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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

Factors Influencing Middle-Aged and Older Latin American Women's
Participation in Physical Activity

by

Stephanie Vaughn

A dissertation presented to the
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requirements for the degree

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Dissertation Committee

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ABSTRACT

Ethnographic methodology was used to explore the factors that influence middle-aged and older Latin American women's participation in physical activity. Semi-structured interviews and field observations were used to elicit information from the twenty five Latin American women in this study sample. Perceptions of health, the health activities in which the women engage, and the factors that influenced their participation in physical activity comprised the three categories of responses. Facilitators and barriers were identified as the two primary groups and were further sorted into intrinsic or extrinsic factors. A sense of self, decreased feelings of stress, wellbeing, managing chronic disease, the desire to lose weight, and a personal health event comprised the intrinsic subcategory. Extrinsic facilitators identified were social support, music, health information, family history, and accessibility. Barriers (intrinsic) were physical illness or disability, pain, fatigue, lack of self motivation, worry, and embarrassment, whereas the extrinsic barrier group included role demands, such as childcare and household tasks, time limitations, environment, which included weather, and unsafe neighborhoods, inaccessible programs, lack of social support, and limited knowledge of risk factors/disease management. Conclusions of this study were that the Latin American women in spite of their multiple role demands and other barriers did participate in health promotion behaviors, such as physical activity. This study sample of Latin American women identified salient facilitators to participation in physical activity which warrant further qualitative exploration. This study adds to the small but growing body of knowledge of Latin American women's health practices and offers opportunities

for the development of culturally sensitive interventions that would promote regular physical activity in this population.

PREFACE

This dissertation culminates one portion of my educational journey. This journey started with a quest for more knowledge regarding the research process, Latin American women, their roles within their culture, and their health practices. The Latin American women who comprised the study sample provided responses that augmented my knowledge about the Latin American cultural influence on women's roles and on their health practices. The influence of culture and other factors on their participation in health behaviors, such as physical activity was the focus of this research. The tremendous spirit and sense of self that these women demonstrated have empowered me to continue on this path of inquiry. I acknowledge their strength, their perseverance, and their tenacity; all of which acted as facilitators to their participation in positive health promotion behaviors.

As projects are not done in isolation, I would like to acknowledge individuals who supported me throughout the dissertation process. Dr. Jane Georges, my chairperson, was a wonderful mentor and provided encouragement every step of the way. I was the recipient of her expertise and vast knowledge of the research process. Dr. Louise Rauckhorst, professor emeritus, was an excellent editor and assisted me to become a better writer. She encouraged me to reframe and re-look at the concepts throughout the development of the dissertation. Dr. Dottie Crummy, a colleague and former fellow student, was a wonderful supportive role model, providing me with the benefit of her recent experience as a doctoral student. Her words of encouragement and her recommendations were always beneficial. In addition, my family, especially my husband

who was my computer “guru,” my extended family at work, and my lifelong best friend encouraged me and kept me motivated to complete my goal.

This dissertation which was a quest for knowledge about the factors that influenced this population’s participation in health promotion behaviors was an adventure, an adventure which is just the beginning for this researcher. There is still much to learn about Latin American middle-aged and older women and their health practices. So the journey will continue.

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CHAPTER I

Introduction

Latin Americans are the fastest growing minority population in the United States (Hartweg & Berbiglia, 1996). They represent a myriad of subgroups including Mexican Americans, Puerto Ricans, Cuban Americans, Central Americans, and other nationalities. Although the Latin American sub-groups share a common language, their cultural traditions differ. Mexican Americans comprise 8.8% of the United States population and have been in this country longer than any other Latin American subgroup (Higgins & Learn, 1999). The “aging of America” is occurring across all ethnic groups. However, the Latin American older population is expected to increase by an astounding 570% between the years 1990 and 2030 (American Association of Retired Persons, 1997). This population may also be predisposed to more health problems than the general population due to sociodemographic factors such as poverty, lower education levels, less access to healthcare, a higher dependence on emergency services for care, and less health insurance coverage (Mein & Winkleby, 1998; Sanders-Phillips, 1994).

Researchers have noted that Mexican Americans between the ages of 45 and 74 are at higher risk for stroke and other vascular diseases than non-Latino whites (American Stroke Association, 1999). Stroke and cardiovascular disease are leading causes of mortality among Latin Americans, affecting 33.3% of Latin American women and 26.9% of Latin American men (American Stroke Association, 1999). Cardiovascular risk

factors, obesity and physical inactivity have been reported to be more prevalent among Latin American women than other ethnic groups. According to the American Heart Association and its affiliate, the American Stroke Association (1999), 68% of Mexican American women aged 20-74 are overweight - defined as a body mass index (BMI) of 25 – 29.9 (American Stroke Association, 1999). A BMI of 25 corresponds to approximately 10% over ideal body weight and obesity is defined as a BMI of 30 or greater.

Despite the documented benefits of physical activity, a large proportion of older adults remain sedentary (Conn, 1998; Kamenimoto, Easton, Maurice, Husten, & Macera, 1999). Latin American women have been reported to be even less physically active than women in other ethnic groups (Los Angeles County Department of Health Services & Public Health, 2000; Melillo et al., 2001).

The effectiveness of physical activity and exercise in the prevention and treatment of chronic diseases such as stroke and cardiovascular disease has been well documented in the literature (American Stroke Association, 1999; Rubenstein & Nahas, 1998). Regular physical activity, such as walking, has been found to be beneficial in lowering blood pressure and cholesterol, and also in controlling obesity if done consistently and long-term (Resnick, 2001). In addition, research has documented positive outcomes related to increasing exercise behaviors among previously sedentary older adults (Conn, 1998).

Latin American culture has been studied extensively; however, there is a paucity of research regarding middle-aged and older Latin American women's health practices and the factors that influence their participation in health promotion behaviors, such as

physical activity. This study will provide health care professionals with information about older Latin American women's perceptions of health and about factors that influence their participation in exercise as a health promotion activity. This knowledge can be used to tailor exercise promotion interventions to the beliefs and values of this population so that nurses and other health care professionals are able to contribute more effectively to the achievement of two major goals of Healthy people 2010: (1) to increase the quality and years of healthy life for older adults, and (2) to eliminate health disparities among ethnic communities (Burggraf & Barry, 2000).

Nurses are often the main health care providers for the middle-aged and elderly women, especially within managed care environments and in community clinics. They are positioned to assess and monitor the overall health status of these women and coordinate their care. Nurses have many opportunities to inform and educate this population on health promotion interventions, such as physical activity, in a variety of in-patient and community settings (Belza & Baker, 2000).

Nurses thus can "shape" client's health behaviors. They can assist in reframing the focus of health care for their clients from one of disease management to one of health promotion and disease prevention. They can be the facilitators and care partners who assist middle-aged and older Latin American women to develop and maintain positive health strategies. Leininger (1991), the author of the theory of Cultural Care Diversity, contends that nursing is the bridge between the folk system such as the health beliefs and practices of Latin American women and the professional health care system.

Therefore, the purpose of this focused ethnographic study was to explore the factors that act as facilitators and barriers to middle-aged and older Latin American women's participation in physical activity.

CHAPTER II

Literature Review

This review of literature focuses on the concept of physical activity and its relationship to disease prevention. Latin American cultural beliefs regarding health are also addressed. In particular, facilitators and barriers to physical activity or exercise among middle-aged and older women, in general, and research regarding factors that facilitate or hinder middle aged and older Latin American women's participation in health activities, such as exercise, are reviewed.

Concept of Physical Activity

A variety of definitions of physical activity were found in the literature. The commonalties among the definitions found in this review were used to build the concept of physical activity used in this study. In general, physical activity is described in the literature as actions performed with the intent or purpose of increasing one's fitness or well-being. Daily leisure activities, including normal activities of daily living, were found to be included in the definition by researchers.

The most prevalent form of physical activity among older women cited in the research literature was walking. Few researchers ascribed to the American Academy of Sports Medicine's narrow definition of physical activity as engagement in 20-60 minutes of moderately intensive exercise from three-five days a week. Scharff, Homan, Kreuter, and Brennan (1999) contend that this definition does not capture all of the physical

activities in which women engage. Newer guidelines from the United States Surgeon General's office state that health benefits may be achieved with more moderate activities, such as leisure activities and other activities of daily living (ADL's). This is supported by the findings of Sacco et al., (1998) who found that participation in daily leisure activities is significant in stroke prevention. Physical activity is described in the Latin American literature as synonymous with exercise (Higgins & Learn, 1999).

For the purpose of this study, physical activity is broadly defined as any moderately intensive exercise associated with work or leisure. This study will add to the small, but growing, body of knowledge regarding the phenomena of exercise behavior in older Latin American women in relation to reducing the risk of stroke and other illnesses.

Sacco et al. (1998) used a combination of methods, both quantitative and qualitative, to gather data regarding the relationship between physical activity and stroke. Their North Manhattan Stroke Study included 369 case subjects and 678 control subjects and extended over a period of thirty months. Fifty-seven percent of the subjects were older Hispanic women. A key finding was that participation in leisure activities, such as walking, significantly contributed to a lower incidence of stroke after adjustment for the presence of cardiac disease, peripheral vascular disease, hypertension, diabetes, smoking, alcohol intake, obesity, medical reasons for limited activity, and education.

Toobert, Strycker, and Glasgow (1998) summarized select studies of exercise in middle-aged and older women with coronary artery disease. Major findings were that postmenopausal women who made moderate lifestyle changes, including regular participation in moderate exercise, demonstrated angiographic regression of coronary

artery disease one year after initiation of the exercise program, as well as a reduction in blood lipids that further lowered their risk for stroke and heart disease. The ethnicity of the subjects in the studies that were reviewed was not identified.

Latin American Culture and Concept of Health

Latin American families often rely on folk or traditional healing methods to treat illness. Some Latin Americans, especially older adults, are still wary of “modern medicine” (Higgins & Learn, 2000). Tradition and folk remedies are closely related to Latin American women’s religion and spirituality. Older Latin American women often assume the roles of caregiver and healer in the home and in the community. Some authors report that Latin Americans perceive health to be primarily a matter of chance, whereas members of other ethnic groups tend to perceive health as related more to lifestyle and choice (Higgins & Learn, 1999; Meleis, 1991; & Spector, 1991). Spector (1991) noted that Latin Americans perceive health to be a balance of social, spiritual, physical, and psychosocial factors, wherein the mind and body are inseparable, and tend to perceive health problems to be the result of sins or “castigos.”

Facilitators and Barriers

The literature was also reviewed to examine different conceptual definitions of facilitators and barriers. Nies, Vollman, and Cook (1998) stated that the definition of the concept of facilitator or barrier begins with the literal definition and expands to include situational and interpersonal factors. A facilitator was described as being synonymous with a benefit by Melillo et al. (2000), while Lindberg and Thompson (2001) defined a facilitator as “that which makes easier or motivates” (p. 283).

