

USING FOCUS GROUP METHODOLOGY TO DEVELOP DIABETES  
SCREENING, EDUCATION, AND PREVENTION PROGRAMS  
FOR AFRICAN AMERICAN WOMEN

A DISSERTATION  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY  
IN THE GRADUATE SCHOOL OF  
TEXAS WOMAN'S UNIVERSITY  
COLLEGE OF HEALTH STUDIES

BY  
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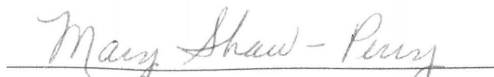

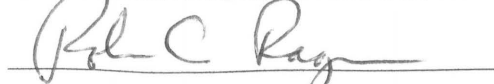

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To the Dean of Graduate Studies and Research:


I am submitting herewith a dissertation written by Cheryl Reifer entitled "Using Focus Group Methodology to Develop Diabetes Screening, Education, and Prevention Programs for African American Women." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Health Studies.

  
Mary Shaw-Perry, Ph.D.

We have read this dissertation and recommend its acceptance:

  
  
  
  
Chair, Department of Health Studies

Accepted:

  
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## DEDICATION

My parents, Alexia and Eugene Simon, gave me life and instilled in me the values of education, hard work, and perseverance. Their example molded my formative years, and their reflection shines through in all I do. Mom and Dad, though you are gone, you live on in me and in my work. I dedicate this to you, and to my husband, Eli, who gave me encouragement, love and understanding, which have made the completion of my educational endeavor possible. Special thanks to my mother-in-law for her words of assurance, and to my Aunt Lee for her wisdom and advice.

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Few studies have been done to determine the perceptions and beliefs that non-diabetic African American women have about diabetes and secondary complications that result from the disease. Therefore, the purpose of this study was to involve low- and middle-income African American women in focus groups to elicit their perceptions and beliefs about diabetes and to generate ideas for developing diabetes education, risk reduction, and screening programs tailored to African American women.

The study population consisted of low- and middle-income African American women that resided in the Dallas-Fort Worth (DFW) metroplex who had no personal history of diabetes. Twenty-eight African American women between the ages of 25-65 were recruited through the assistance of two churches, a beauty salon, and a public health clinic.

Participants' perceptions reflect knowledge of the severity of diabetes, but they lack an understanding of why the disease has severe complications. Participants lacked knowledge about the signs/symptoms of diabetes and how to be screened/tested for the disease. Participants reported being uncomfortable about asking physicians questions about diabetes, requesting brochures, and/or requesting a test for diabetes. The findings from this exploratory qualitative research study can be used to guide the design of health

education and promotion programs for African American women who are at risk for developing non-insulin dependent diabetes mellitus (NIDDM) or type 2 diabetes.

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## CHAPTER I

### INTRODUCTION

#### Problem and Its Background

A review of the literature revealed that few studies have been done to determine the perceptions and beliefs that African American women have about diabetes and secondary complications that result from the disease. As a result of this gap in knowledge, there is a lack of preventive programs or measures, including components for education, risk reduction, and screening programs that are tailored to African American women.

Diabetes and the severity of complications that develop secondary to the disease represent a major health problem that contributes to the health disparities that continue to exist between African American women and other groups (U.S. Department of Health & Human Services, 2000). The findings from this exploratory qualitative research study can be used to guide the design of health education and promotion programs for African American women who are at risk for developing non-insulin dependent diabetes mellitus (NIDDM) or type 2 diabetes.

#### Rationale

The prevalence of diagnosed diabetes in African Americans has tripled during the past 30 years. According to the National Medical Expenditure Survey 1992 (Peyrot & Rubin, 1992), more than \$100 billion is spent annually in the U. S. to care for people with

diabetes. In 1998, 1.5 million out of 35 million African Americans had been diagnosed with diabetes. This is almost four times the number of African Americans known with diabetes in 1968 (National Institute of Diabetes and Digestive and Kidney Diseases [NIDDKD], 1999). Other statistics indicate that more than 2 million African Americans are diabetic, of which 1.1 million (3.5% of African Americans) have been diagnosed (Siminerio, 1996). For every 6 White Americans with diabetes, 10 African Americans have the disease (Harris & Modan, 1994). One in four African American women over the age of 55 have been diagnosed with diabetes, nearly twice the rate of White women (National Women's Health Information Center [NWHIC], 2000; McNabb, Quinn, & Tobian, 1997).

The National Diabetes Data Group reports that African American women have a 50% higher rate of NIDDM than their White counterparts (Allen & Phillips, 1997; Siminerio, 1996). Diabetes is the third leading cause of death in African Americans (Braithwaite & Taylor, 1992). According to the National Center for Health Statistics (NCHS) (Roseman, 1985), diabetes is the fourth leading cause of death for African American women and the sixth for African American men. Delay of diagnosis is an additional risk factor associated with complications of diabetes, since the onset of diabetes can predate the clinical diagnosis for up to 10 to 12 years (Harris, 1995; Harris, Klein, Wellborn, & Knuiman, 1992). There is concern that a large number of African American women are not being screened for diabetes, or diabetes is being identified in late stages of the disease after experiencing complications or symptoms (Fitzgerald et al.,

1998). Approximately one-third of total diabetes cases are undiagnosed among African Americans.

There are several risk factors associated with the frequency of diabetes in African Americans and other populations (NIDDKD, 1999).

The first is genetics, which includes inherited traits and group ancestry. The second is medical risk factors, including impaired glucose tolerance, hyperinsulinemia, and insulin resistance, and obesity. The third is lifestyle factors, including physical activity. (NIDDKD, 1999, p. 1)

It is unclear whether African American women perceive or believe that genetics, medical risk factors, and lifestyle factors may contribute to the development of type 2 diabetes. Therefore, additional research is needed to gain an understanding of the perceptions and beliefs about diabetes among African American women. This knowledge could then be used in designing and implementing effective diabetes screening and prevention programs tailored to African American women.

#### Purpose of the Study

The purpose of this study was to involve low- and middle-income African American women in focus groups to elicit their perceptions and beliefs about diabetes and to generate ideas for diabetes education, risk reduction, and screening programs tailored to African American women.

#### Research Questions

The following research questions guided this study:

1. What are the perceptions and health beliefs about NIDDM (type 2 diabetes) among African American women?

2. What are the perceptions and health beliefs about the risk factors for developing NIDDM (type 2 diabetes) among African American women?

3. What are the perceptions and health beliefs about the severity/complications of NIDDM (type 2 diabetes) among African American women?

#### Definition of Terms

1. African American women: Black or African American females with origins in any of the black racial groups of Africa (U. S. Census Bureau, 2000).

2. Diabetes mellitus: Diabetes mellitus is a group of diseases characterized by high levels of blood glucose. It results from insulin action, defects in insulin secretion, or both (NIDDKD, 1999).

3. Non-insulin dependent diabetes mellitus (NIDDM) or type 2 diabetes: Type 2 diabetes encompasses all forms of diabetes that are characterized by the combination of insulin resistance and deficient secretion of insulin (DeFronzo, 1998).

4. Insulin-dependent diabetes mellitus (IDDM) or type 1 diabetes: Type 1 diabetes encompasses all causes of diabetes that result from destruction of the pancreatic beta cells (DeFronzo, 1998; Haire-Joshu, 1996; Williams & Pickup, 1999).

5. Obesity: Thomas (1993) and Haire-Joshu (1996) define obesity as excess of body fat and over fatness as body fat in excess of 20% for men and 30% for women.

6. Screening: The use of a test to discriminate between people who are and who are not likely to have a disease. A definitive diagnostic procedure confirms the absence or presence of a disease (Knowler, 1994).

### Limitations

The study was limited by the following:

1. The study was limited in scope by the small sample size; therefore, generalizability was decreased.
2. The study was limited to the inclusion of only African American women who self-reported that they had never been diagnosed as having diabetes.

### Delimitations

The study was delimited by the following:

1. The sample was comprised of African American women only (self-described).
2. The sample consisted of African American women between the ages of 25 to 65 years of age.
3. The study included only African American women recruited through two churches, one beauty salon, and one public health clinic.

### Assumptions

1. The participants were willing to participate in the discussion.
2. Other members of the focus group may have influenced individual responses.
3. Responses honestly reflected what participants believed at the time of the focus group interviews.

### Significance of the Study

Little is known about low- to middle-income African-American women's health beliefs and perceptions about diabetes. Focus groups may be a successful technique for providing insight into the thoughts and perceptions of African American women



(Funnell, Arnold, Fogler, Merritt, & Anderson, 1997; Blanchard, Rose, Taylor, McEntree, & Latchaw, 1999). This study utilizes focus group methodology because the literature repeatedly supports that gaps in knowledge about perceptions, beliefs, and health practices can be gained through focus groups. Focus group methods are designed to discover the reality of a specific, well-defined population to meet their specific, self-defined needs (Blanchard et al., 1999). Churches and other community settings may be the appropriate site for focus group studies because of the community-church connection and the willingness of the African-American community to participate in church-based activities (Osei, 1998).

Although focus group studies reported in the literature have addressed issues of African Americans who have diabetes, these studies have not addressed issues of non-diabetic African Americans who are at risk for developing diabetes. There is a need to conduct focus groups with non-diabetic African American women to determine their beliefs and perceptions of the seriousness and severity of diabetes. The problem of complications and morbidity from late-stage diagnosis of diabetes will continue to exist in the African American population unless screening and education strategies increase prevention behaviors. The information gained from this focus group study can provide valuable information for the design, implementation, and evaluation for diabetes screening and education programs and diabetes-print literature to promote awareness, early detection, and treatment for diabetes.

For example, the Michigan Diabetes Research and Training Center (MDRTC) used information gained from focus groups to develop a series of educational videos for

use with African Americans diagnosed with diabetes (Blanchard et al., 1999). The MDRTC observed that the focus group process conveys a message to the minority community that the healthcare system considers them important and is willing to listen and adapt care to their unique concerns (Blanchard et al., 1999).

Clearly, the focus group method appears to be supported in the literature as a valid method for gathering data to design diabetes education programs for African Americans. However, this research method may contribute information about the health beliefs of African American women concerning the seriousness and severity of diabetes and whether lifestyle factors such as diet, weight, and exercise of these women are well understood. Whether or not African American women will engage in lifestyle practices (diet, exercise, weight management) to reduce or delay the onset of diabetes may depend on their perceptions and beliefs about diabetes and its severity, as well as availability of intervention programs tailored to the cultural norms and beliefs of African American women.

## CHAPTER II

### REVIEW OF LITERATURE

Diabetes is a disease that, left undetected or untreated, may pose serious health consequences. A lack of awareness among African American women regarding the need for screening and early detection of diabetes puts them at increased risk for complications that result from the disease (Blanchard et al., 1999). Incidence and prevalence rates are also higher among this group.

This chapter presents findings from a review of the literature. Topics discussed include the following: (a) incidence and prevalence of diabetes among African American women, (b) severity and complications among the African American female population, (c) perceptions among African American women of diabetes modifiable and non-modifiable risk factors, and (d) existing diabetes programs and screening and management programs.

#### Diabetes Incidence and Prevalence

##### General Incidence Rate

Diabetes is the seventh leading cause of death (sixth-leading cause of death by disease) in the United States due to its complications--kidney disease, blindness, amputations, heart attack, and stroke (American Diabetes Association [ADA], 2000a).

At least 20% of diabetes is undiagnosed worldwide, and in many communities

greater than 50% is undiagnosed. The rate of undiagnosed diabetes in the U. S. is 50% for non-Hispanic whites, 42% for Hispanics, and 44% for African Americans (Herman, Smith, Thompson, Engelgau, & Aubert, 1995). Diabetes affects 1.2 million or 10.6% of the Mexican-American population (ADA, 2000a). Diabetes was the fourth leading cause of death among Latino women in 1992 (Allen & Phillips, 1997). Type 2 diabetes is the third leading cause of death in African Americans, surpassed only by cancer and heart disease (Maillet, D'eraimo-Melkus, & Spollet, 1996). One third of total diabetes cases are undiagnosed among African Americans (ADA, 2000a; NIDDKD, 1999). The prevalence of undiagnosed and diagnosed cases of type 2 diabetes has been reported to be 60% higher in African Americans compared with White people (Maillet et al., 1996)

According to the ADA (2000a), an estimated 2.3 million African Americans, or 10.8%, have diabetes. Most African Americans with diabetes, 90% to 95%, have type 2 diabetes (NIDDKD, 1999). African Americans have higher rates of diabetes at all age levels, and one in four who are ages 65 to 74 years will have the disease (ADA, 2000a; Maillet et al., 1996). African American women are in a high-risk category for developing diabetes and related complications (Maillet et al., 1996; NIDDKD, 1999). These women have been reported to have a rate of type 2 diabetes that is two times higher than that of White women (Maillet et al., 1996). According to the third National Health and Nutrition Examination Survey (NHANES III, 1988-1994)(Centers for Disease Control [CDC], 2001), the combined prevalence of diagnosed and undiagnosed diabetes is 10% among African American men and 13.6% among African American women (Schorling & Saunders, 2000). African Americans experience higher rates of at least three of the

serious complications of diabetes--amputation, blindness, and end stage renal disease (kidney failure) (ADA, 2000a).

#### Incidence and Prevalence Rate in African American Women

Among African American women, diabetes has reached epidemic proportions, with 1 in 4 African American women 55 years and older having diabetes (McNabb et al., 1997; Wierenga & Wuethrich, 1995). Among African Americans, age 50 years or older, 28% of women and 19% of men have diabetes (NIDDKD, 1999). An increased incidence of diabetes occurs after the age of 50 in African American women, possibly due to symptoms and complications from a delayed diagnosis of diabetes. Women who have a family member with diabetes are at a higher risk for developing diabetes (NWHIC, 2000). Early detection and treatment of diabetes may decrease or delay the onset of long-term complications from diabetes.

According to the NHANES III survey, 1988 to 1994, (CDC, 2001), the proportion of the African American population who had diabetes ranged from less than 1% for those younger than 20 years of age, to as high as 32% for women 65 to 74 years of age (NIDDKD, 1999). The overall mortality rate for African American women with diabetes was 40% higher compared with their White counterparts according to a national survey of people first studied in 1971 to 1975 (NIDDKD, 1999). African American women have been known to delay seeking entry into the health care system (McNabb et al., 1997). Beyond prevalence data, very little is known about diabetes in African American women or women in general (McNabb et al., 1997).

## Diabetes Risk Factors: Nonmodifiable, Situational, and Modifiable

Nonmodifiable risk factors for diabetes include age and genetics. Risk factors of a situational nature include those factors over which an individual has only marginal or partial control, such as geographic location (including rural or urban living), socioeconomic status (SES), and access to health care (McNabb et al., 1997). Modifiable risk factors are largely under the control of the individual, generally involving lifestyle (McNabb et al., 1997). The modifiable lifestyle factors of obesity/weight, physical activity, and diet will be discussed in relation to diabetes, and diabetes prevalence in African American women. Given the high prevalence of diabetes related to sedentary lifestyles among African Americans, improved understanding of their physical activity patterns may provide relevant public health information (Young, Miller, Wilder, Yanek, & Becker, 1998). According to the National Institute of Health (NIH), it may be possible to prevent or delay the onset of type 2 diabetes by reducing lifestyle risk factors through increased physical activity and weight loss (ADA, 2000a). Both modifiable and non-modifiable risk factors may play a role in diabetes severity, diabetes complications, and death.

### Nonmodifiable Risk Factors

There is clear evidence that African American women are more likely to have diabetes than African American men or White Americans of either gender. The prevalence of type 2 diabetes is about 40% higher in women than men among both Whites and African Americans (McNabb et al., 1997). One in four African American

women have diabetes by the age of 55, suggesting that age is a risk factor for developing diabetes among African American women (McNabb et al., 1997). Genetics has been identified as a probable risk factor for diabetes (McNabb et al., 1997). Individuals having a family member with diabetes have a strikingly increased risk for type 2 diabetes. Hypertension is a risk factor for type 2 diabetes and a major risk for complications related to diabetes (McNabb et al., 1997).

### Situational Risk Factors

In the U. S., individuals in the lowest income brackets have a higher risk of developing diabetes (McNabb et al., 1997). There is evidence that obesity and low SES are correlated, or, in other words, low SES may lead to obesity or both conditions may share the same unknown causes (McNabb et al., 1997). “Urban residents have higher rates of NIDDM than do rural residents, which may be a result of lifestyle factors, such as sedentary lifestyles, obesity, and levels of stress” (McNabb et al., 1997, p. 281). African Americans are less likely to have access to primary health care and primary care services not only because of economic barriers, but often services are not culturally relevant (Glanville & Porche, 1998). Although it is likely that African American women are especially affected by these situational risk factors, there is not sufficient evidence in the literature that validates this assumption (McNabb et al., 1997).

Individuals at higher risks for undiagnosed diabetes are (a) those greater than 45 years of age who are obese, (b) people who are greater than or equal to 45 years of age who are not obese but have a history of physician-diagnosed hypertension, (c) people who are greater than or equal to 45 years of age who are not obese and do not have a

history of physician-diagnosed hypertension but have a history of borderline or potential diabetes, and (d) those who are younger than 45 and are obese and sedentary (Herman et al., 1995). Factors that increase one's risk of developing diabetes include having family members with diabetes (especially type 2), being overweight, and being an African American, Native American, or Hispanic (Gulledge & Beard, 1999). Since genetic predisposition to diabetes is partly based on a person's lineage (NIDDKD, 1998), African American ancestry is an important predictor of the development of diabetes. The African American population formed from a genetic admixture across African ethnic groups with other racial groups, primarily North American Caucasian and European (NIDDKD, 1998). Therefore, being of African American ancestry may increase one's risk for developing diabetes.

#### Modifiable Risk Factors

Obesity or overweight. Obesity has been shown to be a significant modifiable risk factor for type 2 diabetes. In overweight adults 20 to 75 years of age, the relative risk of diabetes is 2.9 times greater than for nonoverweight people of comparable ages (Maillet et al., 1996). Fewer African American women than White women perceived themselves as overweight (Raymond & D'eraimo-Melkus, 1993). There is an increased risk of type 2 diabetes in individuals who are 20% to 30% overweight (Raymond & D'eraimo-Melkus, 1993). This risk increases with an increased degree of obesity, increased body weight, and the distribution of excess body fat. Upper body obesity is associated with an even greater risk of type 2 diabetes (Raymond & D'eraimo-Melkus, 1993). The combined effects of type 2 diabetes and obesity are deleterious. The benefits of aggressive treatment



of overweight or obese individuals with type 2 diabetes seem to be well established (Raymond & D'eraimo-Melkus, 1993).

Type 2 diabetes is more common in older people, especially older women who are overweight, and occurs more often among African Americans, Hispanics, and Native Americans (Beard & Gulledge, 1999). Hereditary and environmental factors, such as lifestyle and diet, are some of the reasons diabetes is more common in African Americans than in Whites (Beard & Gulledge, 1999). One in four African Americans over the age of 65 years has diabetes and one in four African American women over the age of 45 years has diabetes (Maillet et al., 1996; McNabb et al., 1997). Of these women, 85% are obese and the majority has abdominal or central obesity (Maillet et al., 1996; McNabb et al., 1997). One of the most important risk factors for diabetes in African American women is obesity (NWHIC, 2000). African American women between the ages of 25 and 74 are more overweight compared to White women of the same age group (McNabb et al., 1997; NWHIC, 2000). African American women who have most of their body fat in the abdominal area are more at risk than women who carry their weight on their buttocks and hips (McNabb et al., 1997; NWHIC, 2000). Approximately 62% of White women and 83% of African American women with diagnosed diabetes are overweight (McNabb et al., 1997). Among African American women, the prevalence of obesity is almost double compared with White women. More than 60% of African American women over 45 years of age are obese (Maillet et al., 1996; Jewler 1991), and 44% of African women between the ages of 20 to 74 are overweight (Haire-Joshu, 1996). Women under the poverty line have much higher rates of obesity than women in non-poverty groups. Being poor and

obese often are paired, as 34% of African American men and women are below the poverty line--in contrast to only about 11% of White men and women (Jewler, 1991).

