do for your health. Participation is voluntary and confidential.

You will receive health-related gifts as a token of appreciation for your time.

IF YOU ARE INTERESTED OR HAVE QUESTIONS:

CALL [redacted] **(TOLL FREE)**

~ THANK YOU ~

Health promotion behaviors among Korean immigrant women at midlife

Verbal Recruitment Script to recruit participants at KHEIR health clinic

Hello, my name is Sue Kim. I am a Korean nurse studying midlife experiences and health promotion behaviors of Korean immigrant women. This study is part of my training as a doctoral student at the UCLA School of Nursing. I am interested in understanding what factors are related to behaviors that promote health within the context of midlife, or middle-age, among immigrant Korean women.

If you decide to participate you will be asked a set of questions on your thoughts, experiences at this time of life, and things that you do to maintain or improve your health. There are no right or wrong answers. Your name will not appear on the questionnaire and you may withdraw from participating at any time.

Your participation will help in the development of further research on Korean immigrants and you will receive small gifts as a token of appreciation for your time. Everyone who participates will receive a mini breast model, educational brochures on various cancers, and a healthy decisions booklet.

You can participate if you are between the ages of 45 to 64 years, had not had a hysterectomy, are not currently pregnant, and live in Los Angeles County.

IF	44 YEARS AND YOUNGER
OR	65 YEARS-OLD OR OLDER
OR	HAD HYSTERECTOMY OR IS CURRENTLY PREGNANT
OR	DOES NOT LIVE IN LA COUNTY

Thank you for your interest in the study. However, because the study focuses on women within certain characteristics we will have to stop here. (TERMINATE)

You may now choose how you will participate by one of three methods: be interviewed over the phone, be interviewed in person, or complete questionnaire sets and mail them back. Interviews usually take 30 to 45 minutes and can be scheduled at a time according to your preference. Questions will focus on physical, emotional/mental, social changes experienced at this time of life, your thoughts on these experiences, knowledge on midlife health, and things that you do for your health. A portion of the questionnaire is meant to be self-administered and you may take it home to fill out and mail back if you wish.

If you are interested in participating in the study, which method would you prefer?

1. IF PREFERS PHONE INTERVIEW
   → Thank you. Please tell me when you would like to be called.

2. IF PREFERS PERSONAL INTERVIEW
   → Thank you. We could do it now or you could tell me when and where you would like to be interviewed.

3. IF PREFERS MAILED SURVEY

→ Thank you. Please take this questionnaire packet. There is a stamped envelope enclosed for you to mail back the questionnaire once you complete it.

- IF THE WOMAN IS NOT INTERESTED IN PARTICIPATING, TERMINATE:

I see. Thank you for your time.

Consent to Participate in Research

Health Promotion among Korean Immigrant Women at Midlife

You are asked to participate in a research study conducted by Sue Kim, MS, RN, from the School of Nursing at the University of California, Los Angeles, for her doctoral program. You were selected as a possible participant in this study because you are a Korean woman between the ages of 45 to 64, are not pregnant, have not had a hysterectomy, and live in Los Angeles County or Orange County. Your participation in this study is voluntary and confidential.

Purpose of the Study:

The investigator, Ms. Kim, is interested in understanding what you perceive health at midlife to be and how it may be promoted, as well as the experience of this transitional period in terms of physical, emotional, and social changes that occur or are expected.

Procedures:

If you volunteer to participate in this study, you will be asked to participate by choosing from one of three methods: 1) participating in a telephone interview; 2) meeting with Ms. Kim at an agreed upon time and place for a face-to-face interview, or 3) completing self-administered questionnaire sets that will be mailed to you.

Questions focus on the following topics: physical, emotional, and social changes you have experienced at this stage of your life, work and family roles, reflection on this time of life, reflection on health, and things you do to maintain or improve your health.

The interview is expected to take approximately 30 to 45 minutes. A portion of the questionnaire is meant to be self-administered and will be given to you to fill out on your own and return to Ms. Kim.

A small number of women who are capable and willing to share more information will be asked additional open-ended questions for further information on reflection on their midlife experiences, health promotion practices, and facilitators and barriers to health promotion. If you are selected this is expected to take an additional 15 to 20 minutes.

Overall, the length of participation is expected to range from 30 to 65 minutes, depending on whether these additional questions are asked.

If there are questions that you do not want to answer, you do not have to. If you don't feel like continuing to participate in the study, you may withdraw at any time.

Potential risks and discomforts:

There are minimal risks involved in participating in the study. You may feel bored or tired as a result of the questions. In this case you may choose to take a break and continue the interview at another time.

Potential benefits to subjects:

You may not directly benefit from participating in this research. A benefit of participating in the study may be that the interview will provide an opportunity for you to discover, organize, and clarify your experiences at this time of life and gain insight into your strengths in improving health.

Potential benefits to society:

The study findings may be used to help researchers and health care providers to better understand what factors affect health promotion at midlife. It may also inform social and health policy to recognize the needs of Korean immigrant women and provide basic services that address their health issues more adequately.

Payment for participation:

If you choose to participate in the study, you will receive the following small gifts as a token of appreciation for your time and contributions: a mini breast model that simulates breast lumps, educational brochures on various cancers, and a booklet on healthy decisions at midlife. Women who are asked the additional open-ended questions will also be given a note set or calcium supplements.

Confidentiality:

Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Confidentiality will be maintained by storing completed questionnaires in a locked file separate from any identifying information. Your name will not appear on the questionnaires or in written reports. Only Ms. Kim will have access to the data. All records will be destroyed within three years after the study is completed.

Participation and withdrawal:

Your participation is voluntary. If you decide to participate, you are free to discontinue participation at any time without penalty.

Identification of investigators:

If you have questions or concerns about the research, please feel free to contact Sue Kim, RN, M.S. at [redacted] (TOLL FREE) or Dr. Jacquelyn Flaskerud, RN, Ph.D. ([redacted]. Both are at the School of Nursing, UCLA.