The opposite term to facilitator is barrier. A barrier is “anything that hinders or obstructs” (Lindberg & Thompson, 2001, p. 60). Heesch, Brown, and Blanton (2000) described barriers in relation to the individual’s perception of their importance. Barriers to exercise subcategories have been described by researchers as social, physical, and environmental. This study will address both literal and contextual definitions of facilitator and barrier.

The diversity of perceived barriers among older women (forty years and older) of different ethnic groups (African American, Asian, European American, and Hispanic) was noted in Heesch et al. (2000) study. Their findings indicated that the barriers to exercise identified by the women in the sample were not similar enough to comprise a basis for recommending that common interventions would be effective. Thus, their findings highlighted the uniqueness of the cultural experience of different ethnic groups and the need for further exploration of cultural influences on exercise participation. Heesch et al. concluded that ethnic differences may result in feelings of alienation, of isolation, powerlessness, and hopelessness, which can be significant barriers in low-income populations.

This investigator agrees with the findings from the literature review that facilitators and barriers are unique to a population group’s cultural experience and perspectives and that in particular, research concerning the factors that influence older Latin American women’s participation in physical activity is needed. In regards to what prompts middle-aged and older women, in general, to stay healthy and participate in health promotion behaviors, such as regular physical activity, the literature reveals that

multiple factors influence women's participation in such activities. The majority of these studies to date have focused on populations other than older Latin American women.

The discussion of the literature concerning factors influencing participation in physical activity has been divided into two sections. The first section deals with facilitators of physical activity, while the second section identifies barriers to physical activity. Studies regarding the health promotion activities of older women of other ethnic backgrounds, as well as Latin American women were explored. This investigator found few studies that provide a cultural perspective concerning older Latin American women and physical activity or, more specifically, the factors that influence their participation in physical activity. This study will begin to fill this knowledge gap and provide a foundation on which additional research can build.

Facilitators of Physical Activity

A myriad of facilitators of physical activity have been identified in the literature, including strong social support, high self-esteem, a positive mental attitude, health information, and affordable, accessible health activities.

Social support

Conn (1998), Nies, Vollman, and Cook (1998), and Zhan, Cloutterbuck, Keshian, and Lombardi (1998) found that social support or supportive others facilitated older adults' participation in healthy behaviors. Conn's (1998) study used qualitative methodology to explore health determinants in 30 older European American women. To validate the findings of this study, the researcher compared the results to previously reported findings of a similar study. The salient findings from Conn's (1998) study were

that the older women's behavioral, perceived control and normative beliefs influenced their participation in physical activity. Social influence and psychosocial benefit were identified as exercise facilitator themes, and joint problems and fatigue were identified as activity obstacles, the first two themes suggesting that a social model may be useful in promoting positive exercise strategies among older women.

Nies et al. (1998) used focus groups for their qualitative study. The focus groups were comprised of 16 middle-aged European American women who identified key facilitators and barriers to physical activity. Two focus group meetings were sufficient to achieve saturation of data. In addition to social support, another facilitator identified in this study was an "accommodating schedule." Provision of a schedule of locally available opportunities for exercise was found to facilitate physical activity.

Zhan and colleagues (1998) studied three ethnically divided groups of 10 older women (African American, Asian, and Caucasian) using a combination of qualitative and quantitative methods in an attempt to explore the health promotion behaviors in which they engaged. Reliability was demonstrated for all three instruments used in the study: the Demographic Profile, the Health Status Quotient, and the Geriatric Depression Scale. Qualitative interviews yielded information that augmented the quantitative findings. Although similarities were noted among each group's health activities and the factors that facilitated their practice, women from the different ethnic groups interpreted these factors differently. Supportive others were reported to be family, friends, peers, church "friends," and neighbors. These individuals acted as "buffers" for these women and provided encouragement, transportation and, in some cases, financial assistance. The

Asian women identified close family members, and daughters in particular, as their support network. In contrast, the African American women described their extended family as their supportive others, including non relatives. Limitations of the study included the small sample size and the limited discussion of the differences between the groups.

Morris, Ross Kerr, Wood, and Haughey's (2000) qualitative study explored the various factors that influenced 11 older low-income urban-dwelling Caucasian women's participation in health promotion activities. Their results identified the nurturing of the "social self" as comprising these older women's connectedness with others in promoting health. Morris et al. (2000) found that these women used a variety of "ways of living" to promote or nurture health. The majority of the participants related that income influenced their participation in health promotion behaviors; however, no direct association between low income and the women's actual health status was reported. Although each of the four tenets of the nurturance model (nurturance of physical self, nurturance of intellectual self, nurturance of emotional/spiritual self, and the nurturance of social self) was supported, additional research is needed. Limitations of the study were the small sample size.

Jones and Jones (1997) reported data from the Health Evaluation Risk Survey (HERS) which explored the exercise behaviors of 491 older Caucasian and African American women. Receiving positive verbal feedback from significant others was found to be important in improving these women's individual fitness. The results supported previous findings that group or peer support plays an integral role in motivating persons

to “stick with” or adhere to an exercise program (Jones & Jones, 1997). In addition, the data revealed that 97% of the older women in the study perceived exercise to be important in disease prevention and 88% reported that exercise contributed to their sense of well-being. The report discussed opportunities for health professionals to promote regular exercise among seniors, but provided a limited discussion of the findings.

High self-esteem

High self-esteem has been described as a psychosocial benefit, as well as a facilitator, of regular physical activity. In response to the question, “Which comes first?” the literature supports both tenets. Individuals with high self-esteem have been found to be more likely to engage in health promotion behaviors, such as physical activity (Conn, 1998; Duffy, 1993; Misra, Alexi, & Panagrahi, 1996).

Duffy (1993) used the Health Locus of Control (HLC) Scale, Wares Health Perception Questionnaire (HPQ), Rosenberg’s Self-Esteem Scale (RSE), and the Health Promotion Lifestyle Profile to gather data from 477 older adults (60% Caucasian and 40% African American), the majority of whom were women. The study’s purpose was to determine the degree to which selected components derived from Pender’s Health Promotion Model explained the older adult’s participation in health promoting activities, including physical activity. Key findings were that self-esteem, an internal locus of control, and a perception of good health were positively related to the subjects’ participation in health behaviors. Health locus of control is defined as the extent to which people believe that their health outcomes are under their personal control. The results support the usefulness of the Health Promotion Model (HPM) for understanding what

factors influence health behavior in older adults. The individual's perceived locus of control was also found to be related to perceptions of health and one's ability to positively influence or control one's own "destiny" (Duffy, 1993). Thus, older persons who are in good health are likely to feel good about them and perceive themselves as in control of their health and well being. The major limitation of the study was the inability to generalize to a larger population because of the non-probability sampling.

Misra et al. (1996) quantitative study used four instruments to explore self-rated health, exercise, self-esteem, and functional ability in 43 older European-American women who were enrolled in an exercise class. All of the participants were Caucasian and had resources that enabled them to regularly attend the community exercise program. The results indicated that older women who participated in exercise had high self-esteem scores. In addition, older women with higher self-esteem reported more positive coping strategies in regards to chronic health problems than women with lower self-esteem. The strength of this study was that Misra et al. (1996) subjects had participated in an exercise program for at least six months. Limitations of the study were the small size and homogeneity of the sample and that limit generalizability of the findings.

Positive mental attitude

Personal mastery and a "can do" attitude were found by Simonsick, Guralnik, and Fried (1999) to positively influence disabled older women's participation in a walking program. Simonsick et al. (1999) performed a cross sectional analysis of data from the Women's Health and Aging Study (WHAS). The sample was made up of 920 community-dwelling older Caucasian and African-American women with mild to severe

disability. The study examined the influence of walking difficulty, sociodemographic indicators, psychological function, and health related factors on the participants' "walking behaviors." They found that psychosocial and health-related factors were independently associated with walking behaviors and that there was an inverse relationship between the presence of a disability and its severity and the amount of participation in walking outside of the home. Factors typically associated with decreased physical activity in the general population were associated with a lower likelihood of disabled older women walking outside of the home. Simonsick et al. (1999) also found that, even though the African American women in the study they reported less participation in walking activities than the Caucasian women, which is consistent with Zhan et al.'s (1998) findings, the African American women demonstrated less walking difficulty. A limitation of this study was the brevity of discussion concerning the health-related factors that may influence exercise behaviors such as so as to increase the participant's ability to participate in walking and other physical activities was made until the summary.

Clark (1998) and Zhan et al. (1998) reported that a sense of humor and a positive outlook influenced older men and women's participation in physical activity and were associated with quality of life and "zest for living." Clark's (1998) descriptive research examined self-care behaviors in 28 older adults using a questionnaire based on Orem's Self-Care Model. Two experts, who used the Self-Care Model in their clinical practice, judged the instrument for content validity. The data revealed statements of action that promoted increased physical activity in less active seniors such as: think positive, pray, share feelings, sing or dance, manage time, and work together. Many of Clark's (1998)

participants related their health actions to enhanced quality of life. The main limitation of the study was the use of a small convenience sample comprised of independent older adults (ethnicity unspecified); making it more difficult to generalize the findings to a larger population and the ethnicity of the sample was not identified. Morris, Ross Kerr, Wood, and Haughey's (2000) study participants reported social support, as well as the need to maintain a positive mental attitude and divert negative thoughts, to be important for promoting health in older adults.

Health information

The traditional method most often used by health care professionals to change or modify health-related behavior is education. However, research has shown that providing health education alone does not bring about behavior change in older adults (Morris et al., 2000). Education in conjunction with group support in a community setting has been shown to be a facilitator of behavior change related to exercise among older adults (Morris et al., 2000; Zhan et al., 1998). Rubenstein and Nahas (1998) reported that health education begins with an assessment of the client's perceived health and knowledge and with the identification of the client's goals. Jones and Jones (1997) found that, in addition to health education and counseling, the provision of a written "formal prescription" for the older adult's exercise program was effective in underscoring the importance of exercise just as prescriptions for medications are.

Affordability and accessibility

Availability of community-based exercise activities that are affordable has been found to be an important facilitator of physical activity (Nies et al., 1998; Zhan et al., 1998). The Los Angeles Department of Health Services and Public Health (2000) conducted an extensive telephone survey of 8354 adults in Los Angeles County to examine the respondents' participation in physical activity and exercise. The sample was representative of the Los Angeles County's multiethnic population. The type, duration and frequency of each activity performed were explored. Walking was the most frequently reported physical activity performed by these older adults, in part due to economics and accessibility (Los Angeles County Department of Health Services & Public Health, 2000; Melillo et al., 2001; Simonsick et al., 1999). Other popular and accessible forms of physical activity reported by these seniors included gardening, dancing, calisthenics, bicycling, swimming, tennis, and golf. Their participation in these activities was reported to depend on the individual's interest and ability, and the affordability and accessibility of the activity. Belza and Baker (2000) summarized the need for affordable and accessible activities by stating that, "wellness is more attainable if services and providers are located in places where people naturally congregate or have easy access," (p. 13). Persons below the poverty level, which included the majority of Latin Americans, most frequently reported sedentary behavior. The LA Department of Health Services and Public Health (2000) study noted that physical inactivity was highest in those persons with lower education and income. The researchers also speculated that the perception that vigorous exercise was needed to achieve results, the lack of

neighborhood recreational facilities, and the reduction of school-based physical activity contributed to the findings.

