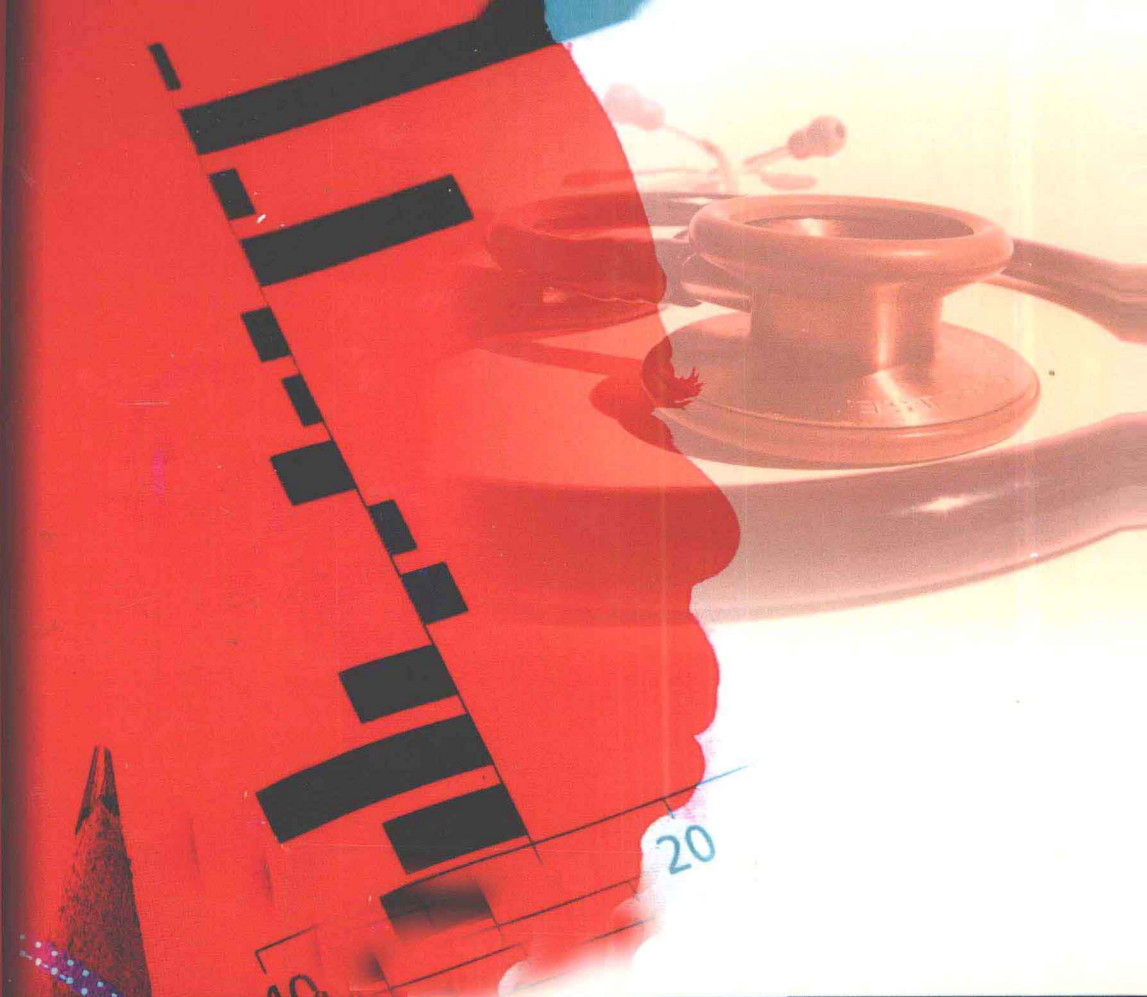




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# *Female African Americans and Health Research*