Rights of research subjects:

You may discontinue participation at any time without penalty. If you have questions regarding your rights as a research subject, contact the Offices for Protection of Research Subjects, UCLA, Box 951694, Los Angeles, CA [redacted]

Signature of research subject

My signature indicates that I have read and understand the information provided above, and that I willingly agree to participate in this research study. I will receive a copy of this form.

_____
Name of subject

_____ _____
Signature of subject Date

In my judgement the subject is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

_____ _____
Signature of investigator Date

Health promotion behaviors among Korean immigrant women at midlife

Recruitment Script for Telephone Contact

THE FOLLOWING SCRIPT WILL BE USED TO FOLLOW UP WOMEN WHO DO NOT INDICATE THEIR WISH NOT TO BE CONTACTED FURTHER ABOUT THE STUDY WITHIN 10 DAYS.

Hello, this is KHEIR calling you about a study on the midlife experiences and health promotion behaviors of Korean women who are first generation immigrants. You may recall receiving a letter about this study, being done by Sue Kim, as part of her doctoral training at the UCLA School of Nursing. Ms. Kim is working with KHEIR on the Korean American Health Survey 2000 that you provided information for some time ago, and she is further studying factors that are related to behaviors that promote health at midlife, or middle-age, among immigrant Korean women like you.

If you decide to participate you will be asked a set of questions on your thoughts, experiences at this time of life, and things that you do to maintain or improve your health. There are no right or wrong answers. Your name will not appear on the questionnaire and you may withdraw from participating at any time.

Your participation will help in the development of further research on Korean immigrants and you will receive small gifts as a token of appreciation for your time. Everyone who participates will receive a mini breast model, educational brochures on various cancers, and a healthy decisions booklet.

You can participate if you have not had surgery to remove your uterus (hysterectomy) and are not currently pregnant. Have you had a hysterectomy OR are you currently pregnant?

IF ANSWERS "YES" TO EITHER CASE
→ Thank you for your interest in the study. However, because the study focuses on women with certain characteristics we will have to stop here. (TERMINATE)

IF ANSWERS "NO" TO BOTH
→ Thank you. The focus of the study fits your characteristics.

You may now choose how you will participate by one of three methods: be interviewed over the phone, be interviewed in person, or completing questionnaire sets that will be mailed to you.

Questions focus on your thoughts, experiences at this time of life, and things that you do to maintain or improve your health. If you choose to be interviewed by phone or in person it is expected to take about 30 to 45 minutes. A portion of the questionnaire set is meant to self-administered and will be sent to you along with a postage paid envelope.

A small number of women who are capable and willing may also be asked a few additional questions in the course of the interview. These questions will be about their reflection on this time of life, and facilitators and barriers to health promotion, and are expected to take 15 to 20 minutes. Women who are asked these additional questions will also be given a note set or

calcium supplements as a token of appreciation. Overall, the length of your participation is expected to range from 30 to 65 minutes, depending on whether these additional questions are asked

If you are interested in participating in the study, which method would you prefer?

1. IF PREFERS PHONE INTERVIEW
→ Thank you. Please tell me when you would like to be called by Ms. Kim.

2. IF PREFERS PERSONAL INTERVIEW
→ Thank you. Please tell me when you would like to be contacted by Ms. Kim to arrange when and where she could go to meet you for the interview.

4. IF PREFERS MAILED SURVEY
→ Thank you. Please tell me the address you would prefer to have the questionnaire set mailed to.

- IF THE WOMAN IS NOT INTERESTED IN PARTICIPATING, TERMINATE:

I see. Thank you for your time.

Appendix B.

Instrument set (Phase 1)

RESPONDENT ID#: _____

DATE OF INTERVIEW: __ __/__ __/__ __
M M D D Y Y

LOCATION: _____

RECORD CURRENT TIME (TIME BEGAN): ___ ___ : ___ ___ AM / PM

1. I would like to start by reading you some statements. Please tell me which one best describes you.

I still have regular periods 1
My periods have been irregular and/or with changes in flow for the last 3 months or more 2
I have not had a period or any spotting for the last 12 months or more 3

MHQ: Midlife Changes

2. Please describe any physical changes you have experienced that you think might be related to this time of your life.

_____
_____
_____
_____
_____
_____

The following is a list of physical changes that some people experience and others don't at this time of life. Please think about whether you have experienced them or not.

4. In general, do you think that most women experience (...) at this time of life?

3. During the past 12 months have you ever experienced any:	No	Yes	3A. Please pick a score that describes your feeling about (...) Not notable at all				Very notable	No	Yes
a. Aching in muscles and joints	0	1	1	2	3	4	5	0	1
b. Shoulder stiffness and pain (*Oshipkyun*)	0	1	1	2	3	4	5	0	1
c. Hot flashes and sweats	0	1	1	2	3	4	5	0	1
d. Night sweats	0	1	1	2	3	4	5	0	1
e. Sweating	0	1	1	2	3	4	5	0	1
f. Poor memory	0	1	1	2	3	4	5	0	1
g. Feeling tired or worn out	0	1	1	2	3	4	5	0	1
h. Difficulty sleeping	0	1	1	2	3	4	5	0	1

i. Flatulance (wind) or gas pains	0	1	1	2	3	4	5	0	1
j. Decrease in physical strength and lack of energy	0	1	1	2	3	4	5	0	1
k. Digestive problems	0	1	1	2	3	4	5	0	1
l. Drying skin	0	1	1	2	3	4	5	0	1
m. Weight gain	0	1	1	2	3	4	5	0	1
n. Frequent headaches	0	1	1	2	3	4	5	0	1
o. Pain in the back	0	1	1	2	3	4	5	0	1
p. Decreased vision	0	1	1	2	3	4	5	0	1
q. Hearing difficulty	0	1	1	2	3	4	5	0	1
r. Changes in color or texture of hair	0	1	1	2	3	4	5	0	1
s. Changes in period	0	1	1	2	3	4	5	0	1
t. Frequent urination	0	1	1	2	3	4	5	0	1
u. Involuntarily leaking urine when laughing or coughing	0	1	1	2	3	4	5	0	1
v. Change in sexual desire	0	1	1	2	3	4	5	0	1
w. Painful intercourse	0	1	1	2	3	4	5	0	1
x. Heart palpitations	0	1	1	2	3	4	5	0	1
y. Dizziness	0	1	1	2	3	4	5	0	1
z. Cramping feeling in hands, feet, or legs	0	1	1	2	3	4	5	0	1
aa. Good energy	0	1						0	1
bb. Sleeping well	0	1						0	1