The NHANES II, which was conducted in 1976 through 1980, identified a higher prevalence of overweight and severe overweight in women than in men (Maillet et al., 1996). The prevalence of overweight was much higher for African American women than for White women at all ages. Church programs are particularly effective in reaching African American women (Kumanyika & Charleston, 1992). The appeal to a collective identity applies here also because a high proportion of African women are overweight (Charleston & Kumanyika, 1992).

#### Perceptions about Obesity/Overweight and Body Image Issues among African American Women

Perceptions of weight have been found to differ across ethnic groups. African American women are reported to be conscious of being overweight, but are less likely to feel a strong social pressure to lose weight. Cultural values, norms, and beliefs strongly influence weight behaviors and diet practices within ethnic groups (Maillet et al., 1996). Losing weight specifically to improve one's health is considered acceptable in the African American culture (Haire-Joshu, 1996).

African American women are not motivated to lose weight by thinness, but rather a desire to be healthier (Maillet et al., 1996). Being thin may reflect inadequate diet, poor health, and deprivation, while being heavy may reflect an abundance of food, wealth, and good health in some cultures (Haire-Joshu, 1996). Historically seen as a sign of health, obesity may be seen as a sign of beauty by older African Americans (Haire-Joshu, 1996).

Role changes, such as grandmotherhood, occur early among African Americans, and the value of low weight may decrease as individuals age and assume different roles (Haire-Joshu, 1996). Among African Americans, weight gain is seen as a normal part of the aging process, and it is viewed as inappropriate to lose weight to improve one's appearance (Haire-Joshu, 1996). Therefore, overweight African American women do not necessarily believe they have a weight problem nor that they are unattractive. African American women have been shown to evaluate their weight in comparison to other African American women who are heavier on average than White women and not in relation to an arbitrary, health-based ideal (Maillet et al., 1996).

Although the obesity rate is about 50% in African American women, studies consistently find that overall, this population of women has a more healthful body image than White women (Goldberg et al., 1999). There is widespread acceptance of higher relative weight as normal, which means that African American women commonly do not recognize that they are overweight and are less likely to initiate a weight control diet than White women their age (Goldberg et al., 1999). Older African American women tended to believe grooming, self-esteem, and attitudes were more important to attractiveness than degree of fatness (Goldberg et al., 1999). Family served as the buffer. Family values among African Americans included a responsibility for each other, respect for elders, sharing material needs, and caring for each other (Daly, Jennings, Beckett, & Leashore, 1995).

Culturally sensitive patient educators are needed who respect cultural differences in values, such as ideal body size (Raymond & D'eraimo-Melkus, 1993). The practitioner

who works with African American clients should be comfortable in working across system levels and should appreciate factors that may affect their clients' well-being so that appropriate interventions can be planned (Daly et al., 1995). Research related to identifying and understanding African American cultural traits is needed (Daly et al., 1995). Group identity plays a significant role in attaining ego strength and self-esteem among African Americans through affirmation from their group (Daly et al., 1995).

Perceptions of body size among African American women have been explored in relation to obesity and health beliefs about whether body size poses a health threat for obesity-related diseases, such as heart disease or diabetes. Approximately 40% of moderately and severely overweight African American women consider their figures to be attractive, indicating a positive body image within this population. African American women are less preoccupied with losing weight and less effective in doing so than other women (D'eraimo-Melkus et al., 1996).

#### Physical Activity and African American Women

African Americans are at a marked increased risk for coronary heart disease (CHD), stroke, hypertension, and diabetes mellitus, all diseases for which regular physical activity provides protection (Young et al., 1998). A lack of physical activity is a risk factor for developing type 2 diabetes (NWHIC, 2000). A sedentary lifestyle is a modifiable risk factor for diabetes, because increased physical activity may be effective in preventing type 2 diabetes (McNabb et al., 1997). Strategies to decrease barriers to diet and exercise while maintaining existing social support would be appropriate for African American participants (Wierenga & Wuethrich, 1995). Health educators need to assess

clients' exercise ability and problem solve with their clients the best way to implement an exercise program (Wierenga & Wuethrich, 1995). Suggestions for decreasing barriers to exercise and diet must be both culturally and economically appropriate (Wierenga & Wuethrich, 1995).

Some African Americans believed that adequate rest is more important for health than exercise and being thin (Haire-Joshu, 1996). African American women are significantly less active than White women (McNabb et al., 1997; NWHIC, 2000). Women who work or who are single with children have difficulty finding time to exercise. African American women, as all women, should find affordable and reasonable ways to exercise, including jogging, walking, community sports, or in-home exercise videos (NWHIC, 2000).

A community-based nutrition-exercise program for African American women in Atlanta had a completion rate of 33% (70 of 209 who responded to the advertisement) (Kumanyika & Charleston, 1992). Church networks can provide the social support needed to facilitate long-term behavior changes needed for weight control. In a church-based program for weight loss, "Lose Weight and Win," the exercise component lasted 30 to 45 minutes. Participants were encouraged to exercise at least two additional occasions outside of class and to record physical activity weekly (Kumanyika & Charleston, 1992).

## Nutrition and African American Women

Dietary patterns have been examined as a factor that contributes to obesity in African American women (Auslander, Haire-Joshu, Houston, & Fisher, 1992). A knowledge of what healthy eating means to African American women may provide insight into the dietary practices that lead to obesity, which in turn increases the risk for developing diabetes. According to Goldberg et al. (1999), focus groups utilizing African American women indicated that these women stated they could not understand healthful eating and were confused by what they viewed as contradictory information about diet. Some who did not agree with the concept of healthful eating observed that their family members lived longer lives by eating some of the very foods described as unhealthful and identified healthful foods as foods that are “good for you” and “foods you should eat.”

Focus group information included asking participants to define “healthy eating” as they understood it, to discuss the negative aspects and benefits of healthful eating, food preparation, and store preferences. Also addressed were issues of physical activities. “Healthy eating” was consistently defined in terms of specific groups of foods. Many women described healthful eating as “3 meals a day from the Basic Four” (Goldberg, 1999, p. 717). One of the participants in the focus group said her breakfast one morning included a bowl of cereal with a banana; the participant further stated that this breakfast was incomplete and would have been more healthful had it included “toast, sausage, and egg” (Goldberg et al., 1999). Another example of dietary habits cited in the literature indicates that African Americans tend to eat less fiber and consume more cholesterol (Jewler, 1991). There is a need for nutritional counseling that directly addresses the

dietary habits of minority populations (Jewler, 1991). In 1996, lifestyle practices related to African Americans and nutrition were reviewed by Veal, the president of the National Medical Association:

African Americans have eaten foods prepared with lard and other heavy oils because that is what they had available. The foods African Americans consumed were filling and presumably a fitting meal for a family. Traditionally, cooking methods such as frying were passed on from generation to generation as mothers taught their daughters how to cook and nourish their families. Economically, it was cheaper to cook beans in fatback than to purchase an array of meats and vegetables. African Americans did not have them, and still many today, do not have the financial means to buy the array of foods needed to provide a balanced diet. All of these factors have collectively been ingrained into African American culture and to a large extent make up the traditional foods that we consume. (McNabb et al., 1997, p. 276)

Food may symbolize cultural values, such as sharing, generosity, and cooperation. In times of scarcity, households in many societies are expected to share their food supply with other kin who are in need. In households with limited resources, this may restrict the quantity or quality of food available to household members (Haire-Joshu, 1996).

Barriers to healthful eating included time, cost, taste, and lack of information. Many women said healthful foods are more complex to prepare and take longer. Focus group participants did not understand how to plan low-fat diets or select low-fat foods (Goldberg et al., 1999). Some nutritionists have identified barriers to healthful lifestyle behaviors. For example, some African American clients believed strongly that reduced dietary fat would adversely affect taste and that a lower fat diet was more expensive. Lack of access to high quality foods at reasonable prices was also a problem (Goldberg, et al., 1999). Culturally insensitive attempts by White middle-class health professionals to alter diet and patterns may understandably be viewed by African Americans as debasing

their cultural traditions and blaming these traditions, originally developed as adaptive responses to White oppression, for their current health status (Haire-Joshu, 1996). According to Goldberg et al. (1999), nutritionists consistently emphasized the need for skill building messages and for culturally relevant messages that would build self-confidence and promote the concept of feeling well and looking good. A few focus group studies have determined that dietary behavior among African Americans was influenced strongly by cultural traditions and cost (Behera, Winkley, & Collins, 2000).

The program, “Lose Weight and Win,” involved nutritional and behavioral counseling components. These components included (a) decreasing the amount of consumed calories by changing eating habits that affect, where, when, what food is eaten; (b) increasing the amount of calories expended by increasing physical activity; and (c) losing weight gradually, no more than 2 pounds per week (Kumanyika & Charleston, 1992). “Lose Weight and Win” is a success in terms of possibly limiting weight gain that would otherwise occur among African American women. “Lose Weight and Win” may also improve activity and fitness levels, which are lower among African American women than among White women (Kumanyika & Charleston, 1992).

### Severity and Complications of Diabetes

#### Disease-Related Complications

Early detection and treatment can reduce the burden of the complications of diabetes (Herman et al., 1995). The risk of developing retinopathy, neuropathy, nephropathy, and macrovascular disease is higher in African Americans than Whites with diabetes (Maillet et al., 1996). African Americans have a higher prevalence of peripheral



vascular disease than Whites, and the peripheral vascular disease explains many excess amputations in African Americans (Auslander et al., 1992). African Americans have the highest amputation incidence among persons with and without diabetes (Auslander et al., 1992). Diabetes complications ranked with heart disease among the 10 leading causes of death for African Americans in 1996 (Office of Minority Health [OMH], 2000).

Cardiovascular disease (CVD) is the leading cause of disability and death among women in the U. S., and African American women experience high rates of CVD due to economic, social, and biological circumstances (Behera et al., 2000). Primary CVD risk factors include physical inactivity, hypertension, smoking, and type 2 diabetes (Behera et al., 2000).

Diabetic retinopathy is a term used for all abnormalities of the small blood vessels of the retina caused by diabetes (ADA, 2000a). Diabetes is the most frequent cause of non-traumatic lower limb amputations (ADA, 2000a; Gullledge & Beard, 1999). The risk of a leg amputation is 15 to 40 times greater for a person with diabetes (ADA, 2000a). Approximately 60% to 70% of people with diabetes have mild to severe forms of diabetic nerve damage (Gullledge & Beard, 1999). Cardiovascular diseases is two to four times more common in people with diabetes, and cardiovascular disease is present in 75% of diabetes-related deaths (Gullledge & Beard, 1999). Obesity may be a possible explanation for the higher cardiovascular disease mortality in African American women, compared with White women (Bayne-Smith, 1996).

## Complications of Diabetes in African American Women

Severity and complications of diabetes are discussed as disproportionately affecting African Americans and African American women, with literature supporting delayed diagnosis of diabetes as an additional risk factor. Renal disease, eye disease, and amputations are a few of the complications that African Americans face due to diabetes-related complications.

The prevalence of blindness secondary to diabetic retinopathy in African Americans is twice that of Whites (ADA, 2000a; Maillet et al., 1996). African American females are four times as likely as White males and three times as likely as African American males to experience severe visual impairment (Auslander et al., 1992; Maillet et al., 1996). The exact reason for African American females having more severe visual impairment than White males and African males is not directly indicated in the literature. African Americans experience higher rates of at least three of the serious complications of diabetes: amputation, blindness, and kidney failure, which is commonly known as end stage renal disease (ESRD) (NIDDKD, 1999). Diabetes is the leading cause of ESRD, accounting for 36% of new cases (Gulledge & Beard, 1999). Ten percent to 21% of all people with diabetes develop kidney disease. African Americans with diabetes are 2.6 to 5.6 times more likely to suffer from kidney disease with over 4,000 new cases of ESRD each year (ADA, 2000a). The rate of lower-extremity amputations in African Americans is 1.5 to 2.5 times higher than in Whites with diabetes (Maillet et al., 1996). Each year, 56,000 people lose their legs or feet to diabetes. African Americans are 1.5 to 2.5 times more likely to suffer from lower limb amputations (ADA, 2000a). The 5-year survival

rate of diabetics following amputations is only 40% (Lavery, Ashrey, Armstrong, Pugh, & Van Houtum, 1999).

Delay of the diagnosis of diabetes is an additional risk factor associated with complications of diabetes. The context is of a system that historically denied access to adequate health services for African Americans; therefore, many African Americans have negative attitudes toward the health care system and delay seeking care until their condition is quite serious (McNabb et al., 1997). A high percentage of African Americans enter the health care system at the chronic stage of illness where resolution of illness is low and cost of treatment is high (Boothe, 1998). Reasons for delayed entry into the health care system could be from the pattern of health care seeking behaviors of African American women. This change to the pattern involves first perceiving symptoms, followed by a delay for a period of time to allow the body to heal itself, reduction of daily activities, seeking advice of friends or family, and finally seeking medical care. The pattern leads to or delays care and diagnosis for diabetes (McNabb et al., 1997).

Individuals with type 2 diabetes may not experience symptoms of the disease and can remain undiagnosed for many years (McNabb et al., 1997). The onset of diabetes can predate the clinical diagnosis for up to 10 to 12 years (Herman et al., 1995; McNabb et al., 1997). In African Americans, socioeconomic and cultural factors often contribute to lack of early diagnosis of type 2 diabetes for several reasons. Of the 30 million African Americans, 50% are women. Thirty-six percent of this African American female population lives in poverty with limited access to health care due to not having health insurance (Glanville & Porche, 1998). There appears to be other significant underuse of

medical care by African Americans. For example, African Americans have been found significantly less likely than White Americans to have seen a doctor within the previous year; moreover, African Americans had fewer physician visits, even when controlling for age, health status, and income (McNabb et al., 1997).

## Diabetes Programs and Screening Practices

### Existing Programs that Target Prevention

According to the literature, one of the diabetes prevention programs for African Americans states that participants were interested in the program because they had a sibling, spouse, parent, or other loved one who had already suffered from end-stage renal failure, amputations, or other diabetes complications. The message of the program, therefore, was that the program was intended to prevent these complications of diabetes. The program message is “if there is no diabetes, there will be no diabetes-related long-term complications” (Osei, 1998, p. 176).

If the message focused on preventing diabetes only and did not emphasize prevention of complications, individuals would not be convinced to participate in even a long-term prevention program. Observations indicated that old stereotypes and assumptions, as well as cultural differences and expectations, still existed and hindered cordial relations between African Americans and other ethnic and racial groups (Osei, 1998).

According to several reports, African Americans lose less weight than Whites do on weight loss programs (Kanders et al., 1994). African Americans may not be inclined

to enter traditional weight loss programs. Weight loss may be looked upon skeptically (Raymond & D'eraimo-Melkus, 1993).

The BALI (Black American Lifestyle Intervention) program was developed specifically for use by African Americans and the intervention was administered by African American women (Kanders et al., 1994). The BALI program is a culturally based weight-control program developed with the assistance of minority health professionals. Information from the BALI survey, which included interviewing African American women about beliefs regarding diet and weight loss, behavior modification, and exercise and dieting obstacles, was used to design the educational materials and diet that were evaluated in a pilot study (Kanders et al., 1994). Preliminary data indicated that African Americans are less successful than Whites at losing weight. The success of the BALI pilot study is attributed to the use of trained African American group leaders, group support, ethnic foods, and a culturally based lifestyle education program. African Americans developed the BALI program specifically for use, and the intervention was administered by African American women (Kanders et al., 1994). Additionally, all recipes, menu plans, and educational materials were reviewed by minority advisors to ensure that they were culturally appropriate (Kanders) et al., 1994).

Another community-based intervention that combined community organizational strategies with peer models is called "nutrition neighbors." The purpose of "nutrition neighbors" was to promote skills and knowledge related to reduce-fat dietary habits among African-American women at risk for diabetes caused by obesity (Haire-Joshu, 1996). The pilot program results indicated that compared with a dietitian-led intervention,

peer educators were more effective in increasing dietary skills such as label reading and knowledge about fat in the diet among participants (Haire-Joshu, 1996). Other community-based health promotion programs targeted churches and clergy to promote positive health behaviors; others have enlisted work settings, schools, and social service organizations (Haire-Joshu, 1996). The overall objective for many community-based programs is to focus on changing community norms in order to mobilize neighborhood resources and informal networks to promote long-term health-promoting behaviors (Haire-Joshu, 1996).

Recently, NIDDKD joined the Centers for Disease Control and Prevention to sponsor the National Diabetes Education Program (NDEP). The goal of this program is to reduce the disability and death associated with diabetes and its complications. The NDEP will conduct ongoing diabetes awareness and education for people with diabetes and their families (NIDDKD, 1999). Especially addressed will be the needs of ethnic groups hardest hit by diabetes, including African Americans. The NDEP hopes to improve the treatment and outcomes for people with diabetes, promote early diagnosis, and ultimately, prevent the onset of diabetes (NIDDKD, 1999).

In response to the alarming diabetes statistics in African Americans, the ADA has developed the African American Program (Siminerio, 1996). The ADA's African American Program was launched in September 1994. This program was conceived to curtail the number of complications and deaths from diabetes in African Americans (Siminerio, 1996). Since there is a strong link between Type II diabetes and obesity, the program will focus on controlling diabetes by providing basic exercise and nutrition

information. The ADA's African American Program's overall goal is to improve the health of African Americans by raising their awareness about diabetes, its risk factors and ways to avoid or delay onset of the disease, and its complications (Siminerio, 1996).

The ADA African American Program will be complemented and evaluated through the association's Diabetes Information and Action Line, or DIAL Program, an 800 telephone service for patient referral and information (Siminerio, 1996). Any materials produced for a church-based program or the public will be culturally sensitive. Materials may include low-literacy brochures, culturally sensitive posters, a nutritional guide for African Americans, and a mass transit public awareness campaign. The ADA African American program will be supplemented by the development of culturally sensitive informational materials and an extensive public awareness campaign, which will include multi-media public service announcements with African American health leaders and celebrities placed locally and produced nationally (Siminerio, 1996).

Diabetes Sunday is a grassroots diabetes awareness program involving churches in partnership with the ADA's African American program (ADA, 2000b). Churches play a critical role in the African American community and have a genuine concern about the health of their members (ADA, 2000b). At a Diabetes Sunday, the pastor shares information with the congregation about the seriousness of diabetes during the church service. Congregation members receive information about the importance of getting checked for diabetes, the risk factors, and the importance of good blood sugar control for those who have diabetes (ADA, 2000b). The goals of Diabetes Sunday are (a) to create awareness about diabetes as a serious disease, (b) to inform the congregation that African

Americans may be at a high risk for developing diabetes, and (c) to inform the congregation that early diagnosis and treatment can make a difference and related complications may be delayed or prevented (ADA, 2000b).

It is critical to establish rapport with church representatives and ministers. In some instances, it may be necessary to screen or recruit on site, for example, at the completion of the church services (Osei, 1998). Church-based interventions have become a component of preventive health programming (Kumanyika & Charleston, 1992). According to the “father” of church health promotion in the U. S., Dr. John Hatch, the “rich history of collective problem solving” of the African American church makes it a unique and critical site for mobilizing the community around health issues (Parks, 1998). Churches are considered particularly effective in the African American community because of the central role of churches in communication patterns and social support networks of many African Americans (Kumanyika & Charleston, 1992). Church programs are particularly effective in reaching African American women.