Limitations of this study included the potential for inaccurate answers through self-reporting. In addition, certain subgroups, such as the homeless, were excluded due to the administration of the survey by telephone. Even with the above limitations, this research provided an in-depth assessment of exercise behaviors in a large, culturally diverse adult sample and provided a foundation from which additional research can evolve.

Facilitators (Latin American participants)

Hartweg and Berbiglia (1996) identified family support to be a core theme among Latin American women in relation to what facilitated their exercise behavior. These researchers conducted a qualitative pilot study to identify self-care actions among Mexican American women. Orem's Self-Care theory provided the framework that guided the research. Five theory experts evaluated the validity of the study. The sample consisted of 20 middle-aged Mexican American women who reported engaging in 232 self-care actions, including 52 actions to meet social interaction needs. This finding is consistent with the familism and sense of community that is prevalent in the Latin American culture (Melillo et al., 2000).

In addition to focusing on their social interaction needs, the participants in Hartweg and Berbiglia's (1996) study reported high self-esteem and stated that they controlled their own destiny. Another common theme was spirituality and faith in God. These researchers concluded that social support, specifically family support, self-esteem,

control of one's destiny, and spirituality were important facilitators to Mexican American women's participation in health promotion activities in general, and their participation in exercise in particular. The use of middle-age participants versus older Latin American women and the small sample size were limitations of the study; however, the researchers achieved diversity in their sample by recruiting participants through multiple methods and from various geographic areas such as the barrios and urban university centers.

Higgins and Learn's (1999) ethnographic study used Leininger's theory of Cultural Care as a theoretical framework. This theory stresses spirituality as an important dimension of the practice of health behaviors such as physical activity. The sample of seven 30-40 year old Latin American women perceived health to be related to lifestyle. They believed that they had control over most aspects of their health. They reported being influenced by health information that they received from health professionals and by what they read in magazines and the newspapers. Spirituality and faith in God also influenced their overall feelings of health and well-being. Standards of rigor were met in this study by reinterviewing all participants four times and reflecting back to them information previously received for clarification and validation. Limitations of the study included the small size and purposive nature of the sample. The participants did not report any culturally specific behaviors associated with health promotion. Due to the younger age of the participants, they may have been more "Americanized" than older Latin American women.

Mein and Winkleby (1998) explored the concerns about and misconceptions of vascular disease among 32 Hispanic women using focus group methodology. The age

range of the participants was 21-76 years old with 28% of the group being forty years and older. Knowledge regarding risk factors about cardiovascular disease (CVD) varied among the participants. Many had become familiar with CVD through personal experiences with family members. The subjects in Mein and Winkleby's study voiced a strong desire to stay healthy for their children. This finding supports the relationship between the cultural emphasis on family and motivation to live a healthy lifestyle.

Melillo et al. (2000) also used focus groups in their study of Latin American's perceptions of exercise. Three groups were each comprised of six older Latin American adults, the majority of whom were women. Facilitators of exercise were reported to be family and peer support, health professional support, including the dissemination of health information, and the availability of accessible, affordable services. Another facilitator identified was "cultural unity" or "getting together as Latinos, to speak our own language, and to be taught the importance of exercise" (p.44). Saturation of data was achieved after a series of three group interviews. A limitation of the study was the small sample size. However, this study did provide an excellent initial knowledge base concerning cultural influences on exercise as a health practice.

In summary, the literature revealed social support, high self-esteem, a positive mental attitude, health information, and affordable, accessible health activities to be facilitators of physical activity among older women. The research conducted with Latin American participants identified social support, especially family support, to be a facilitator integral to the performance of health activities, such as exercise. Additional facilitators of health behaviors were reported to be self-esteem, the ability to control one's

destiny, and spirituality. “Cultural unity” and “getting together as Latinos” were also reported to be important facilitators of physical activity.

As to not make assumptions about what factors motivate and what factors act as barriers to middle-aged and older Latin American’s participation in health promoting behaviors such as physical activity based on a few studies, additional research addressing cultural influence is warranted. The knowledge gained with further investigation will contribute to the development of culturally sensitive interventions to promote regular participation of physical activity in this high risk minority.

Barriers

Barriers that have been found to inhibit older women from participating in regular physical activity are as numerous and varied as the facilitators of exercise. The factors that hinder older women’s participation in physical activity identified in the literature include culture and ethnicity, environment, low self-esteem, effects of chronic illness (such as pain, fatigue, and fear of falling), financial issues, and lack of health information.

Culture and ethnicity

Zhan and colleagues (1998) noted that older adults of various ethnic groups interpreted the health promotion strategy of physical activity differently; however, ethnicity itself was not considered to be a barrier. According to these authors, factors often associated with ethnic groups other than Caucasian or European Americans that influence the individual’s perceptions of and participation in physical activity include: an unsafe environment, inaccessible exercise facilities or programs, reduced financial means, and limited social support. Zhan et al.’s (1998) research identified themes associated

with physical activity, such as “get moving.” African American elders in their study described “get moving” as walking. Chinese older women talked about walking “1000 steps” in the apartment and performing “Tai Chi.” European American older women identified joining an exercise group, performing yoga, dancing, and participating in a regular walking program, as their ways to “get moving.”

Even though African American women described walking as the “get moving” activity in which they most often participated, it was noted that this group along with Latin American women tended to be less active than women from other ethnic groups (Kamenimoto, Easton, Maurice, Husten, & Macera, 1999; Jones & Jones, 1997; Los Angeles Department of Health Services & Public health, 2000; Zhan et al., 1998). In regard to African American women, this may be due, in part, to a higher incidence of functional impairment and disability as a result of chronic disease (Kamenimoto et al., 1999).

Using the Behavioral Risk Factor Surveillance System (BRFSS) and the National Health Interview Survey (NHIS) instruments, Kamenimoto et al. (1999) did a telephone survey that identified several key factors that influenced the health of the subjects, including decreased participation in physical activity. The total sample of 71,517 older adults was multiethnic and drawn from across the United States. The researchers found that participants over seventy-five years old reported engaging in no physical activity. Physical activity was reported to be practiced the most in the Western region and practiced the least in the Southern region of the United States. The data were aggregated to increase the accuracy of prevalence estimates. Data were also made available by state

and California's prevalence of physical inactivity was 26.1% (21.8 – 30.4%). This was one of the lowest rates nationally. The large sample size and the use of two instruments to collect data from the sample enhanced the representativeness and validity of the data. More information about the older Latin American women sub-sample could have revealed more specific and salient findings about their perceptions regarding exercise.

Environment

Older women living in urban areas have reported that they could not safely walk in the surrounding area because of their fear of the threat of violence (Kamenimoto et al., 1999). In addition, the fact that public exercise facilities were not readily available in their local neighborhoods further decreased accessibility. Seniors have also reported the weather to be an environmental barrier (Zhan et al., 1998). Older women residing in parts of the country where there is inclement weather, including high humidity, heat, smog, cold, and snow have reported being unable to participate in outside activities during certain times of the year (Kamenimoto et al., 1999; Los Angeles County Department of Health Services & Public Health, 2000; Nies et al., 1998; Simonsick et al., 1999).

Low self-esteem

Just as a positive attitude and high self-esteem have been found to contribute to older women's participation in regular physical activity, the opposite attributes have been found to contribute to physical inactivity (Misra et al., 1996; Pizzi & Wolf, 1998; Zhan et al., 1998). Research findings indicate that low self-esteem is directly related to older

participants' diminished health and their decreased ability for and desire to participate in physical activity.

Pain, fatigue, and fear of falls

In addition to the psychosocial factors that can positively or negatively influence older women's participation in health promoting behaviors, the following physical factors were noted to deter older women's participation in physical activity: pain, fatigue, and fear of falling, which are often related to osteoporosis and arthritis (Conn, 1998; Dayhoff, Suhrheinrich, Moore, Wigglesworth, & Topp, 1998; Jones & Jones, 1997). Guided by the balance and movement systems model, Dayhoff et al.'s (1998) study clarified the dimensions of frailty predictor variables. This model is a physiological construct that states that multiple neural and musculoskeletal factors contribute to balance. Balance and coordination, in turn, influence a person's ability to participate in physical activity. The 84 older Caucasian adult study participants completed a functional performance questionnaire and a perceived health questionnaire, which were combined to form measures of frailty. Although the aim of the research was to develop criteria to differentiate between non-frail and frail older adults, the researchers also found that decreased balance and strength contributed to the fear of falling, which limited the subject's participation in functional activities and exercise. The main limitation of the study was the use of a purposive sample of highly educated frail elderly volunteers with sufficient financial resources to remain in their homes. Also, the combined measures did not capture all of the dimensions of frailty, thus warranting additional research to identify additional dimensions.

The sample in Lord, Ward, Williams, and Strudwick's (1995) study was a randomly recruited group of 197 community-dwelling older women who demonstrated moderate to high fall risk. The purpose of the study was to examine the effects of regular exercise on strength, balance, reaction time, and fall rate using sensorimotor assessment parameters. These parameters included evaluation of muscle strength, reaction time, neuromuscular control, body sway, and the occurrence of falls during a randomized 12 month controlled trial. Regular exercise appropriate to the individual's condition and functional level was found to improve function, balance, mobility, and energy levels, and to decrease fall risk in the exercise group. A limitation of the study was the lack of consideration of other factors that may have influenced balance and fall risk, such as medication use, cognitive impairment, and/or decreased vision. Interventions that would also address these factors may prove to be even more effective in decreasing fall risk.

Shin's (1997) research used a nonequivalent control group, pretest-posttest design to evaluate the effects of an outdoor walking program on the physical functioning and emotional well-being of 27 older Korean women. The three times a week exercise periods were intensive enough to result in the subjects reaching 40-60% of their target heart rate within fifty to sixty minutes (Karvonen Method). Cardiopulmonary function was assessed via a one-mile walking test. Pulse rates and blood pressures were also monitored. The women's emotional state was evaluated using the Profile of Mood States (POMS) instrument. The three study hypotheses were supported by the findings: the experimental group demonstrated increased flexibility and cardiopulmonary function, and a more positive mental outlook after the completion of the walking program compared to

the control group. Limitations of the study include the small sample size, and the fact that the cultural implications of the findings were not highlighted. In addition, the use of the Karvonen Method to determine exercise intensity is not the current community standard of measure (Jones & Jones, 1997).