5. Please describe any <u>emotional changes</u> you have experienced that you think might be related to this time of your life.

The following is a list of emotional changes that some people experience and others don't at this time of life. Please think about whether you have experienced them or not.

7. In general, do you think that most women experience (...) at this time of life?

6. At this time of your life would you say in general that you have experienced:	No	Yes	6A. Please pick a score that describes your feeling about (...) Not notable at all				Very notable	No	Yes
a. Feeling anxious or nervous	0	1	1	2	3	4	5	0	1
b. Feeling dissatisfied with your personal life	0	1	1	2	3	4	5	0	1
c. Feeling depressed, down, or blue	0	1	1	2	3	4	5	0	1
d. Feeling impatient with other people	0	1	1	2	3	4	5	0	1
e. Feeling that you want to be alone	0	1	1	2		4	5	0	1
f. Feeling confident in yourself	0	1						0	1
g. Feeling satisfied with your situation	0	1						0	1
h. Feeling enthusiastic	0	1						0	1
i. Feeling affectionate	0	1						0	1
j. Feeling that you are growing and changing in postiive ways	0	1						0	1

Now I would like to ask you about your family and others who may live with you.

8. Are you currently:

Married .....1 _____ years
Never married ..... SKIP TO Q12.....2
Divorced 3
Separated 4
Widowed .....SKIP TO Q10.....5

9. Some women feel that their relationship with their husbands change somewhat at this stage of their lives. How about you? Please describe any changes in your relationship with your husband.
Example: What is your relationship like compared to 5 or 10 years ago?

_____
_____
_____
_____
_____

10. How many children, if any, do you have? ___ ___ children

A. How old are the children living with you?
Ages: ____, ____, ____, ____, ____,

11. Some women feel that their relationship with their child(ren) change somewhat at this stage of their lives. How about you? Please describe any changes in your relationship with your child(ren).
Example: What is your relationship like compared to 5 or 10 years ago?

_____
_____
_____
_____
_____
_____

12. If there are other people that live with you, how old are they, and what is their relationship to you? Let's start with the oldest person then go on to the next oldest.

Age	Relationship
_____	_____
_____	_____
_____	_____

13. In terms of work, are you currently:

Working full-time 1
Working part-time 2
Keeping house full-time 3
Retired 4
Never employed 5
Other .....SPECIFY BELOW..... 6

_____
_____

A. What kind of work do you do?

_____
_____

14. Some women feel that their relationship with other people change somewhat at this stage of life. How about you? Please describe any changes in your relationships with people.
Example: In the way you are treated? Ways you relate to others? What is your relationship like compared to 5 or 10 years ago?

_____
_____
_____
_____
_____
_____

The following is a list of relationship changes that some people experience and others don't at this time of life. Please think about whether you have experienced them or not.

14. At this time of your life would you say in general that you have experienced:			15A. Please pick a score that describes your feeling about (...)					16. In general, do you think that most women experience (...) at this time of life?	
	No	Yes	Not notable at all				Very notable	No	Yes
a. Feeling more conflict with husband	0	1	1	2	3	4	5	0	1
b. Feeling more conflict with child(ren)	0	1	1	2	3	4	5	0	1
c. Feeling intimidated when with others	0	1	1	2	3	4	5	0	1
d. Feeling that it is harder to get respect	0	1	1	2	3	4	5	0	1
e. Feeling closer/more dependent on husband	0	1	1	2	3	4	5	0	1
f. Feeling closer/more dependent on child(ren)	0	1						0	1
g. Feeling more freedom from husband	0	1						0	1
h. Feeling more freedom from child(ren)	0	1						0	1
i. Feeling more comfortable in giving priority to what you want or need	0	1						0	1
j. Feeling more tolerant and understanding of others	0	1						0	1
k. Feeling relationship with husband is better	0	1						0	1

l. Feeling relationship with child(ren) is better	0	1		0	1
m. Feeling relationship with others is better	0	1		0	1

Role satisfaction/demand

Let's move on to the roles that women are generally involved in.

17. Please write in the number of hours per week you are involved in each of the following responsibilities, and how satisfying or demanding you find each responsibility to be.

Responsibility	Hrs per week	Satisfying					Demanding				
		1 Not at all	2	3	4	5 Very much	1 Not at all	2	3	4	5 Very much
a. Mothering		1	2	3	4	5	1	2	3	4	5
b. Wife role		1	2	3	4	5	1	2	3	4	5
c. Grand-mother role		1	2	3	4	5	1	2	3	4	5
d. Working outside of the home		1	2	3	4	5	1	2	3	4	5
e. Household chores		1	2	3	4	5	1	2	3	4	5
f. Social activities (volunteer work, church activities, etc)		1	2	3	4	5	1	2	3	4	5

a. Reflection on midlife

18.A. How would you rate this time of life overall?
Wonderful/exciting 1
Good 2
Fair 3
Somewhat difficult 4
Overwhelming 5

18.B. Compared to other Anglo women your age, would you say you are more or less capable of managing changes at this time of life, or about the same?
More capable 1
About the same 2
Less capable 3

18.C. Compared to other Korean women your age, would you say you are more or less capable of managing changes at this time of life, or about the same?