In 1981, the National Black Health Providers Task Force on High Blood Pressure Education and Control recommended using churches as high blood pressure control centers (Siminerio, 1996). Since 1981, church-based high blood pressure control programs have been established in regions of the country. Reports from these programs indicated success (Siminerio, 1996). The ADA outreach efforts for community-based diabetes programs, like the blood pressure programs, will include detection, education, and referral, along with information specific to exercise and diet (Siminerio, 1996).



### Screening Practices and Health Beliefs

In 1989, the ADA changed its position on community screening to recommend that all people with any of the symptoms of diabetes or with one or more diabetes risk factors be identified and referred for medical evaluation (Herman et al., 1995). Although it is recognized that undiagnosed diabetes is serious and prevalent and that early treatment is beneficial to make early detection appropriate, no screening test has been shown to be inexpensive, simple, and acceptable and to provide good sensitivity, specificity, and predictive value (Herman et al., 1995). According to Herman et al. (1995):

Screening is indicated for the detection of disease in asymptomatic, apparently healthy individuals if the burden of suffering caused by the disease is large, the natural history of the disease is understood, effective treatment exists, early treatment is more effective than later treatment, and the screening procedure is good. With the development of a good screening procedure, these criteria would be met for diabetes. (p. 385)

There are several existing questionnaires for assessing diabetes-related health beliefs, but these questionnaires were designed for individuals who have been diagnosed with diabetes already and assessed one's beliefs about developing various complications associated with diabetes (Polley, Jakicic, Venditti, Barr, & Wing, 1997). Polley et al. desired to assess beliefs about developing diabetes in individuals who did not have diabetes; therefore, a simple questionnaire was developed that used one question to assess each health belief, including ratings of perceived risk of developing diabetes, seriousness of diabetes, and the likelihood that weight loss would help prevent diabetes (Polley et al., 1997).

As discussed by Polley et al., other studies examining health beliefs related to specific health risk (rather than complications from having a disease) have also used single questions to assess health beliefs. Perceived risk of developing diabetes was assessed with the question “How likely is it that you will be diagnosed with diabetes in the next 10 years?” (Polley et al., 1997, p. 1534). Another example is a question that assessed the perceived benefits of weight loss by asking, “How likely is it that losing weight will lower your risk of getting diabetes?” (Polley et al., 1997, p. 1534). Participants reported perceived risk and benefits of weight loss using a 5-point scale from 1 (extremely unlikely) to 5 (extremely likely). Participants reported perceived seriousness of diabetes on a 5-point scale ranging from 1 (not at all serious) to 5 (extremely serious) (Polley et al., 1997).

To assess family history of diabetes, participants were asked to provide information about members of their family with diabetes, including siblings, parents, children, and grandparents as well as the number of diabetic relatives. Almost all subjects rated diabetes as very serious (83% rated it a 4 or 5) and almost all believed weight loss would lower their risk of diabetes (93% rated it a 4 or 5); however, only one-third perceived themselves to be at risk (Polley et al., 1997). None of the health beliefs influenced weight loss during the program. None of the health beliefs (perceived risk, benefits of weight loss, or seriousness of diabetes) or risk factors (number of diabetic relatives or age) predicted changes in glucose levels (Polley et al., 1997). This is the first prospective study by Polley et al. which examined whether health beliefs may predict long-term changes in behavior and the only diabetes study to examine whether health

beliefs predicted weight loss in participants at high risk for type 2 diabetes (Polley et. al. 1997).

Concerning studies of patients with diabetes, it is unknown whether health beliefs can be used to predict future behavior (Polley et al., 1997). In a group with similar risk profiles for type 2 diabetes (family history, middle age, and obesity), there was little variability to perceived seriousness of diabetes or weight loss benefits. Those participants with more diabetic relatives perceived themselves at higher risk for diabetes, but perceived risk was not related to obesity or any of the other risk factors for diabetes, including blood glucose levels. This suggests that perhaps individuals may not be aware of the relationship between current glucose levels and chances of developing diabetes (Polley et al., 1997). Those with the highest perceived risk were likely to rate diabetes as very or extremely serious but were less likely to believe weight loss would lower their risk. Therefore, researchers suggested that participants who are more “afraid” of developing diabetes do not believe weight loss will be helpful. In the study, self-reported health beliefs had no long-term effects on behavior (Polley et al., 1997).

Another example of a study of health beliefs was completed by Wierenga and Wuethrich (1995) and discussed differences between Whites and African Americans with diabetes. This study showed that African American women have a higher incidence of diabetes, obesity, and attrition from programs than do Whites. There is a need for additional research describing differences in beliefs about diabetes between Whites and African Americans, and the psychosocial factors associated with the high attrition of African Americans from programs designed to control the effects of diabetes through

weight loss (Wierenga & Wuethrich, 1995). Program attrition is seen more frequently in persons who have lower incomes, are less educated, are in poorer health, have had diabetes for a longer duration, and perceive more barriers to self-care (Wierenga & Wuethrich, 1995). The literature does not report much about screening practices. Clearly, intervention is needed to develop appropriate screening protocols for African American women so that diseases such as diabetes may be detected and treated in the early stages of the disease.

#### Proposed Programs/Campaigns for African American Women

According to McNabb et al. (1997), many of the recommendations that have remained proposed in the literature have remained unmet for almost a decade. The recommendations were as follows: (a) the early diabetes detection for African American women should be emphasized, as individuals may have diabetes for years before it is diagnosed; (b) a national screening program should be instituted that addresses high-risk populations, as data indicated that only half of individuals with diabetes are diagnosed; (c) medical care testing for diabetes should be considered in African American women who are hypertensive, obese, or have first-degree relatives with diabetes; (d) the quality of care for African Americans women with diabetes needs improvement; (e) health professionals not identifying and overcoming cultural and community barriers may prevent African American women with diabetes from receiving optimal care; and (f) improved educational programs and services in diabetes are needed (McNabb et al., 1997). The ADA has formed a coalition to introduce legislation designed to close the gap in health status between Whites and African Americans, improve access to

comprehensive diabetes care, increase availability of diabetes education to African Americans, improve cultural sensitivity, and assist the government in developing policies and programs (Siminerio, 1996).

Community outreach is being implemented at the grass roots level of the ADA's structure through its 52 affiliates and 700 communities. The ADA provides the human resources necessary to implement the African American Program, which targets major African American markets. An outreach effort rather than a clinical setting has been proposed since traditional clinical settings have been associated with poor adherence to treatment (Siminerio, 1996). The outreach efforts will therefore be disseminated through African American churches, which have been recognized as a link between their members and the wider community, serving as a less threatening form of service (Siminerio, 1996). In many poor African American communities, the health care system is weak and overburdened from depending heavily on public health clinics and community centers (Siminerio, 1996).

The African American church has met not only the spiritual, but also the physical, educational, and social needs of its members and their friends and families (Siminerio, 1996). African-American culture has been associated with values of affliction, collectivity, sharing, obedience of authority, spirituality, acceptance of fate, respect for older adults, and respect for the past. (Haire-Joshu, 1996). Treatment programs and regimens such as weight loss programs need to be designed with these in mind (Haire-Joshu, 1996). "Weight control programs may be inherently biased toward the needs and values of the dominant culture and, therefore, may be less attractive to or less successful

with those who are not members of the majority” (Haire-Joshu, 1996, p. 502). Also considering the family or social network may be more appropriate, rather than only focusing on the individual when planning programs or interventions for African Americans (Haire-Joshu, 1996).

Many intervention strategies are implemented at the community level to build on community strengths and enhance community competence and individual health-promotion behaviors (Haire-Joshu, 1996). Community analysis is a process of assessing actual or potential problems, resources, and opportunities needed for community programs (Glanville & Porche, 1998). A community analysis of the African American community must be done with (not on) the community. It is critical to involve, respect, and honor individuals from within the African American community. These individuals are frequently the female head of the household or the spiritual/religious leader and are frequently the gatekeeper to the African American community (Glanville & Porche, 1998).

The gatekeeper provides information on the African American communities readiness to initiate health promotion strategies. Planning health promotion outcomes while the health promotion strategies are developed ensures that the African American community is accepting the expected outcomes and integrates evaluation throughout the program-planning phase (Glanville & Porche, 1998). According to Glanville and Porche (1998), the most lasting and significant impact on the health status of African Americans will be through the implementation of community health promotion. The community leader or “gatekeeper” includes people who are seen as leaders and sources of credible

information (Siminerio, 1996). Community leaders include teachers, physicians, preachers, nurses, social workers, and leaders of civic- and community-based organizations (Siminerio, 1996). African American business and professional people seeking a meaningful social mission to return something to their community serve as valuable resource (Siminerio, 1996).

A review of the literature confirmed African-American women were an appropriate population for the focus of a community-based communications campaign to prevent obesity, especially since about 50% of African American women are obese (Goldberg et al., 1999). “Sisters Together: Move More, Eat Better” was a community-based communications campaign seeking to promote more healthful lifestyles among African-American women aged 18 to 35 years in three communities in Boston, Massachusetts (Goldberg et al., 1999). Public health campaign goals included increasing awareness and knowledge about increased activity and improved nutrition, and promoting healthful lifestyle changes. The campaign also emphasized strengthening community resources and was designed to reflect the perspectives and culture of the target population (Goldberg et al., 1999). The challenge was to design an intervention preserving healthful norms and strengths of cultural eating patterns while promoting an increase of healthful lifestyles (Goldberg et al., 1999). The campaign identified methods of cultural cooking.

Participants’ descriptions of cooking preferences including frying, baking, stewing, and “cooking on top of the stove.” Women agreed they preferred fried foods, but stopped frying as often. Reasons for reducing the amount of frying time included lack of

time, attempting to eat a more healthful diet, and family health problems. Baking was described as “lazy cooking” by some women compared to frying, which was described as “more active.” Microwave ovens generally were limited to warming leftovers (Goldberg et al., 1999).

Participants said the major benefit to healthful eating is improved personal appearance. Others mentioned, “feeling better about yourself” and “more energized” (Goldberg et al., 1999, p. 720). The most credible source of health-related information was a woman’s mother. Several women observed that only their mother was familiar with their entire health history, was more concerned, or had their best interest at heart. A second category of credible sources was other family members. Physicians, especially if African-American and female, nutritionists, and other health care professionals were mentioned. Many women said they would listen to someone who had made lifestyle changes. Women reported listening to radio stations and reading community newspapers. Focus groups helped the team identify credible communication channels and trusted information sources (Goldberg et al., 1999)

Focus groups are an acceptable way to frequently involve people who are missed by other research methods (Behera et al., 2000). This qualitative research can guide the design of health education and promotion programs for high-risk groups (Behera et al., 2000). An African American (cerebrovascular disease) focus group was conducted to determine the women’s general level of awareness and concern about CVD (Behera et al., 2000). Audio recordings of each focus group were transcribed verbatim (Behera et al., 2000). Content analysis of the transcripts was completed by the moderator and two health



professionals, one of African-American heritage (Behera et al., 2000). The women believed that CVD interventions should be designed for low-SES, African American women with consideration for financial and time constraints (i.e., neighborhood walking groups, or community-based blood pressure screening). Women felt that the mass media could educate people at a community level (Behera et al., 2000).

#### Proposed Screening Practices for African American Women

The success of most studies is dependent on the ability to recruit and screen the appropriate population. The issue of recruitment has been extensively studied in the African American population (Osei, 1998). According to Osei, sample posters, brochures, or videotapes at the fifth- to seventh-grade reading level can deliver messages about diabetes and its devastating effects in the African American population. In addition, community agencies are informed about the benefits of participation in intervention or prevention programs to themselves and the African American community at large (Osei, 1998). Preparation for screening and recruitment should include forums for answering questions and adequate advertising. For African Americans, churches can help investigators gain access to the study population (Osei, 1998). A growing body of literature supports use of the church as an effective health promotion strategy for African Americans (Parks, 1998).

Regarding time and punctuality, the African American culture has its own attitudes. There are remediable factors that contribute to lateness in the African American population, such as a lack of access to transportation. During the recruitment phase, transportation should be addressed and problems resolved (Osei, 1998). Compared with

all adults, screening for type 2 diabetes results in greater reduction in the cumulative incidence of major complications in African Americans, resulting in larger increases in life-years (Centers for Disease Control [CDC], 1998). Targeting groups with higher lifetime incidence of major diabetes complications enhances the cost-effectiveness of screening. For example, in a hypothetical cohort of adults whose diabetes begins after 30 years, the sooner after onset that screening and early treatment begins, the greater the reduction in ESRD (CDC, 1998).

When screening African Americans, consider the validity of the instrument. In other words, how were the screening questions devised? For example, in a community-based study among rural African-Americans the objective was to determine if differing beliefs about high blood glucose exist and are associated with blood glucose control among rural African Americans (Schorling & Saunders, 2000). One-fourth of those with diabetes believed they had the condition “sugar.” Efforts were needed to improve control of diabetes in this population and the beliefs should be taken into consideration (Schorling & Saunders, 2000). Some people with elevated blood glucose levels referred to their conditions as “sugar-diabetes” or “sugar.” The hypothesis was that subjects who felt they had “sugar” would have different health beliefs than those who felt they had “diabetes” (Schorling & Saunders, 2000, p. 331). To clarify screening questions for diabetes, the question was asked “Have you ever been told by a doctor that you have diabetes or sugar-diabetes?” (Schorling & Saunders, 2000, p. 331). By including both terms, diabetes or sugar-diabetes, the wording of the question is not an issue in identifying or in clarification. In addition, only a trained interviewer administered the

survey. Other questions included, “Is there a difference between sugar and diabetes?” (p. 331), or “Have you every been told by a doctor that you have diabetes or sugar diabetes?” (p. 331). Those participants who considered they have the condition “sugar” differed in a variety of ways (Schorling & Saunders, 2000).

A study exploring the cost-effectiveness of screening for type 2 diabetes had shown that screening was more cost-effective among younger people and African Americans. Benefits of early treatment and detection accrued from postponement of complications and the resulting improvement in quality of life rather than from additional life-years (CDC, 1998). Although current recommendations are that screening begins at 45 years, results suggested that screening is more cost-effective at younger ages (CDC, 1998).

### Summary

Diabetes prevention and public health issues relating to diabetes in African American women were reviewed in the literature to indicate the importance of screening and early detection of diabetes among high-risk African American women (McNabb et al., 1997). This chapter was consistent with the current findings on the high prevalence of type 2 diabetes in African Americans.

This chapter has provided a thorough review of the literature indicating that diabetes incidence and severity may be correlated to the beliefs, perceptions, and lack of screening for type 2 diabetes. A lack of knowledge and misconceptions or both about the risk factors for diabetes further contributed to late diagnosis of diabetes and increased complications resulting from this delayed diagnosis. Culturally sensitive education

materials and programs are scarce and may discourage African Americans from attending educational programs that are focused on weight loss and diet (Maillet et al., 1996).

Although 63% of African Americans with diabetes are women, little was known about health beliefs and educational needs specific to their culture. Cultural values, norms, and beliefs strongly influenced weight behaviors and diet practiced within ethnic groups (Maillet et al., 1996).

African American women may be unaware or have misconceptions about risk factors for developing diabetes, which includes genetics (family history of diabetes) and lifestyle factors, such as diet, exercise, and weight management. Identifying beliefs and perceptions that African American women have about diabetes should provide information beneficial to developing culturally appropriate screening programs and culturally sensitive diabetes-related educational materials for African American women. The literature review revealed a lack of information regarding the perceptions and health beliefs about type 2 diabetes among African American women, the perceptions and health beliefs about the risk factors for developing type 2 diabetes among these women, and the perceptions and health beliefs about the severity and complications of type 2 diabetes among this group.

## CHAPTER III

### METHODOLOGY

The methodology of this exploratory qualitative research study is discussed in relation to its population, procedures used to sample the population, instruments and procedures used to collect demographic and qualitative data, and descriptive techniques that were used to treat the data.

#### Population and Sample Selection

The study population consisted of low- and middle-income African American women that resided in the Dallas-Fort Worth (DFW) metroplex. For purposes of this study, the population was further delimited to African American women who (a) had no history of diabetes, (b) were self-defined as African Americans, and (c) were between the ages of 25 to 65. Twenty-eight African American women were recruited through the assistance of diverse community organizations: two churches, a beauty salon, and a public health clinic. Participants recruited through the churches and public health or Women, Infants, and Children (WIC) clinic consisted of mainly lower-income women, and participants recruited through the beauty shop consisted of primarily middle-income women. The focus groups held in the church setting consisted of low- to middle-income participants who were church members. The focus group held in the beauty shop consisted of primarily middle-income participants who were clients at the beauty shop. The focus group held at the WIC clinic consisted of mainly low-income women.

The researcher supplied 25 invitations to be distributed by the contact person at each site in order to recruit attendance of 33% to 50% of the invited population estimated for each group. The number of invitations was determined by advice given by an experienced African American female focus group leader (R. Clarke-Turner, personal communication, November 1, 2000). The focus group leader and the researcher discussed that if more than 20 people attended, the researcher would lead a second focus group in another room. (R. Clarke-Turner, personal communication, November 1, 2000). Morgan (1997) advocates over-recruiting by 20% as a common rule of thumb to allow for no-shows. Oftentimes, two participants per group do not show up (Stewart & Shamdasani, 1990).

A total of 28 people participated in the four focus groups conducted for this study. The contact person at each site distributed invitations and used a sign-up sheet to register prospective participants. The contact person at the first church site did not have a sign-up sheet. At the first church site, four people attended the focus group, including the focus group contact person. A participant in the focus group had a history of diabetes; therefore, this participant's comments were subsequently stricken from the record. All participants in the first church-setting focus group were also related to one another; therefore, the researcher decided to add a second church-setting focus group site to attain more objective information and a larger population sample from a church focus group setting.

At the second church site, the contact person utilized a sign-up sheet provided by the researcher. The contact person may or may not have used the sign-up sheet, as the

contact person had rapport with female African American church members and stated she would continually provide verbal reminders and phone calls to recruit members. The coordinator of the second church site stated she would post an invitation and give out invitations to those who were interested, and she would try to elicit only those who did not have a history of diabetes and who were between the ages of 25 to 65. The contact person called the researcher to confirm the number of participants 3 weeks prior to the focus group. A later phone call by the researcher 2 weeks prior to the focus group revealed a conflict with the stated date for the second church site focus group, and the date was changed to a month after the initial set date, which extended the focus group study through January 2001. The coordinator confirmed that 20 women would attend the focus group session, but 10 women actually showed up to participate in the second church-site focus group. One of the participants in the second church focus group was uncomfortable signing the Human Subjects Review Committee (HSRC) form, but agreed to sign the form once the explanation of the purpose of the HSRC form was provided. The HSRC is also known as the Institutional Review Board (IRB).

Contact occurred approximately three weeks ahead of the planned focus group date, and a permission letter was created by the researcher and sent in an envelope for the beauty shop coordinator to sign and send back to the researcher in a stamped envelope. The beauty shop contact person was contacted by a customer of the beauty shop who is an experienced African American female health educator and also served as a facilitator/interviewer for this particular focus group. A sign-up sheet was provided, but recruitment was primarily elicited by word of mouth and verbal agreement between the

beauty shop contact person and the customers or employees who agreed to participate.

Due to the nature of the beauty shop setting, a modified focus group approach was utilized. Small groups of 2 to 3 women were interviewed. Two African American female health educators conducted the interviews and recorded information directly onto the paper that contained the focus group questions. The researcher then submitted the permission letters to the HSRC office. The researcher contacted the City of Dallas to determine the contact person for the WIC offices. A registered dietitian in the position of supervisor for WIC offices in the Dallas area recommended a particular area WIC clinic which would offer a larger African American female population sample for focus group recruitment. The permission letter was written by the researcher to the coordinator for the Dallas area WIC center.