*Nana T. Heweng* & *Ellen B. Parsons*  
Editors

NOVA

# **FEMALE AFRICAN AMERICANS AND HEALTH RESEARCH**

**NANA T. ILEWENG  
AND  
ELLEN B. PARSONS  
EDITORS**

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## Preface

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African Americans have more disease, disability, and early death than whites. Major health problems for African American women include cancer, diabetes, vision loss, tuberculosis, and sexually transmitted diseases (STDs) (including HIV/AIDS). The leading causes of death for African American women are heart disease, cancer, stroke, diabetes, and kidney disease. African Americans are about twice as likely to have diabetes as whites of the same age and they are more likely to have other serious health problems caused by diabetes. Among women, two out of every three new HIV cases are African American. High rates of other STDs, including chlamydia, gonorrhea, and syphilis are a problem as well. African American women are less likely to receive health care; when they do receive care, they are more likely to receive it late. For example, African American mothers were twice as likely to have late or no prenatal care compared to white mothers in 2003. African American women are also less likely to be screened for cervical and breast cancer. This means that cancers tend to be found later and more African American women die from these cancers. There are many possible reasons for these differences, including racism, poverty, cultural differences, lack of knowledge about the importance of screening or testing to prevent health problems, inability to get to the doctor, or lack of trust in the medical system. This new book presents the latest research in the field.

Chapter 1 – Background: African American women have the highest cardiovascular disease (CVD) mortality among American women and disproportionate amounts of obesity and diabetes. They also have low rates of physical inactivity, an important modifier of CVD and its risk factors.

Objective: The purpose of this study was to investigate factors shaping the decisions of African American women to participate or not in physical activity or exercise.

Methods: Participants were recruited during regularly scheduled primary care clinic visits in the southern U.S. There were 61 participants who were interviewed for their attitudes regarding physical activity and health status. These were divided into physically active or inactive groups based on self-description. Fifteen “matched pairs” from these groups were analyzed. Subsequently, three individuals from the active and inactive groups were recruited for case studies where in-depth interviews regarding health, social, and family support were conducted.

Results: Only 15 of women described themselves as active ( $n = 46$  inactive). The mean age of matched pairs was  $55.46 \pm 7.55$  active and  $55.26 \pm 6.97$  inactive. Analysis revealed that these women shaped their physical activity behavior around their understanding of how it would directly influence their ability to avoid (1) current or future increased health cost due to disease, (2) physical limitations or expected age related decline and (3) the dependence on others. Perceptions and understanding of their current health status was a powerful influence on physical activity behavior. Many participants voiced a fatalistic attitude regarding physical activity and health status: health status is fixed and unchangeable or not influenced by physical activity; health status is predictable with age therefore unpreventable by physical activity; and poor health status itself is a barrier to participation in physical activity. A few participants felt that poor health status was a motivation to be physically active.

Conclusion: Due to the significant burden of CVD and its risk factors in African American women, effective physical activity interventions are needed. These findings contribute to the understanding of factors to be considered when developing effective behavior change interventions to reduce CVD in this population. Interventions that clearly connect physical activity to improved health status and those that offer some emotional support are more likely to be successful.

Chapter 2 - Background and Objective: Alzheimer's disease and vascular dementia are major contributors to cognitive impairment. These two conditions constitute a large proportion of dementing illnesses. There is increasing evidence that a majority of cases of Alzheimer's disease are complicated by vascular damage. Diabetes, hypertension, obesity, and physical inactivity are known risk factors for vascular damage and vascular dementia, and have been increasingly linked with the risk of developing Alzheimer's disease. Notably, these risk factors all have behavioral components. The authors' study examines the prevalence of health behavior risk factors for vascular disease, and the prevalence of physician-diagnosed Alzheimer's disease (AD) and vascular dementia, among older African American and non-Hispanic white (hereafter white) women. They also discuss opportunities to promote health behaviors to improve cognitive health.

Methods: The authors used the 2003 South Carolina Behavioral Risk Factor Surveillance System to estimate risk factor rates. They also estimated AD and vascular dementia prevalence, using the 2003 South Carolina Alzheimer's Disease Registry. Data for 2003 for women with AD and vascular dementia ( $n \geq 20,450$ ) were combined with US Census 2003 population estimates to calculate prevalence. The Chi-square statistic tested comparisons; all reported comparisons were significant at  $p < .05$ .

Results: Compared with white women, African American women had notably higher rates of diabetes (15.5% compared to 7.3%), hypertension (35.8%, 27.0%), obesity (37.8%, 20.4%), and physical inactivity (22.5%, 11.8%). African American women were less likely to have cholesterol checked or to eat fruits and vegetables, less likely to have Hemoglobin A1c testing for diabetes control, and had diabetes, stroke or myocardial infarction at younger ages. At all ages, African American women had a higher prevalence of AD than whites: at ages 65-74, the prevalence among African American women was 2.2 times as great as that among white women. This was also true for vascular dementia: at ages 65-74, African American women were 2.9 times as likely to have a diagnosis of vascular dementia than were white women.