Limited financial resources

Lack of financial resources has frequently been identified as a limiting factor in regards to older women's participation in physical activity (Jones & Jones, 1997; Morris et al., 2000; Pizzi & Wolf, 1998). One of the women in Zhan et al. (1998) study stated that she focused on the necessities and that "Sometimes, I have to choose between food and medicine!" (p.42). Divorce and widowhood have been found to contribute to reduced financial means. Dealing with life's challenges with a limited income is an added burden that often needs to be addressed before health promotion activities can be pursued (Morris et al., 2000).

Lack of health information and/or formal exercise prescription

Zhan et al. (1998), in discussing the necessity of available health information for older adults, indicated that failure to achieve optimal benefits from physical activity is often related to a lack of understanding of the recommended frequency of the activity. Older women may be unaware of exercise recommendations and guidelines (Konradi & Lyon, 2000). An alarming 45% of the participants in Jones and Jones (1997) study reported that exercise had never been recommended to them and/or that they had never been told how to exercise by a health care professional. A participant in Zhan et al. (1998) research study commented that, "You got to know how to take care of yourself!"

(p.37). The study participants in Shin's (1997) research also emphasized the need for education regarding health promotion strategies for older women. They viewed the lack of such information as a barrier to exercise as well as other health promotion strategies.

Barriers (Latin American participants)

According to the literature, older Latin American women experience similar barriers to exercise, including limited social support, an unsafe or an unhealthy environment, low self-esteem, and physical symptoms such as pain, fatigue, fear of falling, and lack of knowledge regarding risk factors (Heesch et al., 2000; Mein & Winkleby, 1998). Limited financial resources were also identified as a factor that limits older Latin American woman's participation in regular exercise (Hartweg & Berbiglia, 1996; Mein & Winkleby, 1998).

Melillo et al. (2000) older adult study participants identified additional barriers to participation in physical activity for Latin American women, including the feeling that it is inappropriate for their age group to engage in such activities and the fear of illness or of an exacerbation of an illness, such as asthma or heart disease. One participant stated that "Older Latinos are afraid to exercise, afraid it will deteriorate them" (p.44). A prevalent sentiment among the participants was that exercise and physical activity were for the young. Some participants even expressed "shame" about doing exercise, reflecting that exercise is "foolish."

Researchers Saint-Germain, Bassford, and Montano (1993) used six focus groups, comprised of fifty older Latin American women, to gather data about their culture, such as their use of oral traditions, norms of helping, and the influence of their existing social

networks on their health practices. Saint-Germain et al.'s (1993) findings were similar to those of Hartweg and Berbiglia (2001) and Melillo et al. (2000) in that barriers to physical activity in this female ethnic group were identified as limited social support, low income, a lack of transportation, and fear of pain.

In addition to identifying misconceptions regarding CVD risk factors, Mein and Winkleby's (1998) Latin American women focus groups identified knowledge limitations regarding the relationship between hypertension, obesity, and diabetes and cardiovascular and cerebrovascular health. These subjects also noted that the multiple demands on their time related to child care, spousal needs, and household chores contributed to their lack of personal time for exercise.

The literature revealed barriers to older Latin American women's participation in physical activity to be lack of social (family) support, an unsafe environment, low self-esteem, effects of chronic illness (pain, fatigue, fear of falling), financial issues, lack of health information, multiple demands on their time, and culturally-based beliefs that exercise may be both inappropriate and deleterious to the health of older people. Lack of social support was identified as a common barrier across ethnic groups. It appeared to be more pronounced in the Latin American women subgroup due to the multiple demands on their time in their homes and family lives. The environment, which included weather and neighborhood safety, was also identified as being a barrier for middle-aged and older Latin American women. Although the concept of well-being was addressed in the research about Latin American women, little information was found regarding the effect of low self-esteem on exercise behaviors. Reduced financial means was a common

limiting factor, perhaps more prevalent in the Latin American female subgroup due to the large number of immigrants in the study samples. In contrast, barriers unique to this population were the “fear of inappropriateness of exercise” and fear that exercise might be deleterious to their health.

Summary

Older Latin American women are an understudied high risk group that has been identified as being more sedentary than most ethnic groups. Physical inactivity, along with obesity and hypertension, are known risk factors for stroke and other vascular diseases. Older Latin American women have an increased prevalence of these risk factors. Factors identified in the literature review that facilitate and those that act as barriers to participation in regular physical activity among older women in general and older Latin American women in particular were identified. The majority of the research regarding facilitators focused on social support and a positive mental outlook. Physical barriers of pain, fatigue, and fear of falling along with affordability appeared as common barriers to participation in physical activity. Findings unique to the Latin American culture were identified by Melillo and colleagues (2000) as the motivating factor of “cultural unity” and the barriers of potential embarrassment and the fear of physical deterioration as a result of participation in such activity. The need for further study exploring factors influencing older Latin American women’s participation in exercise is evidenced by the few studies that have focused on cultural influences that affect this particular population’s participation in exercise.

CHAPTER III

Method

The method section addresses the research design and a discussion of the sample. The instrument, an open-ended questionnaire comprised of 13 questions is described. The data collection procedure, the interview and observation process are discussed. In addition, information regarding Human Subjects Committee approval was addressed in this chapter. Lastly, the process of the data analysis was described.

Design

An ethnographic research design was used to study the factors that influence older Latin American women's participation in regular physical activity or exercise. Ethnography involves participant observation, which consists of social interaction between the observer (researcher) and the participants in their own environment. Observations, interactions, and interviews are used systematically gather data about the participants' beliefs, values, and practices (Atkinson & Hammersley, 1998). Through ethnography the researcher attempts to learn what information an individual uses to interpret experiences and to adapt their behavior within the context of the environment. This information or "ineffable or unspoken truths" is evidenced as tacit knowledge. Tacit knowledge is largely the unarticulated contextual understanding that is comprised of the cultural, situational, and experiential. In addition, reciprocity or the interchange of perspectives is also actualized.

Sample

Twenty-five middle-aged and older community-dwelling Latin American women comprised the sample for this study. Criteria for inclusion in the sample included: (1) between forty-five and eighty-five years of age; (2) born outside of the United States in Mexico, Puerto Rico, Central or South America and have immigrated to the United States; (3) Spanish is the individual's primary language; and (4) able to participate in normal activities of daily living, including walking and other physical activities. These women were recruited through the local American Heart Association/American Stroke Association El Club de Caminar and through local community centers in Orange County. Many of the women reported that they heard of the study through "word of mouth." The investigator sought a cross-section of Latin American women to participate so to retrieve a broad spectrum of responses. Assisting in the recruitment of the volunteer participants were community group leaders, the El Club de Caminar leaders, and the translator. The community group leaders introduced the study at the various venues. Appointments were made at that time and/or by telephone for convenient times and locations for the interviews. Prior to each interview, the investigator and translator provided further explanation regarding the study and obtained written consent for participation from the participant.

The women's ages ranged from 46-87 years with the average age being 63 years (Table 1). Most of the women (80%) were homemakers and the average education level attained was fifth grade. Only one had attended college. Some of the participants were not literate, and, thus, had to have the consent form read to them. All had emigrated from

Central American countries including: Mexico, El Salvador, and Guatemala. Twenty two (88%) of the women were of Mexican heritage. Fifteen (60%) of the participants were married, seven (28%) were widowed, two (8%) were single, and one (4%) subject was divorced. Twenty three (92%) of the women lived in multifamily, multigenerational homes where the numbers of persons in the homes ranged from 3 to 15, with the average being six. When sharing the number of children that they had many of the participants related the children's ages, their grade in school, and if adults, their occupation, and the number of grandchildren. Frequently, family pictures were brought to the table or those on a shelf or wall were pointed out to the investigator.

Table 1

Demographics of the Sample (N=25)

<u>Age range:</u>	N	Percentage %
40-60	13	52
61-85	12	48
<u>Marital status:</u>		
Married	15	60
Widowed	7	28
Divorced	1	4
Single	2	8
<u>Average number in household:</u>	6	
<u>Education level (grade achieved):</u>		
0-4	10	40
5-8	8	32
High school	6	24
College	1	4
<u>Country of origin:</u>		
Mexico	22	88
El Salvador	2	8
Guatemala	1	4

The participants who were interviewed in their homes were very gracious hosts. There were noted commonalities in the homes where the subjects resided. Family pictures were prevalent as were religious artifacts. Often a shrine with burning candles graced a prominent location in the main room of the home. The houses were neat, yet displayed a "lived in" look. Although questions regarding income were not included on the questionnaire, it was obvious that most were women of modest means.

Common responses regarding their daily activities included meal preparation,

childcare, and household tasks. It was apparent to the investigator that the males in these households did not participate in routine household tasks, including child care.

Several of the participants walked their children or grandchildren to and from the local schools. If there were no school-age children in the home, or the parent of the child walked the child rather than the grandparent or aunt, then the woman had the opportunity to participate in other activities, such as walking in the park, going to an aerobics class, or going to the community center.

Five of the participants (20%) were employed outside of the home in various occupations. Three were housekeepers, one was a nurse assistant, and another an administrative assistant. The five participants working outside of the home all related that they performed food preparation and household tasks, such as cleaning, laundry, and making the beds, around their work schedules. All of the Latin American women participating in the study identified a daily routine that involved some sort of work-related activities (household and outside employment).

Instrument

The study data collection tool was developed by the investigator and consists of thirteen open-ended questions (Appendix B). The focus of this interview guide was to elicit the participant's perceptions of health, exercise and physical activity, and information concerning the amount and type of physical activity in which they engaged. In addition, the instrument was designed to elicit responses that identify the factors that facilitate the individual's participation in regular physical activity as well as those that act as barriers to their participation in physical activity. The instrument was developed

through review of the literature, including an evaluation of other tools attempting to elicit similar responses. A bilingual Latin American health professional, the translator, reviewed the tool for the cultural appropriateness of the queries.

The instrument also solicited demographic data from the sample, including: age, marital status, the number of years living in the United States, the number of children or other relatives living in the home, and the highest level of education achieved. The demographic data were recorded at the top of the interview guide. This information provided the investigator with additional data for description of the sample and about variables that may have influenced the participants' perceptions of and participation in physical activity.

Data Collection Procedure

The researcher procured a Spanish-speaking translator who is a health care professional. The translator received compensation that was commensurate with the pay scale for her professional role. The investigator provided instruction to the translator regarding the study, the interview process, and the framework in which the interpretation was to occur (Enslein, Tripp-Reimer, Kelley, Choi, & McCarty, 2001). The investigator and translator practiced interview sessions and role-played as part of the translator's preparation. To ensure clarity of the questions, a small pilot study was conducted with two volunteer older Latin American women participants. The questions were clear to the pilot study participants. The participants and translator commented that questions five and six seemed somewhat redundant, however they expressed that the queries may elicit varied responses. Upon further examination, the pilot study participants stated that the

response to the question number five may actually be clarified by the response to question six. Thus, all of the original questions in the data collection tool were retained. The timeline for the project is included in Appendix C.