The WIC coordinator for the Dallas area then contacted the WIC center that was selected for the focus group site and provided verbal permission to the supervisor of that WIC center to allow a focus group to meet at that location. Next, the researcher contacted the supervisor for the WIC site for the group and arranged a meeting date that coordinated with the date of WIC classes offered at the clinic. Such planning deviated from the plan to have WIC staff serve as contact people to recruit focus group members, serve as coordinators for the group, and distribute invitations. For the population of clients at the WIC clinic, the recruitment technique was initiated solely by the researcher, due to the fast-paced nature of a public health clinic setting. The WIC coordinator assisted the researcher in recruiting WIC participants by suggesting that the researcher sit



in on WIC classes and utilize the start and end of class time to sign-up focus group participants.

The WIC supervisor allowed the focus group to count as a WIC clinic class, because the WIC clinic client must attend a certain number of classes to attain vouchers for WIC-approved food items. However, food vouchers were not held for WIC clients who did not wish to wait until the next class (or focus group, in this case) to receive the vouchers, and if the WIC client could not attend the class, they could come by the clinic at any time and still attain their food vouchers. Therefore, an incentive for participation was provided.

The researcher invited WIC clients in the clinic class individually before WIC clinic class time to the WIC center focus group to be arranged three weeks later. The researcher recruited additional WIC clients who were waiting for appointments in the lobby area. The researcher screened each WIC client who was invited to participate in the focus group by asking if that person had a history of diabetes or was between the ages of 25 to 65. Only African American women were invited. The researcher used the sign-up sheet to remind WIC clients of the class by calling one week ahead of the meeting, and again the night before the meeting. Seventeen people were signed up by the researcher, and three people were uncertain if they would be able to attend the WIC focus group. The researcher contacted WIC program participants one week before the meeting and reminded WIC participants about the meeting. Thirteen people confirmed one week prior to the focus group meeting, and 10 people confirmed attendance the night prior to the

focus group meeting after receiving a phone call from the researcher. Six people actually attended the WIC focus group.

### Protection of Human Subjects

The researcher obtained permission to conduct the study from the Texas Woman's University (TWU) Human Subjects Review Committee (Appendix A). All potential participants received a consent form to sign (Appendix B). The focus group leader read aloud to participants the purpose the study, risks and benefits of participating in the study, and an assurance of anonymity. The participants were advised that the study participation was voluntarily and that participants had the right to withdraw from the study without penalty or undue attention. Consent to audiotape during focus group discussion was included in the general consent form. All subjects received copies of their signed consent form. The investigator offered to report the findings of the study at a future date.

The researcher explained to the participants that no individual participants would be identified. Additionally, on tape, no attempt to identify individuals would be made. Participants were told that the tapes would be destroyed as soon as the transcriptions were made, and that the transcriptions, along with other participant responses and information, would be kept in a locked file box in the investigator's office and destroyed after three years by shredding. African American women were recruited through two African American churches, a beauty salon, and a public health clinic. Invitations were distributed through a contact person at each site. Confidentiality and anonymity were

maintained. Permission was obtained from each person who participated in the focus group.

### Procedures

Three focus groups (6 to 10 women per group) were conducted during the months of October 2000 through December 2000, one at each of the three sites from which the women were recruited. An additional or fourth focus group (10 women) was added at a church setting in January 2001, because the turnout at the first focus group in the church setting was poor, with only four participants attending. The contact person from the WIC focus group assisted with group logistics for the WIC group, and subsequently agreed to serve as the contact person for this fourth group, which took place at the contact person's church. The first focus group, which was a church group, had four attendees. The fourth focus group, which was the added second church group, had 10 participants. The goal was to recruit at least eight participants per group. Invitations were provided to participants no more than three weeks ahead of the scheduled group date. The time-line for completion of the focus groups was changed due to problems with group cancellation, and also adding the fourth group.

Contact persons were selected at each focus group site to assist with coordination of focus group arrangements. At the church sites, the contact person for each church provided communication to the church minister in order to secure a meeting room, date, and a permission letter. A letter of explanation about the study was sent to each churches' contact person and also to the ministers at least one month prior to plans to conduct a focus group. The contact person was contacted three weeks prior to the start of the focus

group to attain permission for the focus group site. After the contact person attained verbal permission from the pastor, the researcher then provided a letter of permission for the contact person to sign on behalf of the pastor for church site utilization. The researcher provided a stamped, addressed envelope to receive the permission letter, and to submit to the HSRC.

The beauty shop contact person worked at the beauty shop and arrangements were coordinated for a focus group at a time it did not interfere with the beauty shop customers. A permission letter was attained. Invitations explained that participants should be between the ages of 25 to 65 and an African American female who did not have a personal history of diabetes. The invitations explained that RSVP was necessary as food would be provided. The beauty shop group was changed to interview style instead of the focus group format because the beauty shop setting was not conducive to a group meeting, due to the in-and-out service nature of the business. Two experienced focus group leaders stated the appropriateness of an interview-style technique for the beauty shop population (R. Clarke-Turner & M. Shaw, personal communication, November 10, 2000). Eight people participated in the beauty shop interviews, and all participants completed demographic profile sheets. One beauty shop participant did not sign the HSRC permission form but wanted to participate informally. The researcher opted not to include this beauty shop participant's comments in the data analysis.

The WIC contact person for the regional area of Dallas established which WIC center would be the most appropriate site for the study population. The WIC center contact person requested that certain information be included in the permission letter.

This included information was a statement that the study was voluntary and that participants would not lose WIC center benefits from participation.

The researcher telephoned WIC participants to remind them to attend the group, as the researcher attended WIC classes to recruit participants. For all of the other focus groups, the contact person signed up participants and distributed the invitations. Reminder phone calls occurred no more than three days ahead of the meeting, and calls were made the night before when possible. The demographic profile sheet was completed prior to the start of the focus group during the social lunch or dinner meal, depending on which focus group was attended.

An experienced African American facilitator guided the discussion using questions developed by the researcher. Prior to beginning the study, an expert review panel validated questions. The fourth group was led partially by the researcher due to unforeseen circumstances delaying the focus group leader. The same African American female focus group leader led all four groups, with one additional African American female focus group leader at the beauty shop site; due to interview style technique, two leaders were utilized. The focus group facilitator read from the focus group instructions (Appendix D) which provided an explanation to participants about the purpose of the permission form and a rationale for signing the permission form to participate in the focus group. The form was on carbon paper so that the participant would have a signed copy of the consent form for permission to participate in the study. Names or numbers written on a piece of paper or the participants' name tags were put in a box for the drawing for the door prizes, or a sticker was placed under two chairs, and the participant

who sat in that particular chair won the door prize. The facilitator asked questions from the guide. Participant responses were recorded on a flipchart or the research survey sheet. Each session was also audiotaped, following consent by participants. A transcript of the tape was prepared by the researcher. Individual names were stricken from the record. The researcher reported themes that emerged under the following categories:

1. Perceptions and beliefs about (type 2 diabetes) or NIDDM.
2. Perceptions and beliefs about risk factors for (type 2 diabetes) or NIDDM.
3. Perceptions and beliefs about the severity/complications of (type 2 diabetes) or NIDDM.

Each participant received as incentives a token beauty product, and each group had a chance to win two door prizes, a watch and a camera, provided through a drawing held at the end of each focus group session. Food was provided. Each focus group session lasted approximately 1 1/2 hours.

Thank you letters were written to the focus group leader, the agencies that offered professional advice during the course of the study, and the contact people at each focus group site. Token gifts were provided to contact people at each focus group site. Each focus group participant received a certificate of completion and a thank you letter, which is listed as part of the diabetes packet (Appendix G). A folder of general diabetes information was provided to each focus group participant, but the information was not given out until the completion of the focus group, at which time participants could ask the researcher questions about diabetes.

## Instrumentation

The researcher developed the instrument used in the study. The focus group instrument consisted of four open-ended questions with specific probes, with two parts to be answered under each question to solicit information about the beliefs and perceptions of the participants regarding diabetes. Focus group questions were designed to relate to the research questions. The original design was created by drawing upon the expertise of the expert review panel.

The panel of experts determined the validity of the questions for eliciting information that provided data to answer the research questions. The expert review panel consisted of two African American health educators and educators at three sites in the DFW metroplex specializing in diabetes. Experts further included an additional out-of-state site (MDRTC) specifically working with the African American population in screening for diabetes, surveying African Americans, and promoting diabetes related education for African Americans. The MDRTC staff has published articles relating to diabetes, focus groups and African Americans, in addition to developing an on-line survey for African Americans who have diabetes.

The researcher developed a demographic profile sheet (Appendix C) based on NHANES III (CDC, 2001) and instruments developed by Shaw (1995) and Vaughan (1995) to collect appropriate information about the sample. Questions included the following items: (a) age, (b) last grade in school completed, (c) income, (d) religion, (e) exercise, (f) weight perceptions, (g) race/ethnicity, (h) family history of diabetes, and (i) marital status.

The focus group guide (Appendix D), developed by the researcher, explained that answers to the research questions would serve as a guide in developing strategies to recruit women into diabetes education and prevention programs by identifying what approaches will work. The guide of questions is listed in appendix D.

#### Treatment of the Data

Descriptive statistics were used to characterize the sample. Audio recordings of each focus group were transcribed verbatim. Each focus group audiotape was reviewed in a timely manner following the session to maximize observations, discussion climate, and recall. The investigator transcribed all audiotapes. Two experienced health educators assisted with reviewing the information from the focus group sessions and identifying the dominant themes from the sessions. Handwritten field notes from the investigator and the focus group leader (who utilized a flip chart during the group discussion) were included to supplement the audio transcriptions and identify significant themes.

Data from participants in each focus group session were separately analyzed for individual group responses but grouped together for a composite analysis. Data from the demographic profile instrument were compiled and entered using SPSS crosstabs, a Statistical Package for the Social Sciences (version 10.0). The facilitator, the researcher, and one other health professional completed the content analyses of the transcripts. Each reader identified themes of the transcripts and indicated specific quotes that were particularly representative of the themes. Themes were defined as topics that were discussed more than twice within each focus group discussion. The demographic profiles, collected information, and the transcript of the audiotaped records were treated as data.



Focus group questions were grouped under each research question. Responses to focus group questions were grouped under each focus group question. Repeating of themes or ideas was noted by marking the data with symbols. Common phrases were used to further develop analysis. Particular words or phrases used by participants to describe experiences and that were repeated at least twice were grouped and circled under the focus group question to identify repeat themes. These were then listed and grouped together by similarities. The frequency of statements made per theme group was counted for frequency. The main concepts were placed into a text box, and the recurrent themes were numbered and listed under the text box.

## CHAPTER IV

### FINDINGS

The purpose of this study was to involve low- and middle-income African American women in focus groups to elicit their perceptions and beliefs about diabetes and to generate ideas for diabetes education, risk reduction, and screening programs tailored to African American women. In this chapter, the findings from this qualitative study are presented as they pertain to the following research questions:

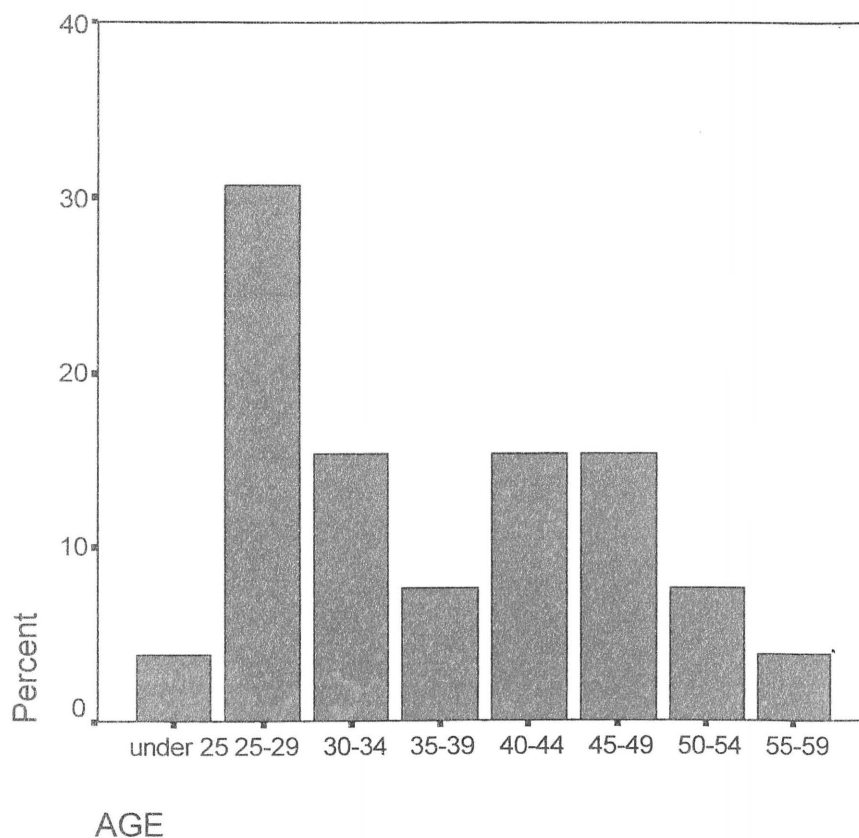
1. What are the perceptions and health beliefs about NIDDM (type 2 diabetes) among African American women?
2. What are the perceptions and health beliefs about the risk factors for developing NIDDM (type 2 diabetes) among African American women?
3. What are the perceptions and health beliefs about the severity/complications of NIDDM (type 2 diabetes) among African American women?

Subject demographics are presented first, followed by the perceptions and health beliefs identified by focus group participants. Findings on perceptions and health beliefs are presented under each of the four focus group questions and are discussed relative to the research questions. Finally, a summary of the combined focus group findings concludes the chapter.

### Descriptive Characteristics of the Participants

A total of 28 African American females participated in the study during the period October 2000 through January 2001. The information and data provided from two of the participants was discarded, because data on the demographic profile sheet indicated a previous history of type 2 diabetes from a participant in the first focus group and a previous history of gestational diabetes from a participant in the second focus group. Information provided by the two participants with a history of diabetes was coded in a manner that the data could be identified and differentiated from information provided by other focus group participants. Therefore, the information from a total of 26 participant demographic profile sheets was used in this study. The sample population consisted of women 25 to 65 years of age, with one exception: a participant in the third focus group who was 21 years of age. Although participants were carefully screened by the researcher prior to the date of the third focus group, a participant who did not meet the focus group criteria accessed the group and participated.

As shown in Figure 1, the largest portion of the participants, approximately 31%, were between the ages of 25 to 29. Twelve participants were between the ages of 30 to 49, and one participant was in the 55 to 59 age group. Including the participant under 25 years of age, 50% of the focus group participants were between the ages of 25 to 34. Only the fourth church focus group had participants in the age ranges above 44 years old (four participants were 45 to 49 years old; two participants were 50 to 54 years old; and one participant was 55 to 59 years old).



Note. Distribution consists of 26 total participants from four focus groups.

Figure 1. Age group distribution of focus groups.

Participants in the study ranged from single, never married; divorced or separated; married; and partnered (Figure 2). Fifty percent of the participants were married. The number of years married ranged from 5 to 30 years. Seven participants (27%) reported being married 5 to 10 years; four participants (15%) reported being married 11 to 20 years; and two participants (8%) reported being married from 21 to 30 years.

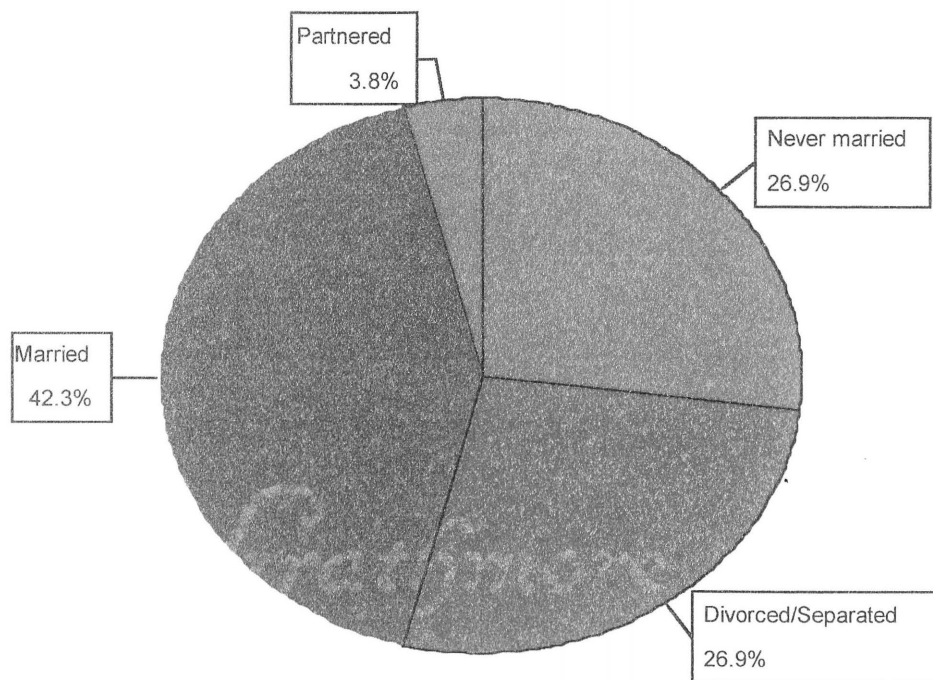


Figure 2. Marital status of focus group participants.

On average, participants reported having two offspring children, total. Participants reported having an average of approximately two children at home and approximately two adults at home (Table 1). In the first group of church participants, one participant was single (33.3%) and two participants were married (66.6%). In the second group of the beauty shop participants, one participant was single (14.3%), four participants were married (57.1%), and two participants were divorced (28.6%). In the third group of WIC

participants, four participants were single (66.6%), and four participants had children at home, one participant was partnered (16.7%), and one participant was married (16.7%). In the fourth group of church participants, one person was single (10%), four people were married (40%), and five people were divorced (50%).

Table 1

Descriptive Statistics Concerning Household Occupants

Household Members	<u>M</u>	<u>SD</u>	<u>n</u>	<u>MIN</u>	<u>MAX</u>
Number of children	2.00	1.26	25	.00	4.00
Number of children at home	1.72	1.14	25	.00	4.00
Number of adults at home	1.60	.577	25	1.00	3.00

The educational levels of the participants included less than eighth grade, partial high school, high school graduate, college graduate, graduate school (greater than 4 years of college), and partial college or trade school. Approximately 4% reported that they were high school graduates. There may have been a larger percentage of high school graduates, but high school graduate was not usually selected if college or trade school was selected; therefore, it is not certain how many additional participants graduated high school or achieved high school equivalency. Therefore, it may not be assumed that if college or trade school had been attended, high school graduation or equivalent achievement had been met. Fifty-percent of participants had completed partial college or

trade school. Approximately 38% of participants had graduated from college, and approximately 8% had attended graduate school. One participant was categorized in the group of missing data (3.8%), one participant was categorized in the group of partial high school (3.8%), and one participant fell in the group of high school graduate (3.8%) (Figure 3).

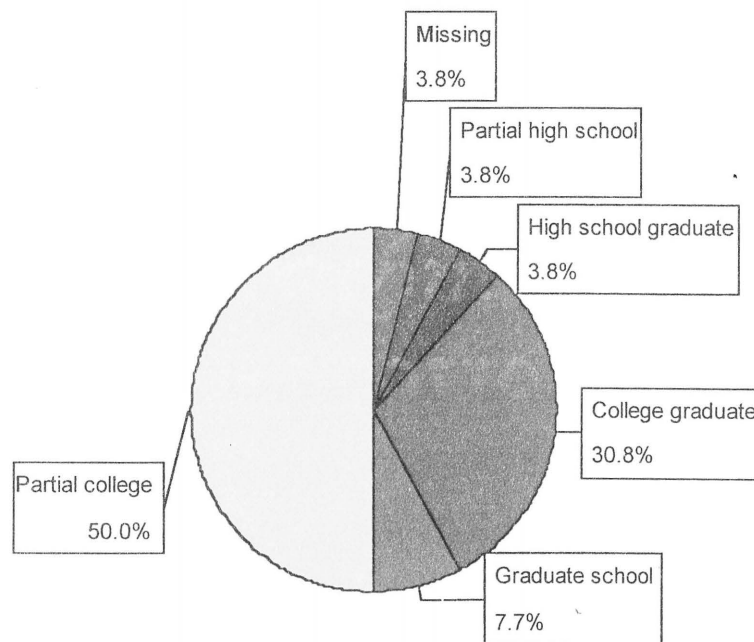


Figure 3. Educational level of participants.