Conclusions: Lifestyle may contribute to higher risks for AD and vascular dementia among African American women in South Carolina. In the U.S., rates of poor nutrition, inactivity, diabetes, hypertension, and obesity are increasing, suggesting that national rates of AD and vascular dementia may rise notably. The results of the authors' study highlight the usefulness of public health interventions to reduce behavioral risks for dementia.

Chapter 3 - African American women represent one of the fastest growing segments of the population infected with HIV as indicated by an infection rate 23 times that of Caucasian women. The reason for such high infection rates is not clear; however, empowerment theory suggests that African American women with a developed sense of empowerment in their daily lives may exert greater control pertaining to their sexual health. Yet as we grapple with what empowerment means as well as how to empower someone to engage in healthier sexual decision making, it becomes obvious that the concept of empowerment becomes entangled with other concepts such as self-efficacy, locus of control, and autonomy. Furthermore, from an outsider perspective, it becomes even more obvious that research focusing on empowering African American women may not necessarily lead to healthier sexual decision making. In some cases, empowerment may even facilitate sexual engagement that places African American women at risk of HIV infection. From this perspective, a model is proposed that incorporates the concepts of empowerment, health education, informed decision making, context-related decision making and choices, and a sexual risk behavior continuum from which implications for health education and research are posited.

Chapter 4 - Conventional wisdom surrounding health communication efforts has moved away from the notion of risk communication as a reactive phenomenon and toward a perspective embracing the importance of preventative health messages. The current chapter offers a recently developed theoretical perspective on risk message development, then goes on to critique risk and health communication responses in light of this model. Implications for risk and health communication practitioners are discussed.

Chapter 5 - Purpose: African-American women tend to be more overweight compared to Caucasian women. Weight is associated with bone mineral density (BMD) but the relation between BMD and resting energy expenditure (REE) which is also lower in African Americans has not been investigated widely.

Methods: 400 African-American women aged 45-87 years from San Diego, California participated in this community-based cross-sectional study. Body composition (fat mass, lean body mass) and BMD of the total body were measured using dual energy x-ray absorptiometry. REE was calculated using the Harris-Benedict equation; grip strength was measured by isometric dynamometry.

Results: REE showed the strongest correlation ( $r=0.55$ ,  $p<0.0001$ ) with BMD and explained 32% of the variance. When body weight replaced REE in the model, weight became the strongest covariate of BMD but explained 4% less of the variance.

Conclusion: In this cohort of African-American women, weight explained less of the BMD variance than REE. Poor energy economy may contribute to being overweight and may explain the lower rates of osteoporosis observed in African-American women.

Chapter 6 - The health of African American (AA) women as they age continues to be an issue in our society. In relation to other groups, AA women have higher morbidity and mortality rates due to cardiovascular disease, diabetes and cancer, among others. Dietary



health, which is often related to the incidence of these diseases, is also problematic for AA women due to several social and economic barriers. Yet there is growing evidence that community-based health interventions can be an effective way to address the health of mid-life and older AA women. This commentary provides a brief overview of the dietary health of mid-life and older AA women, highlights key barriers related to improving their health, and provides recommendations for implementing interventions to bring about desired health behavior change.

**Chapter 7 - Background:** Cancer is a major public health problem accounting for one in every four deaths in the United States. Disparities exist across the spectrum of prevention, early detection, diagnosis, treatment and care. A complex set of factors contributes to these disparities including the interplay of poverty, culture and social injustice. Cancer mortality rates are 18% higher among African American than white women largely due to mortality from breast and colorectal cancers. The purpose of this manuscript is to explore factors associated with timely breast and colon cancer screening among African American women.

**Methods:** This research was a cross-sectional study conducted by the Faith Community Health Commission in Forsyth County, NC. A survey based on the Behavioral Risk Factor Surveillance System Survey was administered to African American adults ages  $\geq 40$ . The survey included sections on demographics, health status and health care access, awareness of common diseases, knowledge, attitudes and beliefs about cancer and cancer screening practices, quality of life, care-giving, and lifestyle factors. Rates of mammography, clinical breast exam, self-breast exam and cervical cancer screening were calculated for all women; rates of colon cancer screening were calculated for women ages  $\geq 50$ . Multivariate analyses were used to assess the relationship between demographic, health care, cancer knowledge, attitudes and barriers on cancer screening practices.