The principal investigator's role was to introduce the study to the potential participants in Spanish in a group setting so as to establish rapport (Appendix D). With the investigator present, the translator explained the study to all participants in Spanish and written informed consents were obtained (Appendix A). The consent form was translated into Spanish prior to the initiation of the study. The translator conducted 22 of the interviews in Spanish. Three interviews were done in English at the request of the participants who were fluent in the English language

The interviews were conducted in various locations: a private, quiet office area in the local community center, in participants' homes, and at participants' places of employment. The site was selected by each participant for her convenience. The interview duration varied with the average length of the interview being 30-45 minutes. The investigator was present for all interviews and recorded observations of the participants' nonverbal behaviors during the interactions in field notes. Each participant received five dollars as compensation for their time at the conclusion of the interview

In addition to the translator used during the interview process, a certified bilingual translator/transcriptionist was employed to translate the tape recorded interviews verbatim into Spanish and then into English. The transcripts were then reviewed by the study translator for accuracy and clarity.

Human Subjects

The rights and welfare of all participants were protected in this study. The potential risks and benefits were explained to the participants in Spanish and/or English (if preferred) and written informed consents were obtained. All information obtained was kept private and confidential except for the dissemination of the aggregate results. The risks to the participants were minimal. Embarrassment and anxiety related to queries concerning personal information about their health practices were the two potential risks identified. An identified benefit was the acquisition of information regarding stroke and cardiovascular disease risk factors. Participation in the project was voluntary and all participants were aware that they could refuse to participate and could withdraw at any time. The research proposal was submitted to and approved by the University of San Diego's Human Subjects Committee prior to the initiation of the study.

Data Analysis

Analysis was performed concurrently with data collection. The investigator was a "participant observer" in the data collection process. Data were gathered via the recording of responses to thirteen open-ended interview questions and by the observation of the participant's non-verbal behavior in her own environment: her home, the community center, or her place of employment.

The audio-taped interviews were transcribed in Spanish and then translated into English. The data were analyzed line by line for the emergence of common themes. In addition, field notes regarding observations during the interviews were typed and organized. Identified concepts and themes were written in the right hand margins. The

in-depth analysis of the interviews revealed categories, properties, and dimensions of the data. The data were further examined to identify connections between the categories. These themes reflected social and cultural aspects of these Latin American women's lives pertinent to their perceptions of health and exercise. Theoretical notes and field observations were also documented and used in the analysis. These notes added context to the transcribed data in that they reflected a participant's expression, a pause in thought, or a gesture that served to clarify a verbal/written response. In addition, notes or memos also prompted the identification of concepts and dimensions. Scientific rigor was addressed through use of self, credibility, and transferability using the following: (1) verbatim transcriptions of audio taped recordings; (2) in-depth field notes highlighting the investigator's observations and interactions with the participants; and (3) review of interviews by a Latin American bilingual translator.

Summary

Ethnographic methodology was used to explore the perceptions of health and physical activity and the factors that influenced these middle-aged and older Latin American women's participation in health behaviors, specifically physical activity. These factors were strongly influenced by cultural and social mores and values. Reciprocity of perspectives and the gathering of tacit knowledge, the epistemology of ethnography, were realized between the participants and the investigator (Atkinson & Hammersley, 1998).

CHAPTER IV

Findings

The identified themes that emerged from this ethnographic study are discussed in this chapter. Quotes that depict the texture of the participants' perceptions of health and physical activity in tandem with intrinsic and extrinsic factors that influenced these Latin American women's participation in regular physical activity will be highlighted. The overriding theme was the participants' perceptions of the meaning of health and their feelings regarding physical activity/exercise. Their perceptions of health were reflected in their daily lives, their normal daily activities, and in the health behaviors in which they engaged.

Meaning of Health

The meaning of health appeared to be very personal to the participants. Some of the women responded to the question about their thoughts or perceptions of health very quickly, while others paused and appeared to give the question considerable thought. The answers were varied, yet they demonstrated a pattern of seeing health as a gift. Health was described as "not being sick," "being without pain," and being able to do things. One participant stated that:

It is the best, the treasure of life. Because if we don't take care of our health, well we're always going to be sick. These are my thoughts...if I am not healthy; I can't share with anyone else...so health is the best thing that we have.

Others commented that health was energy – energy that enabled them to carry out their

daily activities. For example:

Being with energy, feeling well, isn't it? Because I remember that last year I was here lying down. I broke my knee and my arm and I couldn't walk and I couldn't do anything and I didn't want to walk.. I used to walk a half block and I would get tired. I used to suffer a lot from arthritis and that was a good excuse for not walking. Someone told me about this place to exercise and I started to go... from then I realized how much good exercise does to you to feel better.. now I feel with more energy to do more things.

The majority focused on the physical aspects of health; however, some stated that health meant a balance of good physical and mental health. One participant stated that:

Well, exercise is very beneficial for me. One is that I like doing it very much. I love to exercise and secondly, it's like getting medicine for me. If I don't exercise.. for example in the morning, when I get sad because of my loneliness, there are times that my loneliness depress me... then I listen to joyful music (and exercise) and my state of mind changes.

Several referred to health as having their diabetes, blood pressure, and pain under control. To be without pain was the most frequently identified indicator of good health.

"If I am not healthy, I can not share with anyone else!" exclaimed one woman. When asked about the meaning of health, several of the participants spontaneously identified the activities that they performed to stay healthy which also answered the question regarding what activities the women engaged in to promote their health. Overall, the query about the meaning of health elicited positive responses rather than just the absence of a symptom or something negative.

Health Activities

The two health promotion activities that the Latin American women participants most frequently identified as participating in to stay healthy were good nutrition and exercise.

Nutrition

Their perceptions of what comprised proper or good nutrition varied. Most felt that eating more fruits and vegetables and less fat were important. When queried further, it was not always evident that there was an understanding of how to attain that outcome in their cooking. "I try to eat more vegetables and fruit rather than meat. I eat more chicken, not a lot of red meat, more vegetables, not a lot of eggs," was the response of one forty-six year old woman.

Another related:

I try to eat the best possible. I try to plan what we're going to eat that day-try to offer my family vegetables and most of all try to keep it balanced.

There was rarely a reference to "junk food" when eliciting information about the participants' dietary patterns. The women focused on the Latin American traditional fare of tortillas, beans, and rice when preparing meals for their families. Several commented that they were attempting to incorporate more vegetables and chicken and less beef into their meals.

Chronic Disease Management

Taking vitamins, calcium, and prescribed medications was also mentioned as a health promotion activity in addition to seeing a doctor regularly. The high cost of medications and health services were concerns frequently mentioned by the participants. Three of the participants related that they were not taking their antihypertensive medications because they felt that their walking routine reduced their blood pressure. However, two of the women who stated that they managed their high blood pressure

solely with exercise complained of chronic headaches, which is a symptom of hypertension. One of these women stated that:

Yes, lately my pressure has gone up too much. They (the group leaders) check mine more often than the others (at the center)...yesterday they were all surprised, maybe because all the exercise I did, but my pressure was perfect, I think I need to do more exercise (laughs) because yesterday that I overdid it by two hours.

The investigator did not probe further; however it was noted that the participants may not have had the medications available because of affordability and/or inaccessibility issues. They often readily brought their pill bottles to the table and discussed their medication regime in conjunction with their chronic disease management. The women's knowledge regarding the medications varied, but overall appeared to be limited. As one woman remarked:

Well, I was given some medications, but they have side effects and I don't like that. They told me to take them for only three weeks and at the end of the third week I'll tell them that I'm going to discontinue them.

A majority of the participants related that they obtained their medications from Mexico and often sought medical attention there as well. The investigator did not probe this aspect of their lifestyle; however, it appeared that most of the women had no health insurance coverage in the United States and, therefore, had limited access to healthcare in this country.

Physical Activity

Physical activity was the second most frequently identified behavior that was performed to promote health. One participant stated that exercise was "the basis for

everything.” Walking was the most prevalent physical activity reported followed by aerobics and yoga. The amount of physical activity varied from none at all to daily walking, exercise classes, home machine workouts, and/or aerobics up to four hours a day.

The fifteen (60%) women involved with El Club de Caminar generally demonstrated a more structured approach to their daily exercise routine. All of the club’s members kept a journal or diary of the number of “blocks walked,” which was evaluated quarterly by the group leaders.

All participants spoke favorably about the need to exercise and the fact that exercise contributes to one’s overall health. One woman stated that walking prevented high blood pressure and strokes and that doing a variety of activities was important. She stressed that just doing household chores or tasks was NOT enough; one had to walk or do other types of exercise activities.

In response to the interview question concerning the importance of physical activity to one’s health, a few of the participants noted that exercise helped prevent strokes and heart attacks. Most just said that they knew it was important for good health in general. “Exercise is like water to a tree, it gives you life,” was a poignantly expressed thought of one woman.

Participants were also asked about the type of type and amount of physical activity they engaged in. These results are summarized in Table 2.

Table 2

Type/Frequency of Physical Activity

Type of activity	Ages 40-60 (n-13)		Ages 61-85 (n-12)	
	n*	%	n*	%
-Walking	12	92	6	50
-Aerobics/group exercise	4	31	6	50
-Home machine	1	8	2	17
-Other (swim, garden)	1	8	1	8
* same women engage > 1 activity				
Frequency of Activity				
- Regular (> 3x week)	10	77	4	33
- Intermittent/sporadic (2x week or <)	3	23	8	67

Each woman's participation in physical activity varied, although some commonalities were revealed. Walking was the predominant activity of choice, including walking the children to and from school and additional walking that they were doing specifically for exercise benefit. Aerobics, yoga, and dancing were also identified as exercise-oriented leisure activities in which these women engaged. The older Latin American women's participation in walking and participation of some form of group exercise activity was equally divided. A rationale for this interesting finding is that the older cohort of women more frequently attended activities at the community centers than the middle-aged group, where various activities are conducted, which included group exercises. One woman exclaimed:

At one point, I tried to do aerobics, but I was only able to do it for fifteen days because, I don't know, but my blood pressure got up (referring to fact that walking was her activity of choice).

One participant related that she attended a health club called Curves two times a week after work. Another participant swam one night a week at a gym in addition to other activities such as walking and dancing. Music was a popular accompaniment to walking and dancing for the women. Music choice also varied; however, salsa music and Latino singers were identified frequently as favorites. Some of the women had treadmills or exercise bicycles in their homes that they used on an intermittent basis. Another popular home activity was gardening. One woman noted that she spent as many as two to three hours in her garden every Saturday and Sunday. She acknowledged that this was not enough physical activity of itself, but she stated that she enjoyed it and it relieved her stress. Even though others had not mentioned gardening as an activity that they participated in, the investigator observed that several of these women tended vegetable gardens as well as flowering plants and planters.