More capable 1
About the same 2
Less capable 3

18.D. Compared to your earlier adulthood, how would you rate this time of your life?

Better 1
About the same 2
Worse 3

b. Reflection on work and family roles/responsibilities

19.A. Compared to other Anglo women your age, would you say you are more or less capable of managing your work and family roles/responsibilities?

More capable 1
About the same 2
Less capable 3

19.B. Compared to other Korean women your age, would you say you are more or less capable of managing your work and family roles/responsibilities?

More capable 1
About the same 2
Less capable 3

19.C. Compared to your earlier adulthood, would you say you are more or less capable of managing your work and family roles/responsibilities?

More capable 1
About the same 2
Less capable 3

c. Reflection on resources

Satisfied 1
Indifferent 2
Not satisfied 3

Sufficient 1
About right 2
Not sufficient 3

	20. How satisfied are you with [READ EACH] in terms of being able to take care of your health?			21. Considering [READ EACH] would you say it's sufficient, about right, or not sufficient for you to take care of your health?		
a. your economic situation	1	2	3	1	2	3
b. your ability to speak, read, and understand English	1	2	3	1	2	3
c. the health services available to you	1	2	3	1	2	3
d. your health care coverage, if any	1	2	3	1	2	3

d. Reflection on knowledge of midlife health

22.A. How would you rate your knowledge of midlife health overall?

Good 1
Fair 2
Poor 3

22.B. Compared to other Anglo women your age, how would you rate your knowledge of midlife health?

More knowledgeable 1
About the same 2
Less knowledgeable 3

22.C. Compared to other Korean women your age, how would you rate your knowledge of midlife health?

More knowledgeable 1
About the same 2
Less knowledgeable 3

HRQ: Perception of health status

23.A. How would you rate your current health overall?

Good 1
Fair 2
Poor 3

23.B. Would you say you are more or less capable than others of managing your health, or about the same?

More capable 1
About the same 2
Less capable 3

23.C. How would you rate your health now, compared to your earlier adulthood?

Better health 1
About the same 2
Worse health 3

Now I'd like to ask you about things you do for your health.

24. Please describe some of the things you do to maintain or improve your health. Also please note how often you practice each item.

Never 1
Sometimes 2
Often 3
Routinely 4

	Please describe in detail	How often do you practice this?
Physical activities		
Dietary activities		
For your mental health		
For your spiritual health		
Other practices (lifestyle, *hanbang*, etc)		

27. How tall are you? ___ ft. ___ inches OR _____ cm

28. How much do you weigh? _____ lbs OR _____ kg

Use of health services

29. During the past year how many times have you seen the following health care provider for health care purposes?

		A. Treatment for illness	B. Health checkup :Including consultation, education, lab tests	C. Cancer screening		D. Other (Please describe)
1. MD *	County hospital					
	County clinic					
	Non-profit health service					
	Private MD					
2. Hanuisa (traditional Korean doctor)		(Not including acupuncture)		Acupuncture	*Boyak*	
3. Chiropractor						
4. Dentist						
5. Other (Please describe)						

30. The following are some examples of factors that may affect Korean women like you in seeking health care or taking care of your health. Please choose three that you feel are most important and list them in order.

1. ( ) Translation services
2. ( ) More flexible hours (for example: evenings, weekend services)
3. ( ) More information on general health
4. ( ) More information on neighborhood health services
   For example: mobile cancer screening services, health seminars
5. ( ) Better facilities with up-to-date equipment
6. ( ) Affordable health care options
7. ( ) More open attitude of physicians, nurses, haneuisa, etc. (*chinjeul*)
8. ( ) Other (Please describe)

SELF ADMINISTERED QUESTIONNAIRES

Health Promoting Lifestyle Profile (HPLP-II)

This questionnaire contains statements about your present way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

N for Never, S for Sometimes, O for Often, or R for Routinely.

1. Discuss my problems and concerns with people close to me. N S O R
2. Choose a diet low in fat, saturated fat, and cholesterol. N S O R
3. Report any unusual signs or symptoms to a physician or other health professional. N S O R
4. Follow a planned exercise program. N S O R
5. Get enough sleep. N S O R
6. Feel I am growing and changing in positive ways. N S O R
7. Praise other people easily for their achievements. N S O R
8. Limit use of sugars and food containing sugar (sweets). N S O R
9. Read or watch TV programs about improving health. N S O R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber). N S O R
11. Take some time for relaxation each day. N S O R
12. Believe that my life has purpose. N S O R
13. Maintain meaningful and fulfilling relationships with others. N S O R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day. N S O R
15. Question health professionals in order to understand their instructions. N S O R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week). N S O R
17. Accept those things in my life which I can not change. N S O R
18. Look forward to the future. N S O R
19. Spend time with close friends. N S O R
20. Eat 2-4 servings of fruit each day. N S O R
21. Get a second opinion when I question my health care provider's advice. N S O R
22. Take part in leisure-time (recreational) physical activity (such as swimming, dancing, bicycling). N S O R
23. Concentrate on pleasant thoughts at bedtime. N S O R
24. Feel content and at peace with myself. N S O R
25. Find it easy to show concern, love and warmth to others. N S O R
26. Eat 3-5 servings of vegetables each day. N S O R