In Figure 3 the phrasing “partial college” represents participants who attended college without receiving a degree or participants who attended trade school. In the first group of church participants, all three participants (100%) were college graduates. In the

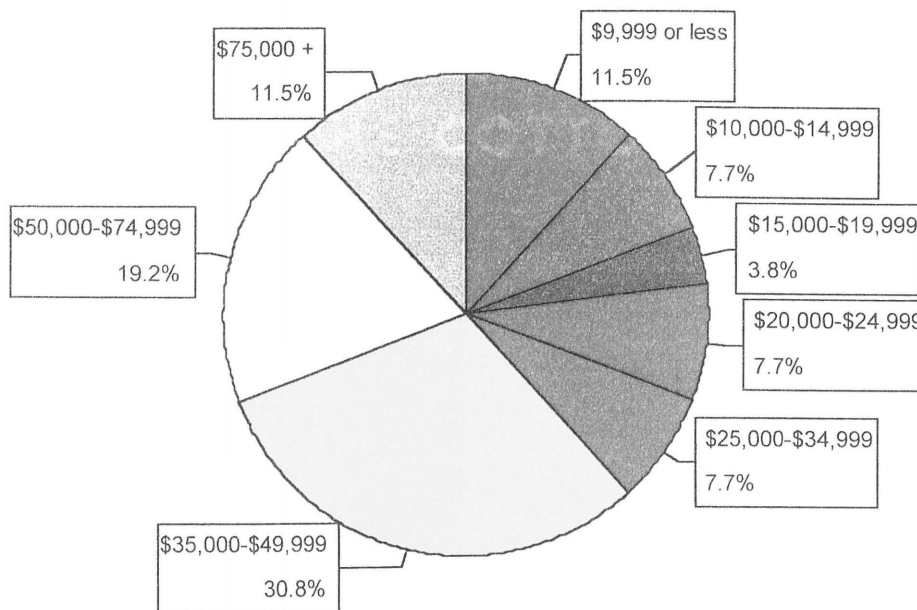
second group of beauty shop participants, one participant attended graduate school (14.3%), five attended partial college or trade school (71.4%), and one participant did not respond to the question (14.3%). In the third group of WIC participants, one person graduated college (16.7%), three people attended partial college or trade school (50%), one person attended partial high school (16.7%), and one person was a high school graduate (16.7%). In the fourth focus group of church participants, one participant attended graduate school (10%), four participants graduated college (40%), and five participants attended partial college or trade school (50%).

The total sample indicated that one-half of the participants had an annual family income of \$35,000 to \$74,999. The extreme lower and upper ranges of income indicate that almost one-eighth of the participants had a yearly family income of greater than or equal to \$75,000, while one-eighth of participants had a yearly family income of less than or equal to \$9,999. Only one participant's income was in the \$15,000 to \$19,999 range. The remaining participants' incomes (\$10,000 to \$14,999, \$20,000 to \$24,999, and \$25,000 to \$34,999) totaled less than 25% (Figure 4). Demographic data indicate that 19 (73%) of the participants were employed, and 7 (27%) of the participants were not employed.

The U.S. Department of Health and Human Services [HHS] published its annual update of the poverty guidelines on February 15, 2000. The HHS guidelines are used by a number of Federal programs, including WIC, as the basis for determining income eligibility limits (United States Department of Agriculture [USDA], 2001). The research study findings indicated that the income from the WIC group participants ranged from



\$9,999 to \$24,999, with up to 5 family members per residence. Using this income criteria, all WIC participants are in a low income group. To be eligible for WIC on the basis of income, applicant's gross income must fall at or below 185 percent of the U.S. Poverty Income Guidelines (USDA, 2001). Based on the HHS guidelines, in the first church group, no participant would be considered as low income; however, in the second church group, two participants would be considered to be low income. Based on the HHS guidelines, beauty shop participants would be classified as middle-income. Data gathered on marital status and number of children and number of people in the household was calculated into the determination of income status.



Note. Family's total yearly income includes all sources of income such as Social Security, child support, retirement benefits, and interest income.

Figure 4. Total yearly incomes of participants.

All 26 participants were African American women. Religious beliefs were identified by asking participants about the level of influence religion had in their daily lives. Religion was described as strongly influencing, moderately influencing, slightly influencing, or not influencing daily lives of the participants. As demonstrated in Figure 5, religion was identified by twenty participants (77%) as strongly influencing their daily lives. Four participants (15%) indicated that religion moderately influenced their daily lives. One participant (3.8%) indicated that religion mildly influenced her daily life, and one participant (3.8%) did not respond to the question. All of the church participants in both of the church groups indicated that religion strongly influenced their daily lives.

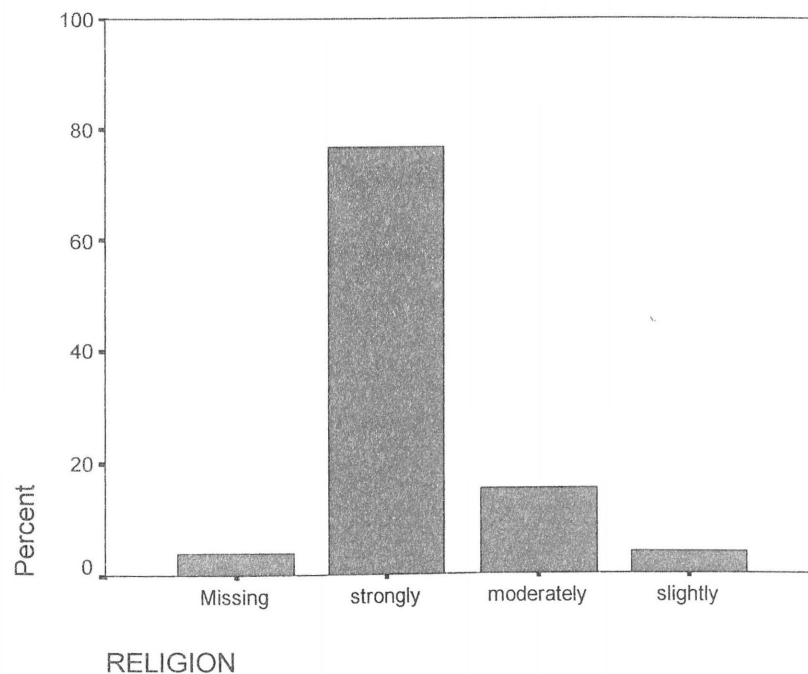


Figure 5. Influence of religion

Lifestyle habits such as diet, exercise, and activity are modifiable risk factors. Modifiable risk factors were addressed by asking questions about exercise, activity, body weight perceptions, and diabetes perceptions on both the demographic profile sheet as well as in the focus group questions. Family history was a non-modifiable risk factor that was addressed on both the demographic profile sheet and in the focus group questions. Sixteen participants (61.5%) claimed to participate in exercise, while 10 participants (38.4%) claimed not to participate in exercise (Figure 6). In each group there were participants who did not exercise. The participants who exercised reported to exercise an average of 3 days per week and an average of 48 minutes per exercise session (Table 2).

Subsequently, data which indicated the type of exercise completed was missing for the participants who do not exercise. Various types of exercise reported included walking, aerobics, jogging, basketball, weight lifting, stretching, and using the treadmill. Eight participants, or 30.8%, claimed to participate in walking, and seven participants, or 26.9%, claimed to perform in more than one type of exercise. The participants who exercised stated a minimum exercise time of 20 minutes, and a maximum exercise time of 120 minutes (Table 2).

Table 2

Descriptive Statistics Concerning Exercise

Exercise	<u>M</u>	<u>SD</u>	<u>n</u>	<u>MIN</u>	<u>MAX</u>
Number of days participants exercised per week	3.07	1.33	15	2.00	7.00
Amount of minutes participants exercised	48.08	31.13	13	20.00	120.00

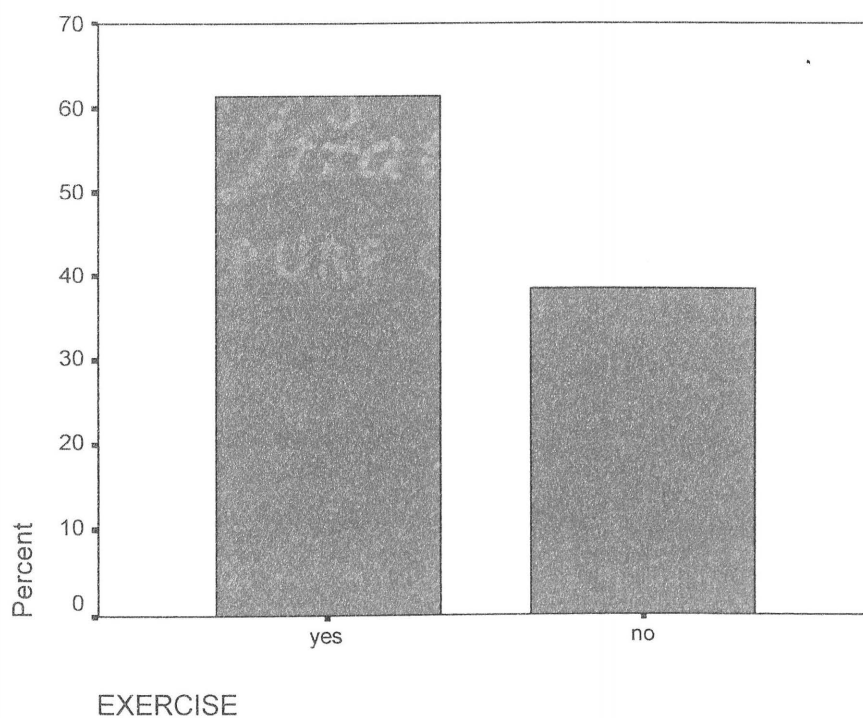


Figure 6. Frequency of participants who exercised.

Figure 7 described the intensity of the exercise as mild, moderate, or hard. Fourteen participants (53.8%) responded to the questions regarding exercise intensity. Five participants (35%) claimed to exercise at a mild intensity, eight people (57%) claimed to exercise at a moderate intensity, and one participant (7%) claimed to exercise at a hard intensity.

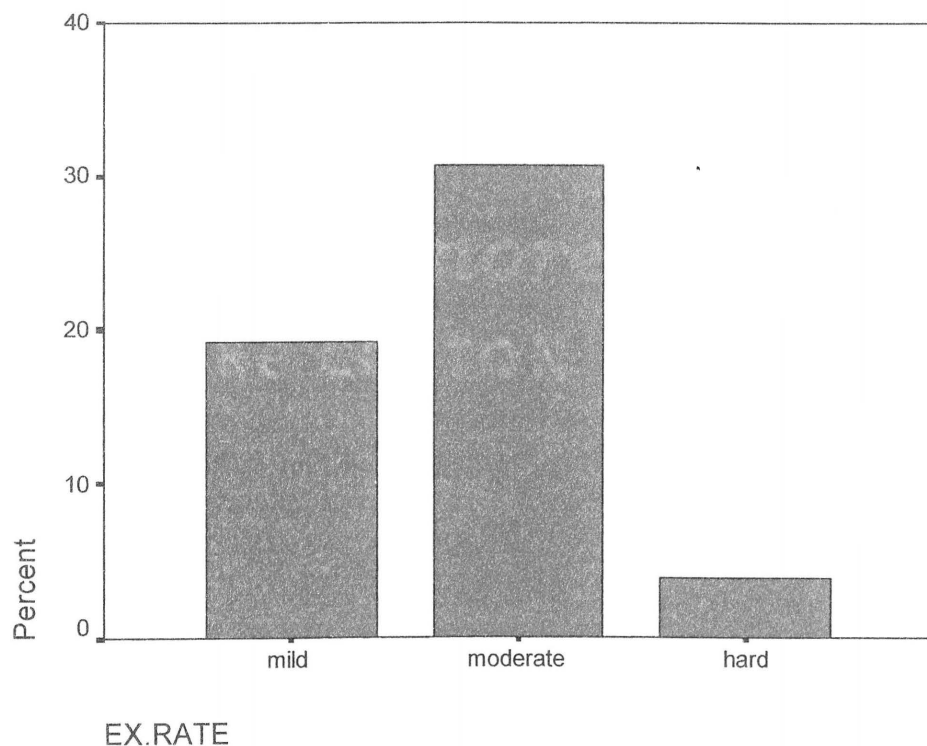


Figure 7. Intensity of exercise rate.

The other types of activities that participants reported were housework, gardening, chasing children, and some even stated their occupation as an activity (Figure 8). Regarding the types of other activities performed, housework was indicated as an activity

by greater than 80%, or 21 of the participants. Three participants (11.5%) indicated that no physical activity was performed, and four participants (15.4%) did not respond to the question as to whether or not physical activity was performed. Participants who indicated more than one type of activity, such as housework and gardening, were counted in the combination category.

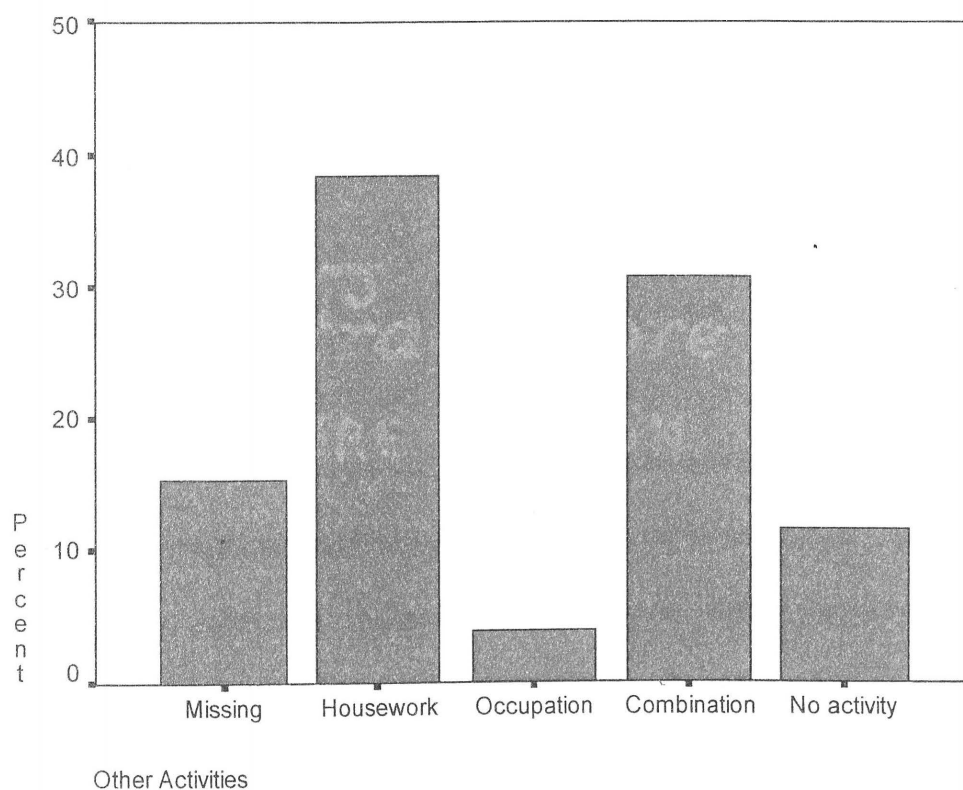


Figure 8. Other types of physical activities reported by participants.

Participants were asked "Do you feel you get enough physical activity?" Only five participants (19.2%) responded that they achieved enough physical activity. Twenty-one participants (80.8%) indicated that they did not perform enough physical activity. It was

left to the discrepancy of the participants to determine what constituted physical activity. Focus group information revealed that weight, obesity, poor diet, limited activity, and lack of exercise were factors that lead to obesity and increased the risk of developing diseases, including diabetes. However, the desire of participants to initiate lifestyle changes to achieve or maintain a healthy weight, increase exercise or activity, or eat healthier was not certain.

When asked about weight satisfaction, approximately two-thirds of the participants revealed they were not satisfied with their weight, and approximately one-third revealed that they were satisfied with their weight (Figure 9). Figure 10 illustrated these body weight perceptions. Utilizing demographic profile sheet data (Appendix C), participants were asked to indicate the best description of their weight, utilizing the following categories: (a) appropriate for weight to height, (b) slightly overweight, (c) overweight, (d) very overweight, and (e) not sure. Approximately one-fourth of participants perceived that their weight was appropriate to their height, and slightly more than one-third of participants perceived themselves to be slightly overweight (Figure 10). The perception of weight to height and slightly overweight categories together constituted greater than one-half (62%) of the participant responses regarding body weight perceptions (Figure 10). Slightly more than one-fourth of the participants (26.9%) perceived themselves to be either very overweight or overweight. Due to the nature of the study, the participants were not weighed; therefore, comparisons about perceived weight versus realistic weight could not be discerned.

The remaining participants were not sure how to best describe their body weight. Focus group participant data revealed the perception that overweight was 15 to 20 pounds, slightly overweight was 50 pounds above desired weight, and obesity was 100 pounds over desired weight. In the first church focus group, one participant indicated that weight was appropriate for height and two participants indicated uncertainty about weight. In the second focus group of beauty shop participants, three participants indicated that weight was appropriate for height, two participants indicated perception of being slightly overweight, one participant indicated a perception of overweight, and one participant indicated a perception of very overweight. In the third focus group of WIC participants, three participants indicated weight was appropriate for height, two participants indicated a perception of being slightly overweight, and one participant indicated a perception of being very overweight.

When asked about weight satisfaction, three of the groups had a fairly equal distribution. The group expressing the most dissatisfaction of weight was the second church group, or the fourth focus group, with nine members who indicated dissatisfaction with current weight and one member who indicated satisfaction with weight. The first church focus group had two participants who were satisfied with weight and one participant who was dissatisfied with weight. The second, or beauty shop group, had three participants who were satisfied with weight and three participants who were dissatisfied with weight. The third, or WIC group, had three participants who were satisfied with weight and four participants who were dissatisfied with weight.