Making physical activity a part of one's daily routine seemed to increase compliance with a regular program of exercise. One woman commented:

It helps me to be active...active with my daily activities, in my kitchen. When I come home from work, I go for a walk...half an hour...I walk. Sometimes I do other exercises at home like abdominals.

Many participants related in detail their entire daily routine which included household chores and exercise. Another example:

Before getting out of bed I do some exercises like this (demonstrates) with my arms and then I get off and take a shower...do one hour of aerobics with the TV, at seven o'clock, after that I prepare myself, have breakfast, and I go to do (more) aerobics at the center for another hour. After that I walk three blocks to catch bus..

The frequency of participation varied with the activity whether it was walking, a structured aerobics class, or a senior exercise class, such as the “third age” class where the women participated in varied activities for approximately one hour. One woman related that the exercises at “third age” were based on age and ability. The yoga and aerobics classes were attended regularly two to three days per week. Overall, the middle-aged group participated in physical activity more frequently than the older group

The older Latin American women who were interviewed at the community center related that they participated in the exercise classes at the center, which consisted of modest stretching and modified calisthenics rather than aerobic activity. Other older participants reported walking as part of their daily routine. The distances varied with their physical abilities and their perceptions of barriers, which will be addressed later in this chapter.

The five participants who were employed outside of the home related having difficulty adhering to a regular schedule of structured physical activity because of additional homemaking responsibilities, childcare, and long commutes, as well as their actual work time. One of the “employed” participants commented on how her daily routine left little time for exercise as follows: “I come to work and after work I go home around four or five and I cook, that’s it.” However, two of the participants who work outside of the home said that they did not let anything interfere with their exercise routine, stating that the “house will be there when I get back!” Another woman related that doing the physical activity the same time each day helped it become part of her daily routine.

Motivating Factors (facilitators)

The factors that motivated these women to participate in physical activity were found to be intrinsic as well as extrinsic (Table 3). Feeling good about ones self or having a sense of self, decreased feelings of stress, a sense of well-being, the desire to manage chronic disease and/or experiencing a personal illness event, and the desire to lose weight were identified as intrinsic factors that motivated the Latin American women to participate in regular physical activity. Extrinsic factors were identified as social support, music, health information, a family history of stroke or cardiovascular disease, and accessibility. The benefits of physical activity, which can also act as facilitators, are included in this section.

Table 3

Facilitators and Barriers to Physical Activity Identified by Study Participants

<u>Facilitators:</u>	<u>Barriers</u>
Intrinsic	
-sense of self	- physical illness/disability
-decreased feelings of stress	- pain
-feeling good about one's self	- fatigue
-well being	-lack of self motivation
-managing chronic disease	-worry
-desire to lose weight	-embarrassment
-personal health event	
Extrinsic	
-social support	-role demands (childcare, household tasks)
	-time limitations
-music	- environment (safety, weather)
-health information	- inaccessibility
-family history	-lack of social support
-accessibility	-limited information about risk factors/disease management

The most prevalent response to what made it possible for the middle-aged and older Latin American woman to participate in physical activity was "self." or a sense of self. The intrinsic factor, a sense of self or self-motivation was the most influential exercise facilitator reported by this group of women. "When I walk, I look into myself," one participant confided. "When I am healthy, I am needed, I have a purpose," was the poignant response of another. "Because it is good for my health, I motivate myself because I feel better, because I know that it helps me I'm going to feel better," related still

another.

Having a family history of hypertension, stroke, and /or cardiovascular disease was cited as an extrinsic motivator for initiation of physical activity for the majority of study participants. When queried about personal or family history of stroke or heart disease, seventeen (68%) of the participants related that they had family members who have heart or blood pressure “problems” or have had cardiovascular-related events. Family history appears to have influenced the exercise participation of some of the women, in addition to motivating them to learn more about these illnesses and how to prevent stroke and heart attack - to be healthy for their families.

In addition, two of the participants related that they had personally experienced problems such as chest pain and/or shortness of breath which required medical attention, and served as an intrinsic motivator. The presence of chronic diseases, such as arthritis, high blood pressure, and diabetes contributed to the women’s desire to participate in physical activity because they knew that it would “help” in some degree. The middle-aged group related that among them they had 14 chronic diseases, including diabetes, hypertension, arthritis, obesity, peripheral vascular disease, and depression. The older cohort experienced a total of 29 chronic diseases among them. The following statement was typical of how the presence of chronic disease motivated these women to practice positive health habits, including participating in physical activity:

Okay, I’m diabetic, this is what motivates me, I don’t want to take medication, I don’t take any medicine for the diabetes, any medicine, because medicine has side effects, so I keep it under control with diet, with my food and exercise.

The need to lose weight was mentioned as an internal motivator by a few participants. “The benefits (of exercise) is that like maintaining weight, blood pressure, all those things so that you don’t have those kind of problems (reference to stroke and cardiovascular disease),” noted one woman. Another commented that exercise is helpful in “getting that little rim down (pointing to her abdomen), feeling healthy or good about yourself or what your goal is.”

Having a partner to walk with and the presence of group support were also reported to be influential factors. One participant stated that, “I draw strength from others.” Another reflected that:

When I am in a group, because if I am on my own, I feel that I don’t do it right. In a group, even if I don’t do it right (the exercise), I feel better because more people motivate me.

“The more people around you, you do it (exercise) with more energy,” related another participant. A third participant described the importance of group support as follows:

I used to be a person that wouldn’t go out anywhere...not in groups or any other way, only from school to my house, I stayed mainly here at home. The group has (really) helped me.

They enjoyed the “coming together” as Latin American women to share and to encourage each other.

Music served as a unique extrinsic facilitator for several of the participants. The participants discussed their favorite music, their favorite singers, and often demonstrated the exercises to a particular tune or music style. Music, a part of their Latin American culture appeared to be a salient motivator for physical activity. One participant pulled the

investigator out of her chair during the interview process and exclaimed, “See this is easy” as she proceeded to demonstrate a lively routine to salsa music. Another active fifty-four year old relates: “I love to exercise; I listen (and exercise) to joyful music and my state of mind changes.”

One of the women commented, “I read a lot and learn a lot,” relating her participation in physical activity to new knowledge gained about the benefits of exercise. The women’s knowledge regarding stroke and cardiovascular disease risk factors and the corresponding desired behaviors to reduce them varied. Nine (69%) of the middle-aged group mentioned two or more facts regarding stroke and cardiovascular disease risk factors such as hypertension and obesity, while only one (8%) of the older participants identified two or more such risk factors during the interview process. An example of a response discussing the importance of knowledge of stroke and cardiovascular disease risk factors is as follows:

Well, I’m telling you, eat less fat to avoid these problems (stroke and cardiovascular disease), because if we eat more fat, our veins get clogged and that means more problems for the heart because the heart keeps us alive..and if the veins are blocked there is nothing that would save us, isn’t it?

It was also noted that a similar paucity of knowledge existed regarding the management of the other chronic diseases, such as diabetes. “It brings down the sugar, because when I exercise... and I checked my sugar and it was low,” related one participant when queried about the benefits of exercise; however, she did not make any other additional comments regarding knowledge of medications for blood sugar control.

Proximity of a program or community center to the woman’s home was also noted

to be an important factor in motivating the individual to participate in a regular exercise routine. For example:

It was near here so I could walk; I mean it's going to be already one year that I started and since then I haven't stopped. This is why they tell me, (name), you have never failed, and I tell them (group leaders) that I never will – as long as I can.

The community programs these women considered accessible were all located in their neighborhoods or close to their places of employment. All of the participants had heard about the various programs via word of mouth. No one related that they had read it in the newspaper or from a pamphlet that they had received in a physician's office or clinic. One woman related how she learned about an accessible exercise venue this way:

Through my daughter...she told me and her sister-in-law, I do not know the name of the neighbor, but it was like a "chain" and my daughter told me to go there to exercise and also for some lectures about health issues and all that, and that sounded attractive.

Benefits of physical activity were often described as "giving me energy," increased circulation, "feeling lighter, more agile," "it lowers my cholesterol," "my blood pressure is lower," "I do not get tired from doing my daily chores," "I feel less depressed," and "it keeps you active." The participants noted that walking and other physical activity "keeps you happy." In addition, one subject reported that her muscles and skin were firmer and not saggy because of her participation in exercise. Arthritic pain and muscle cramps were also reported to be lessened as a result of regular walking and other exercise. Regarding the effect of increased physical activity on pain, one woman responded:

They (exercises) help me because I feel fine. When I don't exercise my ankles hurt or my back or something else, and when I exercise nothing hurts me.

According to another participant:

Before I used to walk two minutes in the machine and I would get shaky, like this (demonstrates hand shaking) I couldn't continue...now I am able to do it (treadmill) for thirty minutes and I don't feel tired or lightheaded. I feel light like a feather.

Stress and anxiety reduction were also identified as benefits of physical activity by a few individuals. One participant exclaimed, "I escape when I walk and I forget my problems for awhile." While another stated, "I feel more relaxed after I walk." The following quotation vividly describes how exercise helped this participant reduce her stress level and cope with family demands:

Well, in every aspect because before I would get irritated by anything, I was always grouchy and everything bothered me, everything...and sometimes I would say-I don't want to go on with this -because you get into a vicious cycle as a woman, cleaning house, being a mother and all that, and that's why I said - no, I have to start doing something else to see if things change for me. I think that exercise really had helped me a lot.

Social benefits of exercise were also described by the study participants.

Repeatedly, individual participants talked about the group that she exercised with or the friend that she walked with or the individual who accompanied her to the community center. "It is better when you (exercise) with somebody else because alone you can't get to it," related one of the women.

In regards to the influence of health information, one participant stated:

I think many people don't know about this, I mean how to stay healthy, to walk, to run, to do exercises. I believe these are just the "basics" to stay healthy.

It was noted that the health information about "the basics" the participants

reported having, especially about stroke and cardiovascular disease risk factors, varied. Nine (69%) middle-aged participants identified two or more facts about these risk factors, whereas only one (8%) participant in the older cohort reported knowing two or more facts about stroke or cardiovascular disease risk factors. One of the middle-aged participants commented:

The first place is diet and exercise; you can prevent it (stroke and cardiovascular disease) with these. You have to watch what you eat, specifically not smoking, not drinking, all of these.

Hindrances to Physical Activity (barriers)

Barriers to participation in physical activity were identified by the study participants as physical illness/disability, pain, fatigue, lack of self motivation, worry, and embarrassment. Role demands, such as child care and household tasks, time limitations, environmental issues (safety and weather), inaccessible programs, lack of family support, and limited information regarding risk factors and disease management were identified as extrinsic barriers.