**Results:** Participants included 463 women from churches, health centers and public housing. The vast majority had had a mammogram, clinical breast exam, or Pap smear at some time in their lives; most had had the procedures done within the recommended guidelines. Screening rates for colon cancer were lower; about half had ever had a blood stool test or a sigmoidoscopy or colonoscopy. Having insurance and a regular doctor were important predictors in breast and colon cancer screening; a higher number of barriers were associated with a decreased likelihood of having a mammogram or clinical breast exam in the past year.

**Conclusion:** These findings suggest that African American women are lagging behind their white counterparts in colon cancer screening. This finding is troubling given the high rates of colon cancer in this population. As expected, having insurance and a regular doctor are important factors in ensuring timely cancer screening. Further research should increase efforts to improve colon cancer screening in African Americans by increasing awareness and access to care, while continuing to stress the importance of breast cancer screening.

**Chapter 8 - Studies over the past fifty years have demonstrated that race of interviewer can affect participants in many ways, including physiological responsiveness, motor task performance, intelligence test performance, and stated anxiety. The purpose of this study was to determine if several clinical measures of anxiety were subject to bias based on the race of the interviewer. Black and white participants (N=546) were individually administered written measures of obsessive-compulsive disorder, subjective anxiety, depression, and stated affect**

by interviewers of different races, and scores were compared. The experiment takes the form of a 2 (black and white participant) X 2 (black and white interviewer) design. The primary dependent variables are scores on affective scales, with race of participant and race of interviewer as independent variables. African Americans reported higher scores on washing and contamination scales in the presence of a black experimenter; European Americans reported a more negative affect in the presence of a black experimenter; other scales were not affected. Black-white differences are also reported, with African Americans reporting higher levels of depression and OCD-related anxiety than European Americans. Authors conclude that participants are aware of interviewer race, but this is not an important cause of bias when reporting mood and anxiety symptoms. Implications for clinicians, educators, and researchers are discussed.

Chapter 9 - The health status of African American women continues to lag behind their white counterparts. Despite the beneficial effects of physical activity on health, African American women remain the least physically active subgroups within the United States. The purpose of this article was to review physical activity promotion and weight loss interventions targeted towards African American women who were 18 years or older. In order to collect the materials for the study, a search of Academic Search Premier, CINAHL, ERIC, and MEDLINE databases was carried out for the time period 2000 June 2007. A total of 11 interventions met the search criteria. Only four out of the 11 interventions were rooted in behavioral theories. The theories used were social action theory, social cognitive theory, behavior choice treatment and the social ecological model. Future interventions need to reify behavioral theories. Seven out of the 11 studies made accommodations for cultural sensitivity while four interventions made no mention of the concept. However, out of the seven studies, only one study distinguished cultural sensitivity into its superficial and deep dimensions and addressed both those realms. Future interventions need to be culturally sensitive. With regard to process evaluation only one intervention included a formative and a process evaluation component. Future interventions need to utilize process evaluations. In terms of the duration, three of the interventions were brief (up to 12 weeks), four were middle range (five to six months) and four were 12 months long. Interventions that did not employ theoretical frameworks were longer in duration than the ones which did. If more interventions are theory based they can be more efficient and shorter in duration. Most of the interventions focused on short-term changes right after the intervention and it is essential to have measures at least at six months after the intervention to assess for the retention of behavior change. On the whole, interventions have resulted in modest changes in behaviors and have shown mixed results with indicators of physical inactivity, thereby necessitating more effective use of theoretical approaches.

Chapter 10 - Recruiting African American women into chemoprevention trials presents a unique set of issues, which encompasses a mistrust of the health care system and the research community as well as the solicitation of asymptomatic women. A qualitative study of 40 asymptomatic African American women in four Midwest cities indicated they required advanced education to build relationships of trust between themselves and the research community before being approached to participate in a breast cancer chemoprevention trial. The Gail Model Risk Assessment Tool was suggested as a strategy to prepare women for chemoprevention research.



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Chapter 1

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# African American Women's Perceptions of Health and Exercise Behavior: A Qualitative Investigation

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## Abstract

*Background:* African American women have the highest cardiovascular disease (CVD) mortality among US women and disproportionate amounts of obesity and diabetes. They also have low rates of physical inactivity, an important modifier of CVD and its risk factors.