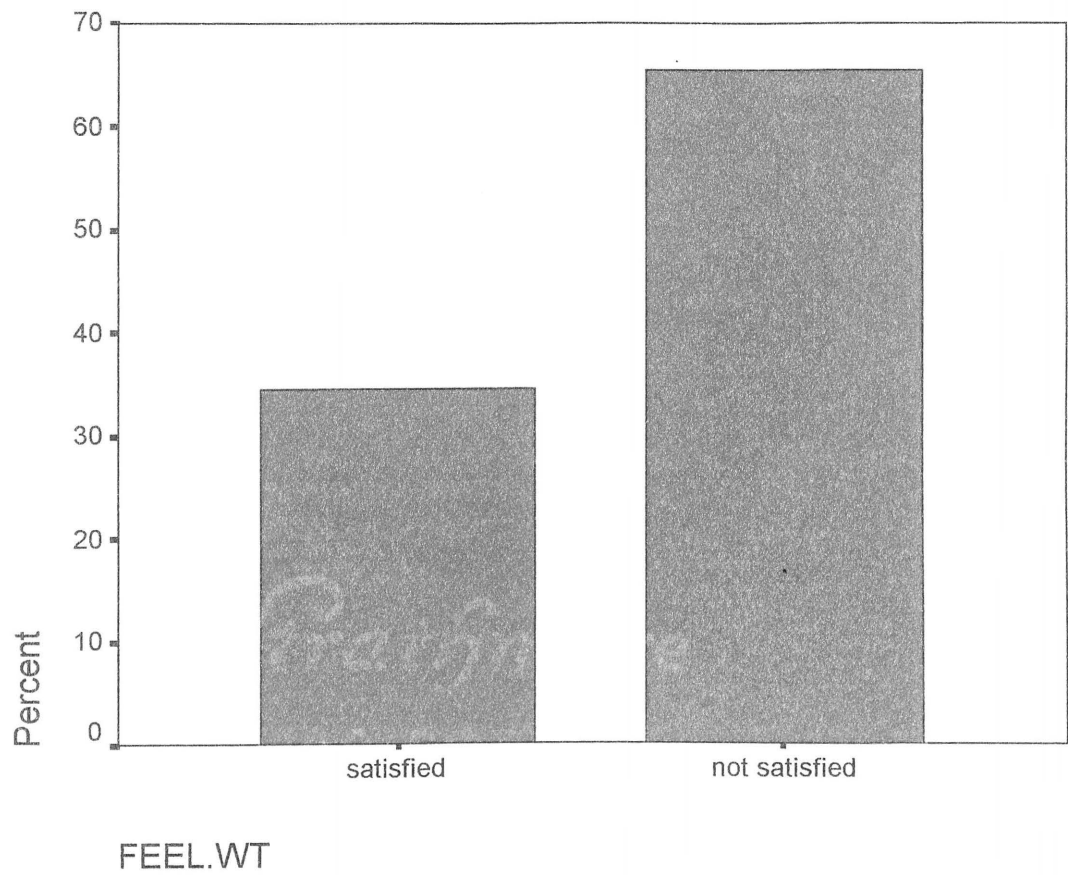


Figure 9. Weight satisfaction reported by participants.

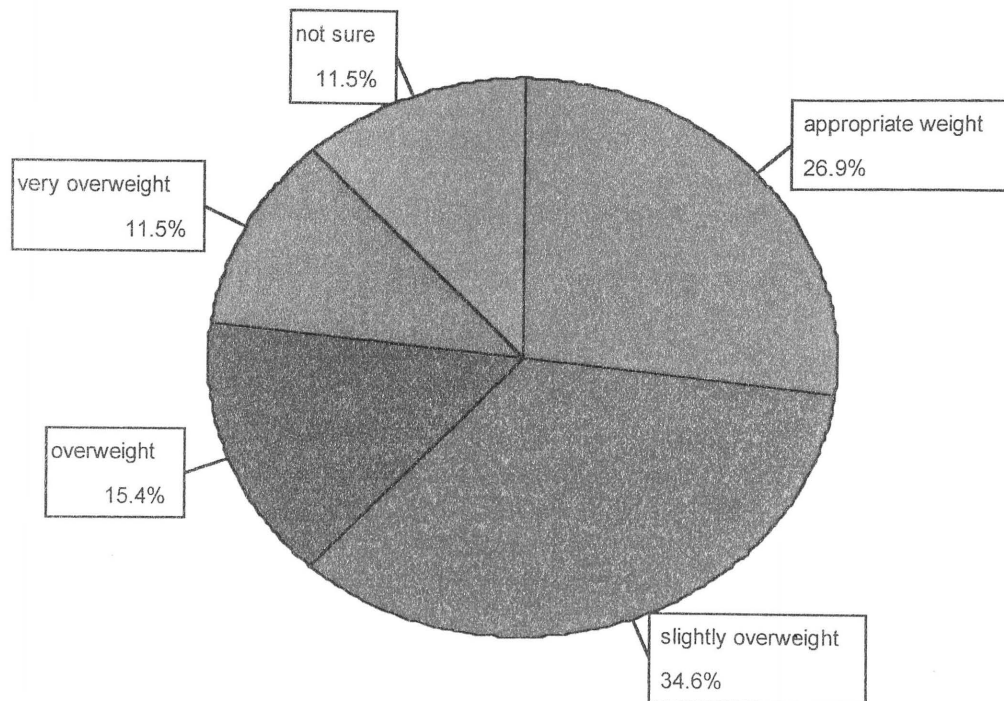


Figure 10. Body weight perceptions.

Supported by the literature, there might be a correlation with a family history of diabetes and risk for developing type 2 diabetes, especially in certain minority groups, including African Americans (McNabb et al., 1997; NIDDKD, 1998). The demographic profile sheet (Appendix C, question numbers 16 and 17) specifically asked if there is a family history of diabetes, and if so, which members of the family have diabetes, high sugar, sugar diabetes, or high sugar in the blood. The literature supported using this terminology to clarify screening for diabetes (Saunders & Schorling, 2000). Figure 11 classified relatives as follows: (a) father or mother, (b) sister or brother, (c) grandparent,

(d) aunts or uncles, (e) more than one relative checked, and (f) not specified. On the demographic profile sheet (Appendix C), children and other were listed as choices, but none of the participants indicated having children with diabetes or anyone in the other category as having diabetes. According to Table 3, twenty-one (80.8%) of the respondents indicated that there was a family history of diabetes, and 10 (38.5%) perceived themselves at risk for diabetes. Figure 11 revealed the distribution of family members reported as having diabetes.

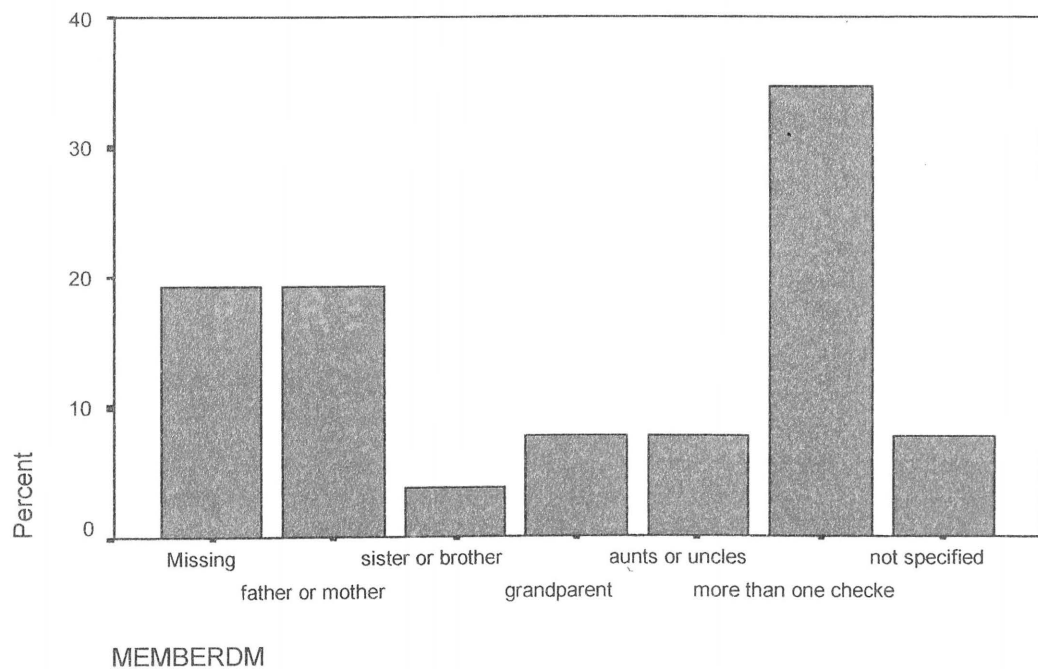


Figure 11. Family members with diabetes.

Missing data were reflected from participants who do not have family members with a history of diabetes. One participant did not respond to the question as to whether or not there was a family history of diabetes, and this was shown as missing data on Figure 11. Approximately one-third of participants reported having more than one family

member with diabetes. The focus group responses overall indicated a concern for diabetes-related complications such as amputation, blindness, and death due to personal experiences reported by family.

The demographic profile sheet (Appendix C, question number 21) asked participants to indicate whether or not they were at risk for developing diabetes. Twelve of the participants (46.2%), indicated that they did not feel they were at risk for diabetes; 10 participants (38.5%) indicated that they may be at risk for developing diabetes; one participant (3.8%) was uncertain about being at risk for diabetes; and three participants (11.5%) did not respond to the question (Table 3). Other demographic profile sheet data revealed that one participant had participated in diabetes programs in the past, and two of the participants had participated in focus groups previously.

Table 3

Descriptive Characteristics of the Participants

Variable	Number of Participants n= 26	Percent
Family history of diabetes	21	80.8%
History of diabetes program	1	3.8%
Perception of diabetes risk	10	38.5%
Previous focus group experience	2	7.7%

## Findings by Question

Focus group questions were utilized to answer each research question. The focus group questions guided the discussion to answer each question. A compilation of the answers are placed within the text box and the emerging themes for each focus group question have been identified outside of the text box.

Research Question 1: What are the perceptions and health beliefs about NIDDM (type 2 diabetes) among African American women?

Question: Focus Group Question 1: What do you believe are the major health problems of African American women?

### Responses: Focus Group Question 1

- (a) too fat
- (b) obesity/overweight
- (c) high blood pressure --from cooking with too much fat
- (d) other: Stress --single parents/divorced/children in family
- (e) AIDS/Lupus/sickle cell
- (f) cancer (especially ovarian and breast)
- (g) diabetes
- (h) heart Problems
- (i) Put self last/postponed physician visits --no self-care

Summary: African American women believed major health problems were obesity/overweight/too fat, high blood pressure related to diet, diabetes, cancer, and heart problems. Stress was a factor for single parents because of child-care issues and responsibilities due to being a one-parent household. The recurrent themes that emerged from focus group question 1 were the major health problems of African American

women which are as follows: (a) hypertension and heart disease, (b) obesity resulting from a high fat diet, and (c) cancer, especially breast.

Question: Focus Group Question 1a: How does diabetes effect African American women?

Responses: Focus Group Question 1a

- (a) vision/blind – loss of vision
- (b) diet -- monitor what you eat/what you eat for blood sugar
- (c) not eating right; not taking meds serious [sic]
- (d) stop smoking/start exercising/ no alcohol
- (e) family members--died of diabetes
- (f) lifestyle—stress, exercise
- (g) no signs/symptoms of diabetes
- (h) amputation—loss of limb
- (i) kidney failure
- (j) arthritis
- (k) diabetes effects circulation, causes high blood pressure (HBP)
- (l) economic hardships/strains finances/other medical problems/kills us
- (m) know signs: leg amputation because of circulation; kidneys affected
- (n) known symptoms (thirst); not sure of symptoms
- (o) death—loss of life
- (p) reduce stress
- (q) effects are unimportant, until something happens

Summary: African American women in this study acknowledged that some family members have experienced death from diabetes. Amputations, loss of vision, and kidney failure were severe complications from diabetes which participants listed. Other considerations included economic hardships, and various other medical problems. The

responses provided indicate that one should initiate lifestyle changes, such as reducing stress and exercising, as well as eating healthier. Eating healthier was perceived to mean monitoring what type of food is eaten because too much starch or sugar caused one to have "blood sugar." The recurrent themes that emerged from focus group question 1a were as follows: (a) loss of vision/blindness, (b) amputation/kidney failure, and (c) death

Question: Focus Group Question 2: What is diabetes?

Responses: Focus Group Question 2

- (a) has to do with blood circulation
- (b) has to do with blood sugar/sugar level/sugar diabetes: imbalance in sugar level
- (c) not enough sugar, too much sugar, the way we eat causes us to lack sugar
- (d) limit sweets, alcohol
- (e) serious
- (f) has do with blood pressure
- (g) dangerous disease
- (h) pancreas does not operate properly – overreacts or underreacts
- (i) problem with insulin/not producing enough insulin
- (j) circulatory system involves blood vessels and heart (mother had diabetes)
- (k) bring up low sugar with peppermints, oranges, sugar water
- (l) involves numbness; cold hands, no circulation, toes could fall off

Summary: Diabetes was defined by the participants as having to do with blood sugar being too high or too low; diabetes was described as a circulatory disease that causes problems with blood pressure, numbness, circulation, and blood vessels. A few participants knew that diabetes was associated with insulin production and the pancreas. The majority believed that eating certain foods, such as sugar or starch, may cause diabetes. The recurrent themes that emerged from focus group question 2 were as

follows: (a) blood circulation/blood pressure, (b) blood sugar was too high or too low, and (c) diabetes was a dangerous disease.

Question: Focus Group Question 2a: How would you describe/define diabetes to someone else?

Responses: Focus Group Question 2a

- (a) don't know – find answer/dictionary
- (b) too much sugar in the body/or not enough sugar in the body
- (c) avoid question – can't help
- (d) not able to – would not feel comfortable/not sure what it is
- (e) glucose level is abnormal and pancreas do not produce insulin
- (f) "It's a serious disease that a grandparent has"
- (g) "If it's really bad you have to take insulin"
- (h) Requires medicine or insulin
- (i) family experiences (aunt with diabetes–insulin-diabetes-amputation—leg cut off)
- (j) coma
- (k) lifestyle – wanting sweets
- (l) not exercising
- (m) too tired
- (n) chasing kids (too busy to take care of self)
- (o) busy in kitchen (activity, stay busy)
- (p) not sure if activities equate to exercise (no enough exercise)
- (q) deadly disease

Summary: Most focus group participants stated they would not be comfortable talking about or explaining diabetes. Most knew that diabetes involves insulin, and a few realized that the pancreas is involved. Diabetes in the family was mentioned in relation to amputations. Diabetes was stated to be serious, and not exercising was mentioned as a factor. The recurrent themes that emerged from focus group question 2a, which asked how one would describe/define diabetes to someone else, were as follows: (a) "too much



sugar or not enough sugar in the body,” (b) “avoid question, not sure how to respond.” and (c) “family experiences that describe diabetes as a serious disease.”

Question: Focus Group Question 2b: What do you believe causes diabetes?

Responses: Focus Group Question 2b

- (a) heredity/trait
- (b) obesity/overweight
- (c) racial/chemical make-up (African Americans, Asians, Hispanics)
- (d) how foods are cooked/food prep/what you eat/cooking/diet-too many sweets, rice
- (e) food cooked – salt, bacon
- (f) poor diet/eating habits
- (g) not being aware: no self-education
- (h) believe it won't happen to us
- (i) not an issue “until it's at our back door”
- (j) not seeing a doctor routinely
- (k) how raised
- (l) family history
- (m) too many sweets/red meat/pork
- (n) not enough vitamins
- (o) not enough exercise (couch potatoes)
- (p) potatoes, starch turn to sugar
- (q) not eating well balanced diet
- (r) lifestyle
- (s) poor circulation/bad circulation of the blood
- (t) not enough rest High Blood Pressure (HBP)

Summary: Heredity/race, as well as family history, were described as factors that lead to diabetes, and the perceptions of the participants were that “until it happens to you, don't worry about it.” Diabetes was mentioned consistently as having to do with poor blood circulation, according to the participant responses. Food preparation methods, lifestyle, obesity, poor eating habits, etc. were some reasons given to eat a more balanced diet. The recurrent themes that emerged from focus group question 2b, which asked beliefs about

what causes diabetes, were as follows: (a) heredity, (b) obesity/overweight, (c) poor diet, and (d) lack of exercise.

Research Question 2: What are the perceptions and health beliefs about the risk factors for developing NIDDM (type 2 diabetes) among African American women?

Question: Focus Group Question 1b: What health practices can you do today to be healthy and prevent or reduce the chance of getting diabetes?

Responses: Focus Group Question 1b

- (a) yearly checkups/health checkups
- (b) diet: eat right/healthier/change diet/decrease fat/ less fried foods/no pork
- (c) less carbohydrates (starches, breads, rice)/less sugar/ starch turns into sugar
- (d) drink more water
- (e) limit salt
- (f) can't afford other food choices
- (g) lose weight
- (h) exercise – walk/chase kids/aerobics/increase exercise
- (i) stay aware – read about diabetes: literature, health fairs
- (j) know signs of diabetes/check Blood Pressure yrly/ decrease stress/ more rest
- (k) automatic test for diabetes, labs, blood sugar, triglycerides

Summary: The participants stated that if they watch what they eat, drink water, eat healthy, have yearly check-ups, and test for diabetes, they might maintain a standard of health. The recurrent themes that emerged from a discussion of the health practices that could be done today to be healthy and prevent or reduce the chance of getting diabetes were described as follows: (a) diet and exercise, (b) knowing the signs and symptoms of diabetes, and (c) reducing stress.

Question: Focus Group Question 3: What are the three most critical factors (things) that contribute to the development of diabetes in African American women?

Responses: Focus Group Question 3

- (a) lack of exercise
- (b) heredity traits/generation
- (c) we fry a lot of foods-should limit greasy foods and starches; find hidden sugar; a lot of fried chicken; pork; there's too much carbohydrate
- (d) not enough literature/education programs
- (e) not eating correctly – limit starch, fat, sugar, carbohydrate
- (f) not exercising
- (g) weight
- (h) heredity
- (i) not knowing what diabetes is and what causes it
- (j) sickness/amputations/blindness
- (k) stress
- (l) poverty – effects buying healthy food, going to doctor
- (m) infrequent doctor visits – no medical insurance...and...
- (n) don't rush women through—women are not asking questions--- have symptoms, don't tell
- (o) intimidated by doctor's terminology – rushed
- (p) too much info – talk over heads; need to talk in common terms

Summary: The following critical factors identified as contributing to the development of diabetes in African American were: lack of exercise, genetics, not eating correctly, stress, and not enough available literature/educational programs. Transportation affected the accessibility to physicians for regular check-ups. The emerging themes in response to the three most critical factors that contribute to the development of diabetes in African American women were described as follows: (a) diet, (b) lack of knowledge and

awareness about diabetes, (c) the doctor-patient relationship, including issues of cost and lack of time spent with the doctor.

Research Question 3: What are the perceptions and health beliefs about the severity/complications of NIDDM (type 2 diabetes) among African American women?

Question: Focus Group Question 3a: What do you believe happens if diabetes is not treated?

Responses: Focus Group Question 3a

- (a) have to get something amputated
- (b) go to hospital—know because Mom had stroke
- (c) liver disease
- (d) loss of limb
- (e) die
- (f) kidney failure
- (g) liver disease
- (h) coma
- (i) no discovery of diabetes until there are questions/not knowing signs causes problems
- (j) don't know how to find signs/symptoms by self
- (k) not known until someone else in the family had it
- (l) sickness—death—loss of limb; blind; slow healing
- (m) blood vessels get smaller
- (n) heart failure (enlarged heart—infections take longer to heal)
- (o) hypertension

The emerging themes in response to the question about what happens if someone has untreated diabetes (due to not knowing signs and symptoms) as identified by participants were as follows: (a) sickness, (b) hospitalization, and (c) amputation. Other comments indicated that untreated diabetes leads to loss of limb, kidney failure, heart

failure, smaller blood vessels, and other complications as noted in the responses to question 3a.

Question: Focus Group Question 3B: What problems develop from having diabetes over a period of time and not knowing it?

Responses: Focus Group Question 3B

- (a) serious over time – takes over body
- (b) amputations, because scared to go to doctor—too late
- (c) get really sick
- (d) amputation
- (e) blindness; eyesight effected
- (f) dizzy
- (g) fatigue
- (h) hair loss
- (i) headaches
- (j) thirsty
- (k) sore
- (l) kidney problem
- (m) hard for wounds to heal

Summary: Diabetes was still perceived as “serious,” “making one sick,” and included complications such as blindness and amputations that may occur over time. Thirst was listed as a sign of diabetes. The emerging themes in response to the question regarding what problems might develop from having diabetes over a period of time and not knowing it were as follows: (a) amputation, (b) blindness, and (c) kidney problems.

Question: Focus Group Question 4a: How would African American women describe the seriousness of the disease? Why would they describe it that way?