27. Discuss my health concerns with health professionals. N S O R
28. Do stretching exercises at least 3 times per week. N S O R
29. Use specific methods to control my stress. N S O R
30. Work toward long-term goals in my life. N S O R
31. Touch and am touched by people I care about. N S O R
32. Eat 2-3 servings of milk, yogurt or cheese each day. N S O R
33. Inspect my body at least monthly for physical changes/danger signs. N S O R
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking care away from destination and walking). N S O R
35. Balancing time between work and play. N S O R
36. Find each day interesting and challenging. N S O R
37. Find ways to meet my needs for intimacy. N S O R
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day. N S O R
39. Ask for information from health professionals about how to take good care of myself. N S O R
40. Check my pulse rate when exercising. N S O R
41. Practice relaxation or meditation for 15-20 minutes daily. N S O R
42. Am aware of what is important to me in life. N S O R
43. Get support from a network of caring people. N S O R
44. Read labels to identify nutrients, fats, and sodium content in packaged food. N S O R
45. Attend educational programs on personal health care. N S O R
46. Reach my target heart rate when exercising. N S O R
47. Pace myself to prevent tiredness. N S O R
48. Feel connected with some force greater than myself. N S O R
49. Settle conflicts with others through discussion and compromise. N S O R
50. Eat breakfast. N S O R
51. Seek guidance or counseling when necessary. N S O R
52. Expose myself to new experiences and challenges. N S O R

Additional items in HPLP-II format

53. How often do you take any calcium supplements in the form of pills, liquids, etc., in addition to what you normally get in foods? N S O R
54. How often do you smoke cigarettes, cigars, or pipes? N S O R
55. How often do you drink alcoholic beverages of any kind? N S O R
56. How often do you take over-the-counter medicines (medicines you can buy without a doctor's prescription)? N S O R

57. During the past month how many times did you take the following over-the-counter medicines for yourself? (Please write number of times)

__ __ Analgesics (pain killers)
__ __ Sleep aids
__ __ Medicines for indigestion, stomach irritation, heart burn, etc.
__ __ Flu/cold medicines
__ __ Antihistamine medicines (allergy symptoms)
__ __ Medicines to help bowel movements
__ __ Others (calcium, vitamins, please describe others)

_____
_____

58. Some women chose to take hormones at this stage of life. How about you? Do you take any female hormones (for example Premarin, Prempro, etc) in the form of pills, patches, or creams?

No .....SKIP TO NEXT PAGE 1
Yes 2

A. How long have you used/taken hormones? _____ years _____ months
B. Women have different reasons for taking hormones. I'm going to read you some statements. Please tell me which one best describes you.

"The main reason I take hormones is..."

To manage symptoms such as hot flashes, joint pain, etc. 1
To prevent future health problems,
such as heart disease or osteoporosis 2
Because my doctor told me I should. 3
For contraception purposes. 4
Other .....SPECIFY BELOW..... 5

_____
_____

KMHQ:
a. Knowledge of symptoms

1. The following is a list of health problems that people sometime experience. For each problem please indicate whether, in general, you think a person your age should see a doctor about it.

a.	A cough at any time during the day or night lasting for three weeks or more	Yes	No
b.	Sudden feelings of weakness or faintness	*Yes*	*No*
c.	Any infections, irritations, or pains in the eyes or ears	*Yes*	*No*
d.	Shortness of breath after doing even light work	*Yes*	*No*
e.	Repeated indigestion or upset stomach	*Yes*	*No*
f.	An unexplained loss of over ten pounds of weight	*Yes*	*No*
g.	Repeated pains in or near the heart	*Yes*	*No*
h.	Repeated vomiting for one day or more	*Yes*	*No*
i.	Pains or swelling in any joint during the day	*Yes*	*No*
j.	Abdominal pains (pains in the belly or gut) for two days or more	*Yes*	*No*
k.	Unexpected vaginal bleeding not caused by an accident or injury, or vaginal bleeding after sex	*Yes*	*No*
l.	An unusual lump, regardless of size, in any part of the breast or underarm	*Yes*	*No*
m.	Rectal bleeding after a bowel movement	*Yes*	*No*
n.	Trouble falling asleep or staying asleep	*Yes*	*No*
o.	Leaking urine when coughing, running, or straining	*Yes*	*No*

b. Knowledge of health care recommendations

2. The following are some recommendation statements about health care for women your age. Please check whether you think they are true or false.

a. Women over age 40 should have a pelvic exam and Pap smear every year.
   True ☐ False ☐
b. After a certain age, women do not need pelvic exams or Pap smears.
   True ☐ False ☐
c. A professional breast exam by a doctor or nurse is recommended for women over age 40, only if they have breast lumps.
   True ☐ False ☐
d. Women over age 40 should have an X-ray of their breasts (mammogram) taken every year.
   True ☐ False ☐
e. A breast self-exam to help early detection of breast lumps is not needed more than once year.
   True ☐ False ☐
f. Women over age 40 who have not had problems before, should have a blood test for cholesterol and sugar at least every 3 years.
   True ☐ False ☐

g. A rectal exam/occult blood exam is recommended every year for women over age 40 to help detect colon cancers.
   True ☐ False ☐
h. Women over age 50 do not need a sigmoidoscopy unless they have family history of colon cancers.
   True ☐ False ☐
i. Women of midlife age should have regular checkups that include thyroid, vision, blood work for anemia, blood pressure, and electrocardiograms.
   True ☐ False ☐
j. Women who are under the age of 60 and have not had any fractures must have routine bone scans to determine osteoporosis risk.
   True ☐ False ☐

HSQ: Health screening questions

A. Have you ever had a....	Never	Yes	Don't know what it is	B. If yes, when was the last time? (MM/YYYY)	C. What were the results?	
					Normal	Abnormal
a. Clinical breast exam	0	1	9	__ __ / __ __ __ __	0	1
b. Mammogram	0	1	9	__ __ / __ __ __ __	0	1
c. Pap smear	0	1	9	__ __ / __ __ __ __	0	1
d. Total cholesterol check	0	1	9	__ __ / __ __ __ __	0	1
e. HDL cholesterol check	0	1	9	__ __ / __ __ __ __	0	1
f. Blood sugar check	0	1	9	__ __ / __ __ __ __	0	1
g. Blood pressure check	0	1	9	__ __ / __ __ __ __	0	1
h. Colon cancer testing (fecal occult blood, sigmoidoscopy, etc)	0	1	9	__ __ / __ __ __ __	0	1
i. Thyroid exam	0	1	9	__ __ / __ __ __ __	0	1
j. Bone scan (for osteoporosis)	0	1	9	__ __ / __ __ __ __	0	1

We are almost finished. Now I would like to ask you some questions about yourself.