*Objective:* The purpose of this study was to investigate factors shaping the decisions of African American women to participate or not in physical activity or exercise.

*Methods:* Participants were recruited during regularly scheduled primary care clinic visits in the southern U.S. There were 61 participants who were interviewed for their attitudes regarding physical activity and health status. These were divided into physically active or inactive groups based on self-description. Fifteen "matched pairs" from these groups were analyzed. Subsequently, three individuals from the active and inactive groups were recruited for case studies where in depth interviews regarding health, social, and family support were conducted.

*Results:* Only 15 of women described themselves as active (n= 46 inactive). The mean age of matched pairs was 55.46 +/-7.55 active and 55.26 +/- 6.97 inactive. Analysis revealed that these women shaped their physical activity behavior around their understanding of how it would directly influence their ability to avoid (1) current or future increased health cost due to disease, (2) physical limitations or expected age

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related decline and (3) the dependence on others. Perceptions and understanding of their current health status was a powerful influence on physical activity behavior. Many participants voiced a fatalistic attitude regarding physical activity and health status: health status is fixed and unchangeable or not influenced by physical activity; health status is predictable with age therefore unpreventable by physical activity; and poor health status itself is a barrier to participation in physical activity. A few participants felt that poor health status was a motivation to be physically active.

*Conclusion:* Due to the significant burden of CVD and its risk factors in African American women, effective physical activity interventions are needed. These findings contribute to the understanding of factors to be considered when developing effective behavior change interventions to reduce CVD in this population. Interventions that clearly connect physical activity to improved health status and those that offer some emotional support are more likely to be successful.

**Keywords:** African American Women, Physical Activity, Motivation.

## Introduction

The Surgeon General's Report identified physical inactivity as a major health risk factor in our society [U.S. Department of Health and Human Services [USDHHS], 1996a]. Physical activity influences all-cause and cardiovascular mortality in both men and women [Blair et al., 1989]. Low levels of physical activity are associated with higher incidence and prevalence of type 2 diabetes mellitus, hypertension and obesity, and physical activity has been shown to improve mental health status and lower risk for osteoporosis and certain cancers [Eyler, et al., 1997; Kushi, et al., 1997].

Although the overall mortality rate due to cardiovascular disease (CVD) in the U.S. has declined over the past decades, the rate of decline is less for women than men. The rate of decline in CVD for minority women is less than for European American women and this is particularly of concern in African American women [American Heart Association, 1997; Taylor, Hughes, and Garrison, 2002; Jones, et al., 2002]. In fact, African American women have been shown to have the highest relative increases in CVD mortality among U.S. men and women. Some of this high burden of CVD in this group may be related to their low levels of physical activity that are among the lowest in the U.S. [Taylor, Hughes, and Garrison, 2002; Jones, et al., 2002; USDHHS, 1996b].

Much of the research on physical activity comes from databases generated by demographic surveys of large samples. This approach has generated a list of correlates that are associated with low activity levels such as race / ethnicity, lesser education, and low socioeconomic status (SES) [Eyler et al., 1997]. However, others have called into question the relationship between these demographic factors and physical activity, especially among minority women [Felton, Parsons, Misener, and Oldaker, 1997; Ford, Ahluwalia, and Galuska, 2000; Vandervoort, Divers, and Acojido, 2000]. Moreover, this methodology does not allow for participants' perspectives and the meanings they have attached to engaging in physical activity [CDC, 1995; Johnson, et al., 1990].

We sought to determine how African American women perceive physical activity and its impact on their health and the motivating factors that impact their exercise habits. An earlier study demonstrated that African American women who described themselves as physically active exercise to achieve an outcome. In addition, guilt or shames were negative influences in the discrimination between active and inactive women sampled [Landry and Solmon, 2004]. The objective of the project reported here is to use a qualitative approach to explore the reasons African American women choose to participate or not in physical activity and exercise.