Physical problems cited as keeping some of the women from participation in physical activity included poor eyesight, fatigue from daily chores or illness, pain (especially in the feet and legs), and poor balance. "The aches make it difficult some days," stated one participant. Others identified shortness of breath, excessive weight, and depression as reasons for not exercising.

Lack of self motivation was identified by four of the women as inhibiting their participation in exercise activities. One of these women stated:

I (am) just being lazy, and I talked to my daughter yesterday (about this) because we have to (exercise) because we are overweight.

An older participant stated:

In beginning, it did (feel difficult to exercise); because I felt my body very heavy, I was feeling very lazy; I used to think, not today, my grandkids are coming and so I'll stay home with them...I used to think like this. I had a lot of excuses. But not now, I do my house chores and then I exercise and I go walking, this is what I have to do!

An example of the influence of worry on participation in physical activity:

When I worry with something, for example, I just had a problem with my family in Guatemala, and so my mind only zeroed in on that and so there are days that I don't do it (exercise).

Embarrassment was also identified as an intrinsic barrier. One older Latin

American female participant indicated that some of the exercises were "inappropriate" by stating that:

(Name) brought me a tape and I do it but I don't like to be seen, because one has to open the legs and all this and since I am already old, well I don't like to be seen...

Another forty-six year old participant individual cited her weight as embarrassing and a deterrent to participating in the group exercise activity stating: "I don't like them to see I'm not thin (referring to the group at the center)."

Role demands, outside appointments and family activities were mentioned as reasons for not exercising on certain days. As one grandmother stated:

Sometimes they do, like I told you before I have to take care of this child, I have to wait until the mom comes back or his brothers so I can be released and go.

The participants employed outside of the home all commented on how difficult it

was to schedule time to exercise after working all day, especially since they had to go home, cook, care for the children, and meet everyone's needs. The role demands were accepted by the five participants employed outside of the home; however, three of the five verbalized their frustration about not being able to find time for personal needs as they related their daily activities to the investigator.

Another hindrance to participation mentioned was living in an unsafe neighborhood. The participants who felt their neighborhood to be unsafe referred to the presence of unleashed dogs, broken sidewalks, and the fear of being alone on the street. Another related environmental concern was the fear of getting lost and not being able to ask directions due to language barriers.

It was noted that many of the participants limited their activities, including walking, to their immediate neighborhoods. A participant related:

I am very depressed. afraid to go out alone, and more than anything I'm afraid of dogs; because if one comes at me, I'll die, I am very scared!

Lack of access to group programs and the lack of availability of childcare at the various community centers were also cited as barriers to physical activity. Living a distance from the local park was a reason cited for not walking by one participant. Others related that they could not work the machines they had at home and could not afford a regular gym.

Lack of support from others in the household, including the spouse, was also a barrier to exercise for some. One woman commented that, when she prepared to go for her walk, her husband would say "don't go, and stay here with me!" She related that she

would go anyway as it was important to her!

The participants were asked about their thoughts regarding the downsides of exercise and their responses were similar to those regarding barriers to exercise. However more downsides were identified by the older cohort of participants than the middle-aged group related to chronic physical health issues, such as diabetes, arthritis, weakness, poor balance, and “tired legs” being barriers to physical activity. As one participant related:

Sometimes if I lay down, I’d fall asleep. Sometimes this happens to me, I don’t want to stand up. Very rarely I feel like sitting down and stay there sitting and not feeling like walking.

Summary

The two cohorts of Latin American women provided a myriad of responses to the interview questions. The two groups identified common responses as well as responses that were more unique to each group. Overall, the participants appeared to be at ease with the interview process. They were interviewed in familiar surroundings: in their homes or their local community centers, or their places of employment. Also, the interviews were conducted in their primary language by a Latin American female bilingual translator unless they requested it done in English.

Perceptions of health and physical activity along with the health activities in which these Latin American women engaged were addressed. Common responses were elicited about their perceptions of health influenced by cultural and social values. Intrinsic and extrinsic factors that influenced their participation in health activities, specifically physical activity were described and examples illustrating the facilitators and

barriers were provided. The participants demonstrated inner strength and a zest for life. Their modest homes reflected strong family and spiritual values. With the exception of two women, all lived in multigenerational households. The majority of both the middle-aged and older age groups of participants had some child care responsibilities in the home settings.

The middle-aged group discussed 14 chronic diseases that they were managing and the older Latin American women reported 29, including diabetes, hypertension, arthritis, and miscellaneous other conditions, such as obesity, hypercholesterolemia, peripheral vascular disease, and depression. Several of the participants were taking medication to control the symptoms of the various diseases, such as oral hypoglycemics. Some of the women in both age groups related that the medications were too expensive and difficult to obtain. Others related that the drugs were “not necessary” because of their exercise regime. Several of the participants told of traveling to Mexico to procure their medications and to access healthcare.

In addition to medication and dietary supplement regimens to promote health and manage chronic illness, other types of behaviors in which they engaged to promote health were revealed. Physical activity and nutrition were the most frequently cited activities. Physical activity/exercise and nutrition are preventive health behaviors for stroke and cardiovascular disease. Seventeen of the participants told the investigator that they have had family members who have experienced stroke and/or cardiovascular disease.

The type and amount of daily physical activity ranged from limited intermittent walking or group activity to three hours of participation in a combination of activities

(Table 2). The middle-aged cohort participated more frequently in physical activity, although the types of activities in which they engaged were similar. Physical activity/exercise in general was described by the participants as contributing to one's improved overall health. Specific benefits were also cited, including decreased pain, management of various chronic diseases, the promotion of positive feelings about one's self, decreased stress and worry, and the facilitation of weight loss.

Factors that facilitated the women's participation in physical activity were identified as "sense of self," decreased feelings of stress, feeling good about one's self, a sense of well-being, the desire to manage chronic disease such as diabetes and hypertension, a desire to lose weight, a personal health event (Table 3). In addition, the availability of social support, music, a family history of stroke or cardiovascular disease, accessible community programs, and knowledge regarding risk factors and disease prevention were also cited as motivators. Information regarding the types and availability of programs was obtained by "word of mouth" and passed along from woman to woman. Although the participants had minimal knowledge of health information about risk factors, when they received information from "authoritative" resources, such as the group leaders, they internalized it. This was evident in their responses and in their demonstration of health behaviors, such as dietary practices and participation in physical activity.

Several barriers to participation were revealed by the women during the interview process, including: physical illness/disability, pain, fatigue, embarrassment, lack of self motivation, worry, and embarrassment. The older group of participants cited more

physical problems such as arthritis and balance issues that prohibited them from assuming a more active role in exercise. Extrinsic barriers were identified as the various role demands of the Latin American woman, including child care and household chores or tasks, time limitations cited by the participants working outside of the home, negative environmental conditions, such as unsafe neighborhoods and hot or rainy weather, the availability of and access to community based programs, and limited information about risk factors and disease management.. Another barrier cited was the lack of social support, especially from a spouse. The consistent participation in physical activity by many of these women despite the lack of spouse or family support demonstrates a sense of empowerment. The women drew strength from each other. As women, they focused on a common goal to improve and maintain their health and as Latin American women they promoted family, family health, and “cultural unity.”

CHAPTER V

Discussion of the Findings, Conclusions, and Recommendations

The purpose of this study was to explore the factors that influence middle-aged and older Latin American women's participation in physical activity. Ethnographic methodology was used to examine the perceptions of health and exercise of 25 middle-aged and older Latin American women. Observation and interviews conducted by the investigator and the translator revealed a myriad of determinants of these women's health behaviors, related to physical activity. Latin American cultural influences were interwoven throughout the participants' responses to queries about their health and their lives. Their lives reflected a balance of physical, mental, and spiritual well-being. These Latin American women cited multiple factors, both intrinsic and extrinsic, that influenced their participation in regular physical activity either positively or negatively.

In addition, the participants identified their perceptions of health as the "treasure of life," having energy, being without pain, and being able to carry out one's daily activities. These perceptions appeared to directly influence their participation in regular physical activity. A similar relationship was noted in Duffy's (1998) study. Duffy identified that a positive relationship existed between health perception and self esteem and the regular practice of health promoting activities, including exercise.

The perceived benefits of exercise, having more energy, lower cholesterol, fewer aches and pains, and increased control of hypertension and diabetes as described by the

Latin American participants in this study validated several of Shin's (1999) research findings. Shin's ethnically diverse older female study participants demonstrated increased cardiopulmonary function, greater flexibility, and increased feelings of well-being when participating in a structured walking program.

Unique findings in this study included the intrinsic facilitator "sense of self" that translated into a sense of purpose or empowerment enabling participation in physical activity. This sense of self and purpose demonstrated by these Latin American women was influenced by their cultural, familial, and religious values.

Social support, often identified in the literature as a facilitator of exercise such as in Nies and colleague's (1998) study where social support, an accommodating schedule, the desire for self-improvement, and a supportive environment were found to influence participation in exercise, was also revealed as a facilitator of physical activity in this sample population. The context of social support went beyond the literal definition to include the support of or the "coming together" of other Latin American women, which was consistent with Melillo and colleague's (2000) findings. These Latin American women drew strength from their family and friends.

The extrinsic motivator of having a family history of a chronic disease such as a stroke or cardiovascular disease was also identified as an influential facilitator. In addition, the desire to more effectively manage their own chronic illnesses such as diabetes and hypertension and the search for health information appeared to positively influence these women's participation in health promotion behaviors like improved nutrition and regular exercise. They verbalized the desire to prevent personal health

events such as stroke or a heart attack and to stay healthy for their families.

Other studies examined similar facilitators of health promotion behaviors in Latin American women (Higgins & Learn, 1998; Melillo et al., 2000). The younger subjects in Higgins and Learn's study were found to be knowledgeable of current health promotion behaviors and perceived health as related to lifestyle, thus reinforcing the practices of diet, exercise, smoking cessation, and stress reduction. The subjects in that study believed that they had control over their lives versus life events occurring by chance. This study's findings also revealed that knowledge regarding risk factors and disease appeared to positively influence the women's participation in health activities.

An additional facilitator noted in this study was music. Several participants discussed the influence of music on their exercise and on their state of mind. It was important to many of them to have music, specifically Latin music, playing while they exercised in their homes or the community centers.

The middle-aged cohort in this study did demonstrate more participation in physical activity than the older group and demonstrated a higher level of knowledge regarding risk factors for stroke and cardiovascular disease and health promotion behaviors. This difference did not, however, appear to lessen or diminish the older cohort's zest for life and desire to participate in physical activity.

Similar barriers to participation in physical activity reported in this study were identified in Nies and coworker's research (1998). They were lack of family support, an unaccommodating schedule, consequences of exercise, environmental barriers, and barriers that were unique to the individual.

Barriers most frequently described by all of the Latin American participants were intrinsic physical barriers, such as pain and fatigue, and extrinsic barriers of role demands, environment and inaccessibility. The older participants reported more chronic diseases and symptoms related to those diseases which further inhibited their participation in physical activity.