1. What was your combined household income for the year 1999 before taxes?

   $_____

2. How often do you carry on conversations in English every day?
   - None at all 1
   - Occasionally..... 2
   - Pretty often 3
   - Quite frequently..... 4

3. How would you rate your ability to...	None at all	Only a little	Average	Pretty well	Quite fluently
a. speak English	0	1	2	3	4
b. understand spoken English	0	1	2	3	4
c. read English	0	1	2	3	4
d. write in English	0	1	2	3	4

4. Do you have any kind of health care coverage?
   - No 0
   - Yes .....continue with next question..... 1

   A. If yes, what kind of health care coverage do you have?
      1. HMO or PPO
      2. Private (fee-for-service)
      3. Medicare
      4. Medi-Cal
      5. Champ US/VA
      6. Other (please describe)
      7. Don't know

5. If you do not have health care coverage, what is the main reason?
   1. Cannot not afford it
   2. Do not need it because I am healthy
   3. Do not know how to purchase it
   4. Lost my job
   5. The insurance offered through work did not cover the doctors I wanted
   6. Other (Please describe)

      _____
      _____

6. How long have you lived in the U.S. ? _____ years _____ months

7. How long have you lived in LA County ? _____ years _____ months

8. When were you born? 19_____ ____ (month) _____ (year)

9. How many years of education have you completed and received credit for?
CIRCLE RESPONSE

6 or less----------				7	8	9		10	11	12
Elementary school								High school-------		
13	14	15	16	17	18	19+				
College----------				Graduate level						

10. What is your religion?

Protestant 1
Catholic 2
Buddhist 3
No religion/Agnostic 4
Other 5
SPECIFY: _____
_____

Marlowe-Crowne Social-Desirability Scale
Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statements is true or false as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates. *Yes* *No*
2. I never hesitate to go out of my way to help someone in trouble. *Yes* *No*
3. It is sometimes hard for me to go on with my work if I am not encouraged. *Yes* *No*
4. I have never intensely disliked anyone. *Yes* *No*
5. On occasion I have had doubts about my ability to succeed in life. *Yes* *No*
6. I sometimes feel resentful when I don't get me way. *Yes* *No*
7. I am always careful about my manner of dress. *Yes* *No*
8. My table manners at home are as good as when I eat out in a restaurant. *Yes* *No*
9. If I could get into a movie without paying and be sure I was not seen, I would probably do it. *Yes* *No*
10. On a few occasions, I have given up doing something because I thought too little of my ability. *Yes* *No*
11. I like to gossip at times. *Yes* *No*
12. There have been times when I felt like rebelling against people in authority even though I knew they were right. *Yes* *No*
13. No matter who I'm talking to, I'm always a good listener. *Yes* *No*
14. I can remember "playing sick" to get out of something. *Yes* *No*

15. There have been occasions when I took advantage of someone.
Yes *No*
16. I'm always willing to admit it when I make a mistake. *Yes* *No*
17. I always try to practice what I preach. *Yes* *No*
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
Yes *No*
19. I sometimes try to get even, rather than forgive and forget. *Yes* *No*
20. When I don't know something I don't at all mind admitting it. *Yes* *No*
21. I am always courteous, even to people who are disagreeable. *Yes* *No*
22. At times I have really insisted on having things my own way. *Yes* *No*
23. There have been occasions when I felt like smashing things. *Yes* *No*
24. I would never think of letting someone else be punished for my wrong-doings.
Yes *No*
25. I never resent being asked to return a favor. *Yes* *No*
26. I have never been irked when people expressed ideas very different from my own.
Yes *No*
27. I never make a long trip without checking the safety of my car. *Yes* *No*
28. There have been times when I was quite jealous of the good fortune of others.
Yes *No*
29. I have almost never felt the urge to tell someone off. *Yes* *No*
30. I am sometimes irritated by people who ask favors of me. *Yes* *No*
31. I have never felt that I was punished without cause. *Yes* *No*
32. I sometimes think when people have a misfortune they only got what they deserved.
Yes *No*
33. I have never deliberately said something that hurt someone's feelings.
Yes *No*

Thank you very much for your time !

Appendix C.

Exploratory open-ended questions (Phase 2)

[REFLECTION ON MIDLIFE SITUATIONS THROUGH A CULTURAL LENS]

[Reflection on midlife situations]

What are your feelings about this time of life? What is it like overall?
What things are important to you at this time?

Probes: How about in terms of any changes you may have experienced? Physical changes? Emotional changes? Social/relationship changes? Role changes? Economic changes?

RECORD AS GIVEN

_____
_____
_____

[Cultural influences: Facilitators and Barriers to Health Promotion Behaviors]

A. What are some things that you think are most important for women your age in order to stay healthy or become healthier?

(PROBES: How about in terms of emotional health or spiritual health?)

RECORD AS GIVEN

_____
_____
_____

B. What do you feel is most important for Korean immigrant women like you to get better health care?

RECORD AS GIVEN

_____
_____
_____

C. What are some of the things that hold you back from taking care of your health?

RECORD AS GIVEN

_____
_____
_____

D. What would help you personally to take better care of yourself?

RECORD AS GIVEN

_____
_____
_____

Appendix D.