## Methods

### Participants

The study occurred in three phases. The entire study protocol was reviewed and approved by the appropriate Institutional Review Board. Results from phase one have been published and outline the methods used [Landry and Solmon, 2004] and here we report on phases two and three. African American women aged 45 – 70 years were recruited during regularly scheduled visits to a public hospital primary care clinic in the southern United States during a period of two months. The population served by this hospital is predominantly indigent. Of the original 105 participants in phase one of the study, sixty-one participants agreed to be interviewed for phase two. Of these sixty-one participants, 15 described themselves as active, based on their responses to the stage of exercise change questionnaire while 46 described themselves as inactive [Landry and Solmon, 2004]. From the pool of 46 inactive participants, we purposely selected 15 by matching them to the active participants--first by age and body mass index [BMI, Howley and Franks, 1997] and then, if necessary, by marital status and number of children. This selection process yielded 15 matched pairs of active and inactive participants with similar demographic characteristics. Phase three participants were 6 conveniently sampled women from phase two participants of the study. Demographic data was collected from all participants.

### Phase Two: Interviews

Interview questions were selected based on queries designed to elicit issues specifically related to perceptions of health and exercise behavior. The interview included questions about perceptions of: (1) control of their health, (2) importance of exercise to health, (3) barriers to exercise, (4) exercise and physical activity levels currently and any changes over time, (5) relationship between health status and exercise and how health concerns influenced their physical activity choices. Interviews were audio-taped and transcribed verbatim.

## Interview Procedures

On the day of their scheduled clinic appointments, after consenting to participate, participants joined the primary researcher in a private room. The interviews ranged in length from 10 to 25 minutes. Data collection extended over a three-month period.

## Phase Three: Case Studies

Case study instruments and data sources included: all previously collected data, a second interview session focused on life history inquiry pertaining to health and physical activity, medical chart review, daily activity log (Cross-Cultural Activity Participation Survey (CAPS)). CAPS Physical activity log is a one-page log with multiple items describing possible activities one might engage in during a given day [Ainsworth, 2000; Ainsworth, Irwin, Addy, Whitt, and Stolarczyk, 1999]. Participants were asked to record daily activity on this log for any two given weekdays and one weekend day (total of three days). Additional interviews lasting up to one and a half hour were conducted and included questions focused on (1) related life experiences which influence physical activity behavior, (2) what movement counts for “exercise”, (3) self definition of health, and (4) self described current level of physical activity or exercise. Responses from phase two interview questions were also reviewed and discussed at more length.

## Phase Three Procedures

Individual appointments were made for the additional case study interviews. Physical activity logs were completed within two weeks of the second interview. Medical chart reviews were completed after all secondary interviews were complete.

## Interview Data Analysis

Two strategies were utilized to analyze qualitative interview data [Maxwell, 1997]: categorizing, and contextualizing. Categorizing allowed us to sift the data into categories by unitizing or coding units of information to allow for comparisons of similarities or differences between and within groups of data [Lincoln and Guba, 1985]. The categorical analysis results are reported based on the responses to five specific interview questions: “do you have control of your health?”, “how important do you think physical activity or exercise is as a component of being healthy?”, self-reported comparisons and explanations of present activity levels with past activity levels and “if I were magic, and could do what ever it takes to get you to become more physically active or exercise, what would I have to do, no limits and why?”. The last two questions were asked to identify perceived barriers to and facilitators of exercise. We coded the women’s responses into categories. We describe these categories



and give examples of them in the results sections below. Categories that were frequently coded were sometimes divided further into subcategories.

Contextual analysis facilitates viewing the data from a holistic view. During the contextualization process whole transcripts are reviewed as individual data units as the researcher looks for similarities and differences which allow for themes to emerge from the data sources. The contextual analysis results are reported by the overall theme and two underlying sub themes that emerged from the analysis. We established trustworthiness and credibility by using member checks with women from within our sample population [Patton, 1990].

## Case Study Analysis

Additional interviews were transcribed verbatim for analysis. Data were analyzed for similarities and differences between and within the active and less active groups and from a holistic approach. The triangulation [Patton, 1990] of data began with examining all data sources individually and collectively. Data sources were integrated and themes emerged using constant comparison [Lincoln and Guba, 1985; Onwuegbuzie and Teddlie, 2003]. Trustworthiness and credibility were established through member checks throughout the analysis process [Patton, 1990]. Member check was completed by meeting with women from the participant group and non participants from the same demographic group to discuss preliminary and final study result interpretation.

## Results

Demographic data of participants are reported in Figure 1.

<i>Participant Characteristics (N = 30)</i>				
	Active (n = 15)		Inactive (n = 15)	
	Mean	SD	Mean	SD
Age	55.46	7.55	55.26	6.97
BMI	33.24	6.28	33.48	6.13
Marital status	Single = 5 Divorced = 6 Married = 3 Widowed = 1		Single = 2 Divorced = 4 Married = 7 Widowed = 2	
Number of children	3 or less	More than 3	3 or less	More than 3
	6	9	6	9

Figure 1. Interview Participant Demographic Profiles.