The intrinsic barrier of worry was an additional finding in this study. Worry and accompanying anxiety detracted the women from their participation in health behaviors, including physical activity.

Role demands were noted in the literature as a barrier for women of this culture, however, the specific barrier of time limitation experienced by the women who were employed outside of the home has not been addressed (Juarbe, 1998). The women had role demands inherent in their Latin American culture, in addition to the demands of the workplace, thus further inhibiting their participation in physical activity.

A limitation of this study was the potential social desirability bias on behalf of the participants during the interview process.

Summary

Perceptions of health and physical activity and the factors that influenced middle-aged and older Latin American women's participation in physical activity were explored in this ethnographic study. These factors were strongly influenced by cultural and social mores and values. Reciprocity of perspectives and the acquisition of tacit knowledge, the epistemology of ethnography, were realized between the participants and the investigator.

Facilitators and barriers to participation in physical activity, both intrinsic and

extrinsic, were identified by the study participants. A sense of self, decreased feelings of stress, feeling good about one's self, a sense of well-being, the ability to manage chronic disease, the desire to lose weight, and the experience of a personal illness, such as a cardiac event, comprise the list of intrinsic motivators that facilitated participation in regular physical activity by these Latin American middle-aged and older women. The sense of self which was reflected in the empowerment in these women to overcome barriers was a significant finding. In addition, social supports, music, health information, family history of stroke or cardiovascular disease were found to be extrinsic determinants of physical activity. The context of social support finding was also significant – a reflection of the importance for them to come together as a group of Latin American women sharing a culture, caring for their families, and caring for each other.

Physical illness/disability, pain, fatigue, worry, embarrassment, and lack of self motivation were identified as intrinsic barriers to these women's participation in physical activity. Worry, identified in this study as a barrier to participation in physical activity, was not evident in the literature as a common deterrent to health activities. Additional factors, such as role demands (childcare and household tasks), time limitations, inclement weather, unsafe neighborhoods, inaccessible programs, lack of social (family) support) and limited knowledge of stroke and cardiovascular risk factors and disease management were revealed as extrinsic barriers. An unaccommodating schedule was described in the literature; however, time limitation was not specifically addressed in the context of not having enough time to meet all of the role demands in the home in addition to the demands of their outside employment. The advent of this information about this

understudied group of women creates opportunities for nurses and other health care professionals to address in their practice.

Implications of the Findings for Nursing Education and Practice

After analysis of the data, several implications for nursing education and nursing practice were identified based on this study's findings.

Nursing Education

As the Latin American population continues to grow in the United States, health and culture-related issues that are relevant to this population need to be addressed in nursing curricula. As research begins to close the gap in knowledge regarding Latin American health issues, current research and trends in management of chronic illnesses and the risk factors to decrease the incidence of others should be current topics in nursing education. Thus a reframing of nursing curricula with a focus on health promotion in multiethnic populations with health disparities is warranted. This study's findings regarding facilitators and barriers to participation in physical activity among middle-aged and older Latin American women can augment current chronic disease prevention and management, in addition to the development of effective strategies to implement with this population in both clinical or community settings, in programs to promote and sustain positive health behaviors.

Physical and psychosocial issues affecting Latin American women's health practices should also be presented as part of women's health curriculum content. This study's findings describe Latin American women's perspectives regarding relevant factors that affect their participation in physical activity, an important health promotion

behavior.

Nursing Practice

The need to develop strategies targeted to increase Latin American women's regular physical activity is the main clinical practice implication from this study. The development and implementation of interventions need to address the multiple roles of Latin American women and how they can integrate physical activity into their daily routine. Middle-aged and older women who have been sedentary should be assessed by a health care professional prior to the initiation of a physical activity program.

Community activism promoting safe neighborhoods and accessible sites should be part of a community based nursing practice initiative. It was evident from the findings that more culturally appropriate community-based programs targeted to Latin American women that provide structured physical activities in addition to information about disease risk factors and health behaviors to reduce them are needed. Spanish-speaking or bilingual health care professionals who are culturally competent should facilitate such programs. It was also evident from this study's findings that the programs need to be "social" in nature and provide childcare. The information regarding such programs should be initiated at the community centers, from the local church parishes, and the local schools and capitalize on the "word of mouth" method of information dissemination.

Physical activity preferences need to be explored although walking was by far the preferred activity among the study participants. Exercising 30 minutes a day, which is the latest recommendation the Surgeon General's office, may be a challenge for women with multiple role demands. A recommendation of three short 10 minute walks may be more

feasible as the walks can be combined with other activities of daily living and responsibilities, such as walking children to school, going to the market, or going to church. Cultural beliefs regarding the woman's role in the Latin American family and appropriateness of activity as well as family tradition, and spirituality need to be considered when developing and implementing strategies to promote physical activity.

Recommendations for Research

Two of the five themes identified for the National Institute of Nursing Research (NINR) emphasis are the identification of interventions to reduce health disparities and changing lifestyle behaviors for better health focusing on risk behaviors such as obesity and physical inactivity (NINR, 2004). The identification of determinants of health behavior promotes the development of culturally sensitive interventions to facilitate positive health behaviors. The NINR research directive also recommends studies that would focus on the stressors implicated in health disparities.

The facilitators, sense of self and the subsequent empowerment that these Latin American women demonstrated deserves further exploration. The examination of the relationship of these behavior determinants and participation in physical activity using qualitative method will contribute to the further understanding of Latin American women's health patterns and provide valuable practice recommendations.

The concept of cultural unity or the coming together as Latin Americans warrants development and additional research. Cultural influence on health beliefs and participation in health activities is well documented in the literature; however the influence of this concept of "cultural unity" identified by Melillo et al. (2000) and

validated in this study is significant.

A culturally sensitive instrument developed from the identified facilitators and barriers can be used to determine the correlation of specific factors with participation in physical activity. Research exploring the correlation of specific behavior determinants with physical activity can be used to develop appropriate interventions. The effectiveness of such interventions that promote positive and sustained health behaviors such as regular physical activity can be the focus of outcome studies. This research trajectory would assist in meeting both NINR and Healthy People 2010's objectives. In addition, outcome studies could validate the benefits of programs such as the American Heart Association's El Club de Caminar and promote continued funding of such programs. Positive findings could ultimately facilitate increased governmental funding for health promotion.

Conclusion

To the Latin American women who participated in this study health is a precious balance of family relationships, spirituality, and being able to participate in the activities of life. This study revealed various factors that were noted to influence this group's ability and desire to participate in life's activities, including the health behavior of physical activity. The responsibility of nurses and other health care professionals is to foster this participation by removing or minimizing barriers, enhancing facilitators, and providing supportive strategies to assist these women to sustain long-term participation in physical activity.

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Appendix A

Consent

- You have agreed to be interviewed by Stephanie Vaughn PhD (c) MSN RN CRRN and/or her assistant as part of a research study entitled “Factors Influencing Middle-aged and Older Latin American Women’s Participation in Physical Activity.” This study is being conducted in an effort to gather information regarding factors that facilitate and factors that hinder middle- aged and older Latin American women’s participation in physical activity, specifically exercise. The results of this study will be used to develop strategies that will assist this group of women to regularly participate in physical activity and reduce the risk factors that cause stroke and other related diseases.
- You understand that all information that you provide is kept confidential and private. The results may be made public, but all individual data will remain anonymous. The research records, including the interviews and field notes, will be safeguarded and kept confidential for a minimum of five years and will only be accessed by the principal investigator.
- You are aware there will be minimum risk or discomfort to you as a subject in this study. Potential risks are: anxiety or embarrassment when asked to reveal personal information regarding health practices and fatigue during the interview process. Participation is strictly voluntary and you may refuse to participate or withdraw at any time. Refusal to participate in this study will in no way cause any loss of benefit to you as the subject.

- You understand that the investigator will answer all of your questions about the research prior to the interview and at any time throughout the process. You also understand that the duration of your participation in this project is the time spent in the interview, which is approximately 30-60 minutes. You understand that you will incur no personal expense and that you will receive five dollars as compensation for your time.
- For more information regarding this study, you may contact the principal investigator - Stephanie Vaughn - (714) 838-9274 or (714) 573-5379 or the translator Belinda Flores – (714) 636-4174 or Jane Georges PhD - (619)260-4600.
- Thank you for participating in this project and sharing information that will assist us in getting middle-aged and older Latin American women to more consistently participate in activities, such as exercise, to prevent stroke.
- I have read and understand this form and consent to the research that it describes for me. I also understand that I will receive a copy of the consent for my records.

Subject Name (Print): _____

Subject Signature: _____ Date: _____

Principal Investigator (Print): _____

Principal Investigator signature: _____ Date: _____

Appendix B

Factors Influencing Middle-Aged and Older Latin American Women's Participation in Physical Activity

Age:

Marital status:

Number of children&/or relatives living in the home:

Highest level of education:

Country of origin:

Interview Questions

1. What is your daily routine – your daily activities?
2. What does “health” mean to you?
3. What do you do to stay healthy?
4. What are your feelings about physical activity or exercise?
5. To what extent do you think that physical activity is important for your health?
6. What do you think are the benefits of physical activity/exercise?
7. What are some of the “downsides” of physical activity/exercise?
8. What kind of physical activity/exercise do you participate in?
9. How often do you exercise? How long do you exercise at one time?
10. Does your schedule allow time for you to exercise?
11. What things make it possible for you to be able to participate in physical activity or exercise?
12. What things make it hard for you to exercise?
13. What kind of programs in your community are you aware of that help people stay physically active or exercise?

Appendix C

Dissertation Time Table

December, 2002 - March, 2003	Obtain IRB approval at University of San Diego Recruitment of Spanish translator. Initial contact with Director of Orange County's American Stroke Association to gain entree.	
March, 2003	Visit community center, meet with community center leaders, and observe group education session and interaction of the group participants.	
March – April, 2003	Recruit subjects. Conduct Interviews.	
April - August, 2003	Transcribe audiotapes. Data analysis. Submit draft of data analysis to committee chair.	
September – December, 2003	Prepare dissertation draft for committee. Presentation of findings - ARN local chapter and nationally at ARN conference in New Orleans.	
January – March, 2004	Submit draft of dissertation to chair and committee members; incorporate feedback into subsequent drafts; prepare for defense. Graduate in May 2004.	

Appendix D

Script

Thank you for agreeing to participate in this study, “Factors Influencing Middle-aged and Older Latin American Women’s Participation in Physical Activity.”

This study is being conducted with late middle-aged and older Latin American women who live in Orange County. The purpose of this study is to identify factors that facilitate or help women exercise and those that hinder or act as barriers to their participation in physical activity and exercise. This study is being conducted in cooperation with the American Heart Association/American Stroke Association as part of an ongoing effort to promote health and prevent stroke and other related diseases in Latin American women.