- (a) seriousness –not perceived as serious until amputation. scale of 1-10 (8 is serious; 5 if no one in family has diabetes)
- (b) very serious –dialysis; other relatives with diabetes on dialysis
- (c) not serious until amputation/hospitalization
- (d) more serious among African American women than women of other races
- (e) consistent illness makes people think
- (f) culture: meal planning—no connection between what we ate to disease; cook what Mom cooks/older women teach younger to cook
- (g) stressors/single mom
- (h) family—pt-themselves don't think it's serious
- (i) educate at earlier age
- (j) talk about diabetes as a silent killer
- (k) life threatening
- (l) serious over time—effects body--amputations
- (m) happens to someone in family—increases awareness. not necessarily seriousness
- (n) know from grandparents – they ended up on dialysis

Responses: Focus Group Question 4a

Summary: According to the responses to focus group question 4a, African Americans did not perceive diabetes to be serious until there were complications, such as dialysis or amputations. The cultural significance of food was mentioned, as cultural cooking was passed from generation to generation. Stress was mentioned as a health concern that might in some way relate to diabetes. Providing education to others about diabetes at a younger age to increase awareness was mentioned. The emerging themes in response to

the question about how would African American women describe the seriousness of the disease were as follows: (a) very serious, (b) serious over time, i.e. causing amputations, and (c) life threatening versus not seen as serious until an amputation occurs.

Although one of the final focus group segments, questions 4 and 4b, did not specifically answer the research questions posed in this study, these questions were quite significant, in order to plan a culturally appropriate and successful diabetes program for African American women was highly relevant to this research study.

Question: Focus Group Question 4: What do you feel diabetes education programs should include?

Responses: Focus Group Question 4

- (a) free screening/affordable information
- (b) diet/exercise
- (c) questionnaire on the body
- (d) weight plan—too fat
- (e) diabetes, dieting
- (f) checklist—simplistic—diabetes test-brochures
- (g) more groups/opinions/small groups/personable
- (h) provide childcare/transportation
- (i) communication symptoms, how effects them  
where---beauty shops, clinics; breakroom at church
- (j) “If I don’t eat right, these things cause diabetes”
- (k) booths at state fair
- (l) women intimidated by the doctors’ big words
- (m) come monthly; designated spot
- (n) bring someone to a meeting with diabetes to show  
what happened/tell story/if amputations, etc.
- (o) health mobile screening
- (p) literature- stress, exercise
- (q) real concern for people/use posters

Summary: The participants indicated an interest in mobile screening, check-list style literature, stress reduction programs, weight plan and dieting, and exercise. The emerging themes in response to the question what should diabetes programs include were identified as follows: (a) before and after effects of diabetes should be indicated (bring a diabetic to share experiences); (b) free affordable health screening, through mobile access or a church or community center; and (c) teaching the warning signs and symptoms at church, school, work, and other gathering sites.

Other general statements by participants included that they would like to know who was doing the stats, because they did not believe stats about African American women and diabetes were true. The focus leader conferred with the researcher that functional health, such as stress, sickness, or hospitalization means removal from the family (R. Clarke-Turner, personal communication, November 8, 2000). The leader also stated that the family could be a source of “misinformation,” as no one in the focus groups thought that you get diabetes “no matter what.”

Question: Focus Group Question 4b: What do you feel can be done to get African American women to participate in diabetes education programs?



Responses: Focus Group Question 4b

- (a) affordable screening/free clinics/reduced price program
- (b) stress relief – we eat differently at home
- (c) check weight, diet
- (d) literature, checklist, not lots of info/pamphlets
- (e) before and after effects of diabetes
- (f) time and place in community to show concern for African American women
- (g) clinics, beauty salon
- (h) child care during exercise
- (i) info about exercise and diet
- (j) transportation/health mobile
- (k) talk at people's level/encourage to pay attention
- (l) TV posters, celebrities
- (m) bring someone who has diabetes-scare tactics
- (n) music/gifts/treats – money, food, incentives
- (o) relationships with women – no faking
- (p) teach warning signs church, break room at church, school, health classes, café – worksite health programs
- (q) bring in knowledge – signs/symptoms
- (q) take away “I don't have a ride” as an excuse seriousness – not perceived as serious until amputation, scale of 1-10 (8 is serious; 5 if no one in family has diabetes)
- (r) involve African American women and African American female health professionals

Summary: Participants reported that issues to be considered in efforts to get African American women to participate in diabetes education programs would be helpful, and that diabetes needs to be personalized, or better explanations given on how it relates to them. The women felt there should be more efforts to increase awareness of the signs, symptoms, and availability of testing for diabetes and simple literature handouts in sites such as churches, schools, worksite programs, and health classes. The before and after

effects of diabetes, information about diet and exercise, including scare tactics, are recommended sources of information to include in program planning. Education by an African American health care profession is desired in the classroom setting.

The recurrent themes that emerged from focus group question 4b are that transportation, childcare, and medical visits were issues to be considered in efforts to get African American women to participate in diabetes education programs. Participants thought that stricter doctors who enforced weight-related issues would be helpful. Increased awareness of the signs and symptoms of diabetes and testing for disease was desired by these women.

## CHAPTER V

### SUMMARY, DISCUSSION CONCLUSIONS, AND RECOMMENDATIONS

The final chapter is presented in four parts. The first part, the summary, presents an overview of the entire study. It includes a description of the participants, methods of data collection, and results of the analysis. Part two provides a brief discussion of the findings. Part three, the conclusion, includes a restatement of the three research questions and a summary statement of the answers to the questions. In the last part, the logical significance of the results and implications for health education are discussed and a list of recommendations for further research is provided.

#### Summary of the Study

The purpose of this study was to involve low- and middle-income African American women in focus groups to elicit their perceptions and beliefs about diabetes and to generate ideas for diabetes education, risk reduction, and screening programs tailored to African American women. This study was conducted to determine the beliefs and perceptions that non-diabetic African American women had about diabetes, the risk factors (modifiable and non-modifiable) for developing diabetes in African American women, and the complications that might result from the disease. A review of the literature revealed that few studies had been done to determine the perceptions and beliefs that African American women had about diabetes and secondary complications that result from the disease. Additionally, there was a lack of preventive programs or

measures, including components for education, risk reduction, and screening programs that were tailored to African American women.

The sample for this research study consisted of a population of low- and middle-income African American women that resided in the Dallas-Fort Worth [DFW] metroplex. For purposes of this study, the population was further delimited to African American women who (a) had no history of diabetes, (b) were self-defined as African Americans, and (c) were between the ages of 25 to 65 years of age. Twenty-eight African American women were recruited through the assistance of diverse community organizations: two churches, a beauty salon, and a public health clinic. Four focus groups provided participants an opportunity to respond to the research questions of the study. These focus groups were conducted in three settings (two churches, a beauty shop, and a public health or WIC clinic). The focus group questions were developed by the researcher and validated through a panel of experts. The expert review panel consisted of two African American health educators and health professionals at three sites in the DFW metroplex specializing in diabetes and representatives from an out-of-state site (MDRTC) that works with the African American population in screening for diabetes. Meals, incentive gifts and door prizes were also provided. The data collection involved the use of a demographic profile sheet (Appendix C) and the researcher developed focus group questions (Appendix D).

First, the participants completed a demographic profile sheet (Appendix C) prior to the start of the focus group session. During the focus group sessions, the focus group leader recorded responses to the focus group questions (Appendix D). Responses were

recorded on a flip chart using different colored markers, or onto a sheet of paper if the interview-style technique was used. Focus group sessions were audiotaped. The audiotapes were transcribed, and the data were analyzed for theme content by a focus group leader, a researcher, and a third health educator. The researcher then displayed the information in the following manner: (a) first, the data from all four focus groups were condensed into a summary list and placed into a text box; (b) secondly, the text boxes of data were grouped as concepts under the research questions; and (c) finally, following the text boxes were brief numbered lists of the main themes corresponding to each focus group question. The focus group questions were grouped as concepts under the research questions. Chapter IV provided a detailed explanation of the data findings.

### Discussion of the Findings

Perceptions and health beliefs about diabetes in African American women, including the risk factors for diabetes. The participants stated that stress might lead to disease, such as high blood pressure, diabetes, and cancer. Other factors listed as possibly contributing to diabetes included inadequate rest, improper diet, and not getting enough exercise. Figure 6 illustrated that walking was an important form of exercise for African American women. Normal routine activities such as housework were considered a significant form of exercise among the participants.

According to participant responses, obesity and heart problems were perceived as health issues for African American women. Death and amputations were considered to be common occurrences from diabetes according to the focus groups in this research study, especially given personal family experiences with diabetes-related deaths and

complications. While 80.8% of the participants identified a family history of diabetes, only 38.5% perceived themselves to be at risk for diabetes. Only a total of four participants (15.4%) indicated a negative family history for diabetes, and the only group in which all members had a family history of diabetes was the first church focus group in which all participants had familial ties among each other. Focus group participants in this research study mentioned that genetics, race and physical make-up played a role in developing diabetes. Severity and complications of diabetes such as vision loss and amputations, emerged as repeat themes, regardless of whether the focus group questions were addressing general diabetes beliefs or diabetes beliefs related to severity and complications. Diabetes was mentioned as being a deadly disease.

The data indicated that participants believed dietary factors played a role in preventing diabetes. Major themes that emerged about perceptions and health beliefs about diabetes in African American women included consuming less carbohydrates, drinking more water, limiting salt, limiting certain meats (such as pork), and losing weight.

There were some misconceptions about which foods eaten actually contribute to diabetes. Focus group participants stated that starch turns to sugar; therefore, starch should be limited in the diet. Exercise, weight loss, limiting starch, pork, fat, fried foods, sugar, and carbohydrates were listed as health practices to prevent or reduce the risk of getting diabetes. Obesity was listed by the participants as a major health problem of African American women and a contributor to diabetes. Food item selections rather than overeating were stated to contribute to obesity.

According to the literature, many African American women considered weight loss to be appropriate for health improvement but not necessarily for appearance (D'eraimo-Melkus et al., 1996; Haire-Joshu, 1996). Statements by beauty shop participants indicated that overweight meant "to be 50 pounds above normal weight," and obesity was described as "100 pounds above normal weight." The data from the focus group study revealed that two-thirds of the participants were not satisfied with their weight. Participants suggested that becoming more knowledgeable about diabetes might be achieved by reading simple diabetes-related literature and attending health fairs. In addition, health fairs, community centers, grocery stores, and clinics were suggested as resources that could offer free or low cost cholesterol and triglyceride screening. The participants stated that a nutritional diet and activity might prevent the onset of diabetes. Participants in this research study believed that their food choice selections caused the body to make more sugar or not enough sugar. Many of the participants in this study felt that diabetes was mostly caused from blood pressure or blood circulation, or a combination of increase/decrease in blood sugar levels.

One-third of participants perceived they had an acceptable weight (Figure 9). Obesity was thought to contribute to diabetes and was considered a modifiable risk factor since weight was viewed as something that could be changed or controlled. There were indications of some weight dissatisfaction in each focus group; however, in the fourth church-site group, nine out of ten participants indicated that they were not satisfied with their weight. The literature indicates weight satisfaction rather than weight dissatisfaction as being common among African American women, which was the opposite finding of

this focus group study. When participants were asked to describe their risk of diabetes or what they could do to prevent their chances of getting diabetes, the following themes emerged: (a) all of the focus group study data suggested that the church setting should be utilized for health screening and exercise classes; (b) participants identified eating healthier as limiting sweets, carbohydrates, and fats in the diet; (c) staying active or exercising may lessen the risk of getting diabetes.

All of the participants were unaware of the types of exercise programs or health screening programs offered at their churches. Additionally, many of the focus group participants in this study perceived that (a) health care was too expensive, (b) there were too many locations health care sites to visit (not all services under one roof), (c) that physicians did not talk on their level, and (d) that simple written materials were not provided. Most of the participants expressed the desire for more services, such as screening for diabetes to be offered at churches, WIC and other public health clinics. Participants suggested that services could be offered at schools, grocery stores, or neighborhood community centers. None of the participants in the focus groups were aware that a free diabetes screening program was offered in a local neighborhood convenient to two of the focus group sites. Transportation and childcare issues also surfaced as concerns that could prevent African Americans from participating in diabetes education and screening programs.

Perceptions and health beliefs about the severity for developing diabetes in African American women. Focus group participants in this research study believed that diabetes is a severe disease with complications, including renal failure, kidney disease,



blindness, and amputations. The complications might not be not perceived as serious until amputations have occurred. Not knowing the signs of diabetes and what to look for were stated as concerns among focus group participants. According to focus group participants in this study if diabetes was not treated, sickness may develop, hospitalization may occur, and amputations may be necessary.

Focus group data revealed that delays in seeking medical treatment were most likely due to the following: (a) poverty affecting the ability to buy food and visit the doctor; (b) infrequency of doctor visits due to a lack of medical insurance; (c) not feeling comfortable relaying symptoms to doctors; and (d) feelings of being rushed by the doctor and intimidated from the medical terminology used, or wanting to hear “common terms” and not “talking above our heads” [sic].

One of the focus group questions in the study asked, “What are the three most critical factors that contribute to the development of diabetes in African American women?” The three critical factors that were reported as recurring themes in this focus group study were (a) diet, (b) knowledge and awareness, and (c) the doctor-patient relationship. The data revealed that African Americans perceived diabetes to be a serious illness. The research study reported the participants’ perception of the seriousness of diabetes when participants referred to diabetes as it is “a silent killer” or it is “life threatening” in addition to diabetes becoming “serious over time, and affects the body, causing amputations.”

Although there were participant comments in the research study about obesity as a health concern and a contributing factor to diabetes, obesity was not necessarily

perceived as contributing to the seriousness or severity of diabetes. Most of the focus group participants reported diabetes as being very serious based on their experiences with relatives who had experienced diabetes-related complications, such as dialysis, kidney failure, amputations, or blindness. More research studies must be completed to explore the perceptions and beliefs that African American women have about diabetes and resulting complications.

Participation in Diabetes Programs. Focus group question 4a in the study asked the question, “What do you feel can be done to get African American women to participate in diabetes education programs?” Participants stated that simple check-list handouts, designed specifically for African Americans, would supply needed information about diabetes. Although the highest educational level of the majority of participants included some college or trade school, participants expressed a desire to have simple materials. Participants stated that not enough exercise or health-related classes are offered for African American women and that African American women would be interested in attending exercise classes and other activities if offered in churches, community centers, and similar gathering places, especially if transportation services and child care are offered.

Additionally, the participants suggested that African American women might participate in diabetes education programs if the following were provided: (a) affordable screening, not just education; (b) free clinics and free programs with follow-up; (c) stress reduction techniques, (d) literature that includes symptoms of diabetes onset, and effects of diabetes on the body in a checklist style without excessive information; (e) a time and

place in the community to provide information; (f) information in clinics, beauty salons, and churches; (g) involve women in diabetes education programs; (h) provide child care during exercise classes or other classes; (i) provide transportation, taking away the “I don’t have a ride” excuse or provide a mobile diabetes program; (j) worksite health approaches teaching warning signs at church, breakrooms, schools, health classes, and cafés; (k) educate at younger ages, bring in people who have diabetes and can share experiences; (l) keep it simple, talk at the person’s level of understanding; (m) use African American health educators, encourage to pay attention, use money, food, incentives, scare tactics.

## Conclusions

### Research Questions

The following three research questions were answered using the data collected from the focus group discussions:

Research Question 1: What are the perceptions and health beliefs about NIDDM (type 2 diabetes) among African American women?

Answer: The perceptions and health beliefs about NIDDM (type 2) diabetes among African American women as revealed by participants indicated that diabetes affects African American women by: (a) causing problems with circulation, (b) promoting kidney failure, (c) causing loss of vision, and (d) causing loss of limb. Participants stated that contributing factors to developing diabetes included lifestyle and other factors such as (a) too much stress, (b) not eating properly and/or caused by certain foods, (c) not exercising, (d) being obese/overweight, and (d) financial or economic

hardships. Diabetes was defined by participants as (a) having to do with blood circulation, (b) too much or too little blood sugar, and (c) a dangerous disease. Most participants stated they would not be comfortable explaining what diabetes is to someone else and they may choose to avoid the question or rely upon family experiences to use for an explanation.

Research Question 2: What are the perceptions and health beliefs about the risk factors for developing NIDDM (type 2 diabetes) among African American women?

Answer: The participants indicated that the perceptions and health beliefs about the risk factors for developing NIDDM (type 2 diabetes) among African Americans included diet, lack of knowledge and awareness about diabetes, and the doctor-patient relationship. The diet is discussed in relation to not eating properly, which included eating too many fried foods; eating too much starch, sugar, or carbohydrate; and poverty effecting the ability to afford healthy foods. Health practices to prevent or reduce the chances of getting diabetes included (a) yearly checkups, (b) drinking more water, (c) exercising, (d) losing weight, (e) learning about the signs of diabetes, (f) decreasing stress, and (g) resting more.

The participants indicated that heredity was a key factor to developing diabetes and indicated that there was not enough literature or programs to explain about diabetes, hence sickness occurs due to lack of knowledge. The African American women in this study stated that the physicians rushed the office visits and did not take the time to discuss health. A further barrier was communication when medical terms were used

instead of common terms. The African American women in this study reported barriers to getting information about diabetes and the risk factors for developing diabetes.

Research Question 3: What are the perceptions and health beliefs about the severity/complications of NIDDM (type 2 diabetes) among African American women?

Answer: The perceptions and health beliefs of participants about the severity/complications from diabetes among African American women were reported as follows: (a) having to get something amputated/loss of limb, (b) going to the hospital, (c) kidney failure, (d) blindness, and (e) death. These same complications were mentioned in the focus group questions that asked about what happens if diabetes is not treated, and what happens from having diabetes over a period of time and not knowing it. The participants' perceptions reflected a knowledge of the severity of diabetes, but not a knowledge of why severe complications results from untreated/poor management of the disease. The lack of awareness of what the signs/symptoms of diabetes are and how/when to test for diabetes was expressed as a concern by the participants. Another issue of concern was how to approach the physician to ask questions about diabetes, diabetes testing, or some simple diabetes-related brochures. There were some additional concerns expressed about minimizing costs associated with screening services.

Understanding the beliefs and perceptions that African American women have about diabetes may help improve screening rates, therefore avoiding a delay of a diagnosis at a later stage of development. As morbidity and mortality rates associated with type 2 diabetes complications continue to increase at alarming rates among African Americans, finding solutions for early detection and diagnosis, as well as the appropriate

education/screening program design, needs to be addressed for this population. Programs that improve or increase early screening rates for diabetes lead to early identification and diagnosis of diabetes, which will lead to earlier treatment for the disease.

### Recommendations

Although this exploratory research provides information that may be useful in designing, implementing, and evaluating diabetes education and screening programs for African American women, there are many questions that remain to be answered to eliminate the unequal burden of diabetes among African Americans. The researcher makes the following recommendations for further research:

Due to the small sample size of this study, more focus groups should be conducted to attain information to further expand each the following concepts: (a) identifying ideas for diabetes education that are culturally appropriate; (b) identifying what information, programs, and services are needed to promote risk reducing behaviors; and (c) increasing participation in screening programs to increase awareness about early detection and treatment for diabetes for the purposes of preventing complications from undetected diabetes.

Focus group studies should be conducted to gather additional information to assist in the development and implementation of successful diabetes screening and intervention strategies for African American women. Possibly conducting focus groups that involve family members who have diabetes and the non-diabetic family members may provide alternative views of what is needed to increase awareness and participation in diabetes screening programs. For this reason, there is a need for programs related to

diabetes screening, and focus groups are recommended as avenues to use for further exploration of diabetes screening and diabetes programs as well as family issues related to diabetes.