Categorical Analysis

While the majority of the responses from active women contained and concentrated on issues of health status, the inactive women were more likely to have additional concerns relating to environmental concerns and daily obligations. Identified categories can be found in Figure 2. Active women responded more positively concerning their perceptions related to having control of their health. Although all participants agreed physical activity /exercise was important, more inactive participant responses indicated a lack of belief of a connection between physical activity behavior and their personal health status. Health status was the number one reported reason for the decrease in activity level overtime for both groups. When perceived barriers were inquired about, the connection between health status and physical activity again become evident. As expected, inactive participants provided the most coded data for barriers and health status was the most dominate theme of all responses. Quotes comparing active and inactive responses from the categorical analysis discussed below can be found in Figure 3.

Control of Health Question	Importance of Exercise/ Physical Activity Question	Reasons for Decreased Activity Levels Over Time Question	Perceived Barriers Question
1. Self-care	1. Outcomes <div><div>a. Acknowledging General Benefits</div><div>b. Experiencing Specific Benefits</div><div>c. Improved Function</div></div>	1. Health status	1. “Fix me”
2. Mind set		2. Age related	2. Lack of empowerment
3. Medical adherence	2. Unsure	3. Environment	3. Daily Obligations
4. Disease progression	3. Conditional	4. No explanation	4. Environment
5. Spirituality	4. Cautious	5. “Got lazy”	5. “Nothing for me/It’s a mind set”
6. Knowledge			6. “I don’t know”
			7. “I can’t be fixed”

\*Column headings coincide with interview questions, see Methods section. Under each question are the category and sub-categories which emerged from responses from each question.

Figure 2. Identified Categories from Interview Categorical Analysis\*.

*Control of health.* Several women stated that they are unsure about the level of control they have on their health, however, all women expressed a belief that they have some level of control of their health. Positive perspectives were coded almost equally between active and inactive groups. As may be expected, the inactive group was responsible for double the number of negative perspectives coded.

Interview Question: Do you have control of being healthy?
<i>Example Active Group Participant Quote</i>
Yes. Yeah, there's a few things. Sometime I splurge and I shouldn't, so yeah there are some things I can change.
No, I have got control now that I've been going to the doctor. I'm a diabetic. [in general can people control their health? Like they can do something about it?] Yes, make sure you see a doctor, exercise, eat the right food.
<i>Example Inactive Group Participant Quote</i>
Yes I do. Problem is I do what I can when I can. (due to illness) If I don't feel like doing it I don't do it.
I don't think so, no more. I used to think so. Well, I used to be in control when I was, when I didn't have any sickness at all. I was most in control then. But since I'm in the sickness I have to bear with it. I can't go over it, I can't go under it, I'm going to have to come and do it. So that's just the way it is. Yeah, I'm trying to take the medication and stuff and get my health
Interview Question: How important do you think physical activity or exercise is as a component of being healthy?
<i>Example Active Group Participant Quote</i>
"circulation, ... arthritis, ... stiffened joints, exercise can help restore that"
"If I miss walking my blood sugar is higher the next morning."
<i>Example Inactive Group Participant Quote</i>
Well, walking is good for your heart....but I need help with more or less the tummy..."
"Well in some ways you can mess up a muscle if you don't do it right. But its mostly healthy...But if you are hard of breathing.... if you don't take exercise you just feel like it's clogging up in you, ... its better to do exercise than to not".
Interview Question: Why do you think you have decreased your physical activity or exercise level over time? What influenced that change?
<i>Example Active Group Participant Quote</i>
"More active in the past. Well after I had so much problem with my back and eventually had surgery on it, it's quite a chore to walk."
"...Depends on how my leg feels....like I say, my health.
<i>Example Inactive Group Participant Quote</i>
"I used to a long time ago when the kids were small cause they liked to play. [why] I just don't know, I guess they grew up and started going their separate ways and I just got couch and TV I guess."
"I would say less, because I was working before my hip got... and because I can't see how to get around."
Interview Question: "If I were magic, what could I do to get you to become more physically active or exercise? What would I have to do? No limits and why?"

Figure 3. (Continues.)