HPLP-II and M-C SD
(Korean version)

건강 증진 생활 양식 II

Health Promoting Lifestyle Profile II

이 질문지는 귀하의 **현재** 생활 방식 또는 습관에 대한 것입니다. 각 문항에 대해 가능한 정확하게 답해주시고 문항을 건너뛰지 않으시면 감사하겠습니다. 각 행동 양식을 따르는 정도를 다음 항목에서 골라 동그라미로 표해주십시오:

전혀 : 전혀 실행하지 않음
가끔 : 가끔씩 실행함
자주 : 자주 실행함
일상적 : 일상적으로 실행함

1. 나의 문제와 고민을 주위의 가까운 사람들과 나눈다. *전혀* *가끔* *자주* *일상적*
2. 지방, 포화지방산, 콜레스테롤 함량이 적은 식단을 한다. *전혀* *가끔* *자주* *일상적*
3. 특이한 징후나 증상을 의사나 기타 의료인에게 이야기한다. *전혀* *가끔* *자주* *일상적*
4. 계획된 프로그램을 가지고 운동을 한다. *전혀* *가끔* *자주* *일상적*
5. 잠을 충분히 잔다. *전혀* *가끔* *자주* *일상적*
6. 내가 긍정적인 방향으로 성장하고 변화하고 있다고 느낀다. *전혀* *가끔* *자주* *일상적*
7. 다른 사람들이 이룬 업적에 대해서 칭찬을 잘한다. *전혀* *가끔* *자주* *일상적*
8. 당분이 들어 있는 음식과 설탕의 섭취를 제한한다. *전혀* *가끔* *자주* *일상적*
9. 건강을 향상시키는 것에 관해 읽거나 그런 TV 프로그램을 시청한다. *전혀* *가끔* *자주* *일상적*
10. 일주일에 최소한 세 번은 20분 이상 격한 운동을 한다. (예를 들면 힘차게 걷기, 자전거 타기, 에어로빅, 계단 오르내리는 운동기계 이용, 등) *전혀* *가끔* *자주* *일상적*
11. 매일 긴장을 풀 시간을 가진다. *전혀* *가끔* *자주* *일상적*
12. 나의 삶에 목적이 있다고 믿는다. *전혀* *가끔* *자주* *일상적*
13. 다른 사람들과 의미 있고 만족스러운 관계를 유지한다. *전혀* *가끔* *자주* *일상적*
14. 매일 6-11 그릇(서빙) 분량의 쌀, 빵, 곡류, 또는 국수류를 먹는다. *전혀* *가끔* *자주* *일상적*
15. 의료인들의 지시를 제대로 이해하기 위해 질문한다. *전혀* *가끔* *자주* *일상적*

16. 가벼운 정도 또는 중간강도의 운동을 한다. (예를 들면 일주일에 다섯 번 이상 30-40분간의 지속적인 걷는 운동) *전혀 가끔 자주 일상적*

17. 삶에서 내가 바꿀 수 없는 것들은 받아들인다. *전혀 가끔 자주 일상적*

18. 앞날을 기대한다. *전혀 가끔 자주 일상적*

19. 가까운 친구들과 함께 시간을 가진다. *전혀 가끔 자주 일상적*

20. 매일 2-4 그릇(서빙) 분량의 과일을 먹는다. *전혀 가끔 자주 일상적*

21. 의료인의 지시에 의문이 있을 때 다른 의료인에게 다시 확인한다. *전혀 가끔 자주 일상적*

22. 레크레이션이 되는 활동을 한다. (예를 들면 수영, 춤, 자전거 타기 등) *전혀 가끔 자주 일상적*

23. 잠잘 시간에 즐거운 생각에 집중한다. *전혀 가끔 자주 일상적*

24. 내 자신에 대해서 만족하고 평안함을 느낀다. *전혀 가끔 자주 일상적*

25. 다른 사람들에게 쉽사리 관심과 사랑을 표현하고 따뜻하게 대한다. *전혀 가끔 자주 일상적*

26. 매일 3-5 그릇(서빙) 분량의 야채를 먹는다. *전혀 가끔 자주 일상적*

27. 건강에 관한 걱정을 의료인과 상의한다. *전혀 가끔 자주 일상적*

28. 일주일에 최소한 세 번 이상 몸펴기 (스트레칭) 운동을 한다. *전혀 가끔 자주 일상적*

29. 구체적인 방법을 이용하여 스트레스를 관리한다. *전혀 가끔 자주 일상적*

30. 장기적인 목표를 향해 노력한다. *전혀 가끔 자주 일상적*

31. 사랑하고 아끼는 사람들과 신체적인 접촉을 갖는다. *전혀 가끔 자주 일상적*

32. 매일 2-3 그릇(서빙) 분량의 우유, 요거트, 또는 치즈를 먹는다. *전혀 가끔 자주 일상적*

33. 신체적인 변화나 위험 징후가 있는지 최소한 한 달에 한번은 내 몸을 살핀다. *전혀 가끔 자주 일상적*

34. 평상시 활동을 하는 동안에 운동한다. (예- 점심시간에 걷기, 엘리베이터 대신 계단 이용하기, 차를 멀리 세우고 걷기 등) *전혀 가끔 자주 일상적*