The focus group profile sheet and focus group questionnaire used in this research study are not designed to address problems consistent with late diagnosis of diabetes. It is still not clear whether African American women believe they can decrease the severity of diabetes with lifestyle practices. Utilizing focus groups that include family members who have diabetes and modifying the demographic profile sheet instrument to further address lifestyle practices may help answer why the late stage diagnosis of the disease continue to occur. African American women in this study seemed to perceive that someone who has diabetes will have severe consequences, such as dialysis, after a period of time.

Other recommendations include:

1. Replicate the study in a different geographical regions of the country with a larger sample of African American women.
2. Consider all income levels or SES contrasted with health beliefs and perceptions about diabetes.
3. Consider similar study on a larger scale, by increasing the number of participants and focus groups.
4. Involve African American women who have a family history of diabetes in program planning.

5. The health educator may apply a theory or model, such as the Health Belief Model, to explore whether or not the belief regarding the severity of diabetes is dependent upon the length of time that one has diabetes.

6. Replicate the study using family members as participants, including both participants who have a history of diabetes and participants who do not have diabetes in the focus groups.

7. Conduct a study to determine the influence that family members have on the perceptions of African American women concerning diabetes and diabetes-related complications.

8. Conduct research to determine the most effective strategies for getting more African American women to participate in focus group studies.

9. Conduct a quantitative study to increase generalizability and to decrease subjectivity.

### Implications for Health Education

The information gained from the focus groups in this study provides valuable information for the design, implementation, and evaluation for diabetes screening and education programs and diabetes-printed literature to promote awareness, early detection, and treatment for diabetes. The main source for learning about diabetes as a disease and its implications in the African American population is from other African Americans, family members, or relatives. Therefore, individuals involved in health education targeting this audiences need to consider strategies that utilize peer networks when designing education/screening programs (i.e. Tell-A-Friend type programs).



African American women who have diabetes and supply information as lessons to be learned from their experiences influence perceptions and beliefs about diabetes among African Americans. For example, African American women who have diabetes may relay information to family members about what diabetes is and what diabetes can do to the body using information gained by their own experiences. Peer education could prove to be a useful strategy in working with this community to address education and screening for diabetes. This information is subsequently relayed to family and community members.

The focus group data support that family experiences with diabetes may influence the perceptions African American women have about diabetes. The implication here for educators is to offer educational programs that are family-oriented (family-supported). The availability of diabetes-screening programs to the African American community does not imply awareness that a program exists. Therefore, health educators and others need to evaluate how information is disseminated in the community and how leaders within the community are utilized to promote health information.

Health educators should also utilize information derived from focus group studies such as this to help develop culturally appropriate programs that are responsive to the needs and concerns of the intended audience. Focus group information may be used to alter myths about diabetes that may be contributing to negative behavior. Finally, health educators and other professionals must remember that programs and services that are responsive to the needs of any particular community must be acceptable, available, accessible, affordable, and appropriate.

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## APPENDIX A

Permissions to Conduct Study from  
TWU Graduate School and HSRC

TEXAS WOMAN'S  
UNIVERSITY

DENTON DALLAS HOUSTON

HUMAN SUBJECTS  
REVIEW COMMITTEE  
P.O. Box 425619  
Denton, TX 76204-5619  
Phone: 940/898-3377  
Fax: 940/898-3416

October 5, 2000

Ms. Cheryl Reifer  
3909 Trellis Lane  
Plano, TX 75075

Dear Ms. Reifer:

*Re: Using Focus Group Methodology to Develop Diabetes Screening, Education, and Prevention Programs for African American Women*

The above referenced study has been reviewed by a committee of the Institutional Review Board (IRB) and appears to meet our requirements in regard to protection of individuals' rights

If applicable, agency approval letters obtained should be submitted to the IRB upon receipt prior to any data collection at that agency. The signed consent forms and an annual/final report are to be filed with the Institutional Review Board at the completion of the study. A copy of your newly approved consent form has been stamped as approved by the IRB and is attached to this letter. Please use this form which has the most recent approval date stamp when obtaining consent from your subjects

This approval is valid one year from the date of this letter. Furthermore, according to HHS regulations, another review by the IRB is required if your project changes. If you have any questions, please feel free to call the Institutional Review Board at the phone number listed above

Sincerely,



Dr. Linda Rubin, Chair  
Institutional Review Board - Denton

enc.

cc. Dr. Susan Ward, Department of Health Studies  
Dr. Mary Shaw, Department of Health Studies  
Graduate School



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TEXAS WOMAN'S  
UNIVERSITY  
DENTON / DALLAS / HOUSTON

THE GRADUATE SCHOOL  
P.O. Box 425649  
Denton, TX 76204-5649  
Phone 940/898-3400  
Fax 940/898-3412

October 16, 2000

Ms. Cheryl J. Reifer  
3909 Trellis Ln  
Plano, TX 75075

Dear Ms. Reifer:

Thank you for providing the materials necessary for the final approval of your *dissertation* prospectus in the Graduate School. I am pleased to approve the prospectus entitled "Using Focus Group Methodology to Develop Diabetes Screening, Education, and Prevention Programs for African American Women", and I look forward to seeing the results of your study.

If I can be of further assistance, please let me know.

Sincerely yours,



Michael H. Droge  
Dean of Graduate Studies and Research

MHD/sjr

cc Dr. Mary Shaw, Health Studies  
Dr. Susan Ward, Health Studies

## APPENDIX B

### Consent Form

TEXAS WOMAN'S UNIVERSITY  
SUBJECT CONSENT TO PARTICIPATE IN RESEARCH

Using focus group methodology to develop diabetes screening,  
education, and prevention programs for African American women.

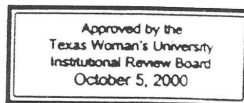
Researchers: Cheryl Reifer, M. S., RD/LD (972) 964-5799  
Rosena Turner-Clark, M.S.W. (940) 898-2867  
Mary Shaw, Ph.D., C.H.E.S. (940) 898-2865

You are being invited to participate in research that involves your participation in a focus group. The focus group is a group of 8-10 people that discuss their feelings about specific topics under the direction of a leader. The purpose of this research is to gather information about beliefs about diabetes. This information may be used to help develop programs for African American women who are at risk for developing diabetes. The focus group will take about 60 minutes of your time. Your total involvement will take about 1-1/2 hours.

You will complete a self-reported questionnaire to provide information for the research. For confidentiality purposes, your name will not be on the questionnaire and your name will not be used in study reports. Confidentiality will be protected to the extent that is allowed by law. During the focus group, a trained leader will ask you and the other participants some general questions about health beliefs and diabetes. Prior to and at the end of the group you will be able to ask any questions that you may have about this research or the procedures involved.

The focus group will be audio taped so that the comments and those of the other participants can be accurately recorded. A professional transcriptionist will transcribe the comments. After the group comments are transcribed, the audiotaped information will be destroyed by erasure of the audiotape. Your name will not be associated with the comments once they are taken from the audiotape. You may feel some embarrassment, anxiety, or fear during this research. A group leader and one or more research assistants will be available that have been trained in running groups. In addition to the group leader, one or more research assistants may be present in the room in order to assist the leader.

Participant's Initials: \_\_\_\_\_



You are assured there are no correct answers. There will be no pressure to answer any questions. You are assured that no loss of benefits or services and will occur. You will be given the opportunity to have questions answered. You may stop participation at any time without consequences. Data associated with this research will be locked in the investigator's office and will not be mentioned by name in any reports or articles written about this research.

You may benefit from the research by learning if you are at high risk for diabetes and how to get help for diabetes. Benefits to you include food and refreshments at the focus group session. You will be offered a diabetes education packet. All of the information from the focus groups will be summarized and used to make decisions about planning diabetes education materials and programs that are culturally appropriate for African American women. You will be provided with a copy of the findings of the research. You will receive a token gift and may be eligible for further door prizes.

If you have any questions about the research or about your rights as a participant, you should ask the researchers: their phone numbers are at the top of this form. If you have questions later, or wish to report a problem, you may call the researcher or the Office of Research and Grants Administration at 940-898-3377. The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. TWU does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.

Your participation is voluntary and you may withdraw from the research at any time. Withdrawal or refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, or no loss of services received. You have been given the opportunity to have your questions answered. You will be given a copy of the dated and signed consent form to keep.

Participant Signature \_\_\_\_\_ Date \_\_\_\_\_

Witness Signature \_\_\_\_\_ Date \_\_\_\_\_

APPENDIX C  
Demographic Profile Sheet

### Demographic Profile Sheet

Please answer the following questions by checking ☒ the appropriate answer or by writing your answer in the blank space.

1. What is your age?

<input type="checkbox"/> 25-29	<input type="checkbox"/> 45-49
<input type="checkbox"/> 30-34	<input type="checkbox"/> 50-54
<input type="checkbox"/> 35-39	<input type="checkbox"/> 55-59
<input type="checkbox"/> 40-44	<input type="checkbox"/> 60-65

2. What is your present marital status?

<input type="checkbox"/> Single, never married	<input type="checkbox"/> Married
<input type="checkbox"/> Divorced or Separated	<input type="checkbox"/> Widowed
<input type="checkbox"/> Cohabiting (living together)	<input type="checkbox"/> Partnered

3. How long have you been married? \_\_\_\_\_

4. How many children do you have? \_\_\_\_\_

5. Number of people living at home \_\_\_\_\_ Children \_\_\_\_\_ Adults

6. What is the highest level of education you have?

<input type="checkbox"/> Less than 8 <sup>th</sup> grade	<input type="checkbox"/> College Graduate
<input type="checkbox"/> Partial high school	<input type="checkbox"/> Graduate School (> 4 years of college)
<input type="checkbox"/> High School Graduate	<input type="checkbox"/> Partial College or Trade School

7. What is your family's total yearly income? Include all sources of income such as social security, child support, retirement benefits and interest income.

<input type="checkbox"/> \$ 9,999 or less
<input type="checkbox"/> \$10,000 – 14,999
<input type="checkbox"/> \$15,000 – 19,999
<input type="checkbox"/> \$20,000 – 24,999
<input type="checkbox"/> \$25,000 – 34,999
<input type="checkbox"/> \$35,000 – 49,999
<input type="checkbox"/> \$50,000 – 74,999
<input type="checkbox"/> \$75,000+

8. Are you employed outside the home? \_\_\_ Yes \_\_\_ No

9. What is your race/ethnicity?  
       \_\_\_\_\_ African American                      \_\_\_\_\_ Other: Please specify \_\_\_\_\_  
       \_\_\_\_\_ Carribbean                                \_\_\_\_\_ Mixed: Please specify \_\_\_\_\_  
       \_\_\_\_\_ Dominican  
       \_\_\_\_\_ Haitian  
       \_\_\_\_\_ Jamaican
10. How much does your religion influences your daily life?  
       \_\_\_\_\_ Strongly influences  
       \_\_\_\_\_ Moderately influences  
       \_\_\_\_\_ Slightly influences  
       \_\_\_\_\_ Does not influence
11. Do you exercise?    \_\_\_\_\_ Yes    \_\_\_\_\_ No
12. If you answered yes to number 11, what type of exercise do you do?  
       \_\_\_\_\_ Walking  
       \_\_\_\_\_ Jogging  
       \_\_\_\_\_ Bicycling  
       \_\_\_\_\_ Treadmill  
       \_\_\_\_\_ Swimming  
       \_\_\_\_\_ Other \_\_\_\_\_
13. How many days of the week do you exercise? \_\_\_\_\_ Day(s)  
       How long do you exercise? \_\_\_\_\_ Would you rate it as mild,  
       moderate, or hard? \_\_\_\_\_
14. What are some other physical activities that you currently do?  
       \_\_\_\_\_ Gardening                      \_\_\_\_\_ Other: Please Explain \_\_\_\_\_  
       \_\_\_\_\_ Housework                      \_\_\_\_\_ Job: Type \_\_\_\_\_  
       \_\_\_\_\_ Sewing
15. Do you feel that you get enough physical activity?    \_\_\_\_\_ Yes    \_\_\_\_\_ No
16. Does anyone in your family have diabetes, sugar diabetes, high sugar, or high  
       sugar in the blood?  
       \_\_\_\_\_ Yes    \_\_\_\_\_ No

17. If you answered yes to number 15, check which members of your family have diabetes, high sugar, sugar diabetes, or high sugar in the blood?

- ☐ Children ☐ Other: (Please explain) \_\_\_\_\_  
☐ Father or Mother  
☐ Sister or brother  
☐ Grandparent  
☐ Aunt or Uncle

18. Have you ever participated in a diabetes education program? ☐ Yes ☐ No

19. What best describes your weight?

- ☐ Appropriate for weight to height ☐ Not sure  
☐ Slightly overweight  
☐ Overweight  
☐ Very Overweight

20. What best describes how you feel about your weight?

- ☐ Satisfied  
☐ Not satisfied  
☐ Not sure

21. Have you ever been told that you have diabetes, high sugar, sugar diabetes, or high sugar in the blood? ☐ Yes ☐ No

Are you at risk for developing diabetes? ☐ Yes ☐ No

If "Yes," Why? \_\_\_\_\_

22. Have you ever been in a focus group before? ☐ Yes ☐ No



APPENDIX D

Focus Group Guide

## Questions for Focus Groups

To the group facilitator:

### 1. Introduction and Purpose

- a. Thank you for coming.
- b. I am interested in what you have to say.
- c. I am passing out a consent form which indicates to me that you are voluntarily consenting to participate in this group.
- d. You will be participating in a focus group. I will be asking you some general questions and would like for you to tell me what you think. There is not a right or wrong answer. You do not have to agree with each other.
- e. This is not an informational session for diabetes; however, you will receive a diabetes education packet to keep.
- f. The information you give will be used to help guide the design of health education and promotion programs for African American women who are at high risk for developing type 2 diabetes.

### 2. Procedure

- a. We will be using a tape recorder so that we can record what you say. Your comments are confidential, and will be used for reporting group responses.
- b. Two separate focus groups with other individuals will be conducted on the same topic but in a different setting.
- c. You do not need to wait to be called on to talk. It is easier if you talk one at a time so that the tape recorder and note taker can get everything you say.
- d. Questions will be asked. Please feel free to add comments before the topic moves on to the next question.

### 3. Introductions

Please introduce yourself. Tell the group your first name or initials, the area that you live, and any comments you want to add about diabetes.

### 4. Ask the set of questions provided.

## Closure

- a. Is there anything that you want to add before we end?
- b. Thank you so much for sharing your thoughts. The information from all of the groups will be summarized and used to make decisions about planning diabetes education materials and programs that are culturally appropriate for African American women.

- c. You will be provided a copy of the findings. In addition, you will receive a diabetes education packet.
- d. Once again, thank you for your time and opinions.

### Focus Group Questions

Each of the four research questions will be used as a guide in developing strategies to recruit women into diabetes education and prevention programs by identifying what approaches will work.

1. What do you believe are the major health problems of African American women?
  - a. How does diabetes effect African American women?
  - b. What health practices can you do today to be healthy and prevent or reduce the chance of getting diabetes?
2. What is diabetes?
  - a. How would you describe/define diabetes to someone else?
  - b. What do you believe causes diabetes?
3. What are the three most critical factors (things) that contribute to the development of diabetes in African American women?
  - a. What do you believe happens if diabetes is not treated?
  - b. What problems develop from having diabetes over a period of time and not knowing it?
4. What do you feel diabetes education programs should include?

- a. How would African American women describe the seriousness of the disease? Why would they describe it this way?
- b. What do you feel can be done to get African American women to participate in diabetes education programs?

APPENDIX E

Invitations for Focus Groups

Are You Interested  
In  
Everyday Wellness for African American Women?  
If so.....  
You are invited to participate in  
Sisters Sharing Information  
To  
Help Develop Programs For

Increasing Diabetes Awareness.....Prevention and Early Disease Detection  
“Diabetes Awareness—Identifying the Issues”

When: October 28, 2000  
Time: Lunch and Fellowship – 12:30pm-1:00pm  
Sisters Sharing Information - 1:00pm-2:00pm  
Where: Starlight Bethel Missionary Baptist Church  
3163 Cedar Crest Blvd.  
Dallas, Texas 75203

DOOR Prize Drawing \* 1:00pm  
\* You must be present to win  
\* A token gift will be given to all participants

Reserve your space today by calling:  
Cheryl Reifer, M.S., RD – Principal Investigator (972) 964-5799  
Rosena Clarke-Turner – M.S.W., RN. (817) 568-2579  
Texas Woman's University – Department of Health Studies

Participants must be:

- African American women
- Between the Ages 25-65
- Have no history of diabetes or told that they have diabetes by a physician or health educator

Are You Interested  
In  
Everyday Wellness for African American Women?  
If so.....  
You are invited to participate in  
Sisters Sharing Information  
To  
Help Develop Programs For

Increasing Diabetes Awareness.....Prevention and Early Disease Detection  
“Diabetes Awareness—Identifying the Issues”

When: Tuesday, November 14, 2000  
Time: Dinner and Fellowship – 5:30pm-6:00pm  
Sisters Sharing Information - 6:00pm-7:00pm  
Where: Turning Heads Beauty Salon  
207 Fielder No. Plaza  
Arlington, Texas 76012  
(817) 795-9999

DOOR Prize Drawing \* 7:00pm  
\*You must be present to win  
\* A token gift will be given to all participants

Reserve your space today by calling:  
Cheryl Reifer, M.S., RD – Principal Investigator (972) 964-5799  
Rosena Clarke-Turner – M.S.W., RN. (817) 568-2579  
Texas Woman’s University – Department of Health Studies

Participants must be:

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Are You Interested  
In  
Everyday Wellness for African American Women?  
If so.....  
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Sisters Sharing Information  
To  
Help Develop Programs For

Increasing Diabetes Awareness.....Prevention and Early Disease Detection  
“Diabetes Awareness—Identifying the Issues”

When: Saturday, November 18, 2000  
Time: Lunch and Fellowship – 1:00pm-1:30pm  
Sisters Sharing Information - 1:30pm-2:30pm  
Where: Medical Science Building – for WIC  
2922 Martin Luther King Blvd.  
Dallas, Texas 75215  
(214) 670-8286

DOOR Prize Drawing \* 2:30pm

\* You must be present to win

\* A token gift will be given to all participants

Reserve your space today by calling:

Cheryl Reifer, M.S., RD – Principal Investigator (972) 964-5799

Rosena Clarke-Turner – M.S.W., RN. (817) 568-2579

Texas Woman's University – Department of Health Studies

Participants must be:

- African American women
- Between the Ages 25-65
- Have no history of diabetes or told that they have diabetes by a physician or health educator



Are You Interested  
In  
Everyday Wellness for African American Women?  
If so.....  
You are invited to participate in  
Sisters Sharing Information  
To  
Help Develop Programs For

Increasing Diabetes Awareness.....Prevention and Early Disease Detection  
“Diabetes Awareness—Identifying the Issues”

When: Saturday, January 20, 2001  
Time: Lunch and Fellowship – 12:00pm-12:30pm  
Sisters Sharing Information - 12:30pm- 1:30pm  
Where: Bibleway Bible Church  
2930 East Ann Arbor Avenue  
Dallas, Texas 75216

DOOR Prize Drawing \* 1:30pm  
\*You must be present to win  
\* A token gift will be given to all participants

Reserve your space today by calling:  
Cheryl Reifer, M.S., RD – Principal Investigator (972) 964-5799  
Rosena Clarke-Turner – M.S.W., RN. (817) 568-2579  
Texas Woman’s University – Department of Health Studies

Participants must be:

- African American women
- Between the Ages 25-65
- Have no history of diabetes or told that they have diabetes by a physician or health educator

## APPENDIX F

### Diabetes Packet Information

## Diabetes Packet

1. African Americans and Diabetes: Are you at risk?  
A program of the American Diabetes Association  
1-800-diabetes (342-2383)  
The web-site for the American Diabetes Association (ADA) is:  
[www.diabetes.org](http://www.diabetes.org)
2. Soul