35. 일과 오락 시간의 균형을 맞춘다. *전혀 가끔 자주 일상적*

36. 하루하루가 흥미롭고 도전이 된다고 느낀다. *전혀 가끔 자주 일상적*

37. 친밀함을 나누고싶은 욕구를 충족시킬 수 있는 방법을 강구한다. *전혀 가끔 자주 일상적*

38. 육류, 생선, 마른 콩, 달걀, 견과류 (호두, 땅콩 등) 종류를 매일 2-3 그릇(서빙) 분량만큼만 먹는다. *전혀 가끔 자주 일상적*

39. 나의 건강 관리에 대하여 의료인들에게 정보를 구한다. *전혀 가끔 자주 일상적*

40. 운동하는 동안에 맥박을 잰다. 전혀 가끔 자주 일상적
41. 매일 15-20 분간 휴식을 갖거나 명상을 한다. 전혀 가끔 자주 일상적
42. 삶에 있어 나에게 중요한 것이 무엇인지 인식한다. 전혀 가끔 자주 일상적
43. 나를 보살펴주는 여러 사람에게서 도움을 받는다. 전혀 가끔 자주 일상적
44. 영양분, 지방, 염분 함량을 확인하기 위해 식품의 영양 성분표를 읽는다.
전혀 가끔 자주 일상적
45. 개인 건강 관리를 위한 교육 프로그램에 참석한다. 전혀 가끔 자주 일상적
46. 운동을 할 때 목표로 정한 심박동 수에 이른다. 전혀 가끔 자주 일상적
47. 피곤해지지 않기 위해 나 자신을 조정한다. 전혀 가끔 자주 일상적
48. 내가 나보다 더 큰 어떤 존재(절대자)와 연결되어있다고 느낀다.
전혀 가끔 자주 일상적
49. 토론과 타협을 통해 다른 사람들과의 갈등을 해결한다. 전혀 가끔 자주 일상적
50. 아침 식사를 한다. 전혀 가끔 자주 일상적
51. 필요할 때는 조언이나 상담을 구한다. 전혀 가끔 자주 일상적
52. 새로운 경험과 도전에 나 자신을 열어놓는다. 전혀 가끔 자주 일상적

[본 연구를 위한 추가질문]
53. 알약이나 액체 형태 등의 칼슘 보충제를 먹는다. 전혀 가끔 자주 일상적
54. 담배나 시가를 피운다. 전혀 가끔 자주 일상적
55. 알코올이 들어있는 음료를 마신다. 전혀 가끔 자주 일상적
56. 처방전 없이도 약국에서 살 수 있는 일반약 (over-the-counter medicines)을 복용한다.
전혀 가끔 자주 일상적

사회적 바람직성 척도 개인적 반응 목록

Marlowe-Crowne Social Desirability Scale Personal Reaction Inventory

개인적 태도와 특성에 관한 다음 문항들을 읽고, 각 문항이 귀하에게 해당되는지의 여부를 표시해주십시오.

1. 나는 투표하기 전에 모든 후보자들의 자질을 철저히 확인한다. 예 아니오
2. 나는 어려움에 처한 사람을 돕는 일이라면 내 일이 아니어도 절대로 주저하지 않는다. 예 아니오
3. 나는 누가 나를 격려해주지 않으면 일을 계속 해나가는 것이 때때로 힘이 든다. 예 아니오
4. 나는 누군가를 극도로 싫어한 적이 없다. 예 아니오
5. 나는 때로 내가 과연 인생에서 성공할 능력이 있는지에 대해 의심을 해본 적이 있다. 예 아니오
6. 나는 때때로 내 마음대로 일이 되지 않을 때 화가 난다. 예 아니오
7. 나는 항상 옷차림에 신경을 쓴다. 예 아니오
8. 나는 집에서 식사할 때도 식당에서 식사할 때와 똑같이 매너를 잘 갖춘다. 예 아니오
9. 만약 돈을 내지 않고 영화관에 들어갈 수 있고 아무도 보는 사람이 없다면 나는 아마 그렇게 할 것이다. 예 아니오
10. 가끔 내 능력을 너무 과소평가해서 일을 포기한 적이 있다. 예 아니오
11. 나는 때대로 남의 이야기하는 것을 좋아한다. 예 아니오
12. 나는 윗사람이 옳다는 것을 알면서도 거기에 맞서 반항하고 싶을 때가 있었다. 예 아니오
13. 나는 대화를 할 때 상대가 누구든지 언제나 잘 들어준다. 예 아니오
14. 나는 어떤 일에서 빠져 나오려고 꾀병을 부린 적이 있다. 예 아니오
15. 나는 다른 사람을 이용한 적이 몇 번 있었다. 예 아니오
16. 나의 실수라면 언제든지 기꺼이 인정할 마음이 있다. 예 아니오
17. 나는 항상 언행일치의 생활을 하려고 노력한다. 예 아니오
18. 나는 말이 험하고 불쾌한 사람들과 어울리는 것을 특별히 힘들어하지 않는다. 예 아니오
19. 나는 누군가를 용서하고 잊으려 하기 보다 복수하려고 할 때가 가끔 있다. 예 아니오
20. 나는 모르는 것이 있을 때 그것을 인정하는 것이 전혀 아무렇지 않다. 예 아니오
21. 나는 불쾌하게 구는 사람들에게도 항상 예의바르게 대한다. 예 아니오

22. 나는 때로 내 방식대로 일을 하려고 고집을 피우곤 했다. 예 아니오
23. 나는 무엇을 부수고 싶은 충동이 든 적이 가끔 있었다. 예 아니오
24. 내 잘못으로 인해 다른 누군가가 처벌받는 것은 생각할 수조차 없다. 예 아니오
25. 나는 도움의 대가로 무언가를 요구받았을 때에도 전혀 불쾌하지 않다. 예 아니오
26. 나는 사람들이 나와 아주 다른 생각을 이야기할 때 짜증을 내본 적이 전혀 없다.
예 아니오
27. 나는 차의 안전점검을 하지 않고는 절대로 장거리 여행에 나서지 않는다. 예 아니오
28. 나는 다른 사람들이 잘되는 것을 보고 질투심을 느낀 적이 있었다. 예 아니오
29. 나는 어떤 사람에게 잘 난척하지 말라는 말을 해주고 싶은 충동을 느낀 적이 거의 없다.
예 아니오
30. 나는 나에게 부탁해오는 사람들 때문에 가끔 짜증이 난다. 예 아니오
31. 나는 이유 없이 벌을 받았다고 생각한 적이 전혀 없다. 예 아니오
32. 나는 가끔 다른 사람들이 불행한 일을 당할 때 받아 마땅한 것이라 생각한다.
예 아니오
33. 나는 결코 고의적으로 다른 사람의 감정을 상하게 하는 말을 한 적이 없다.
예 아니오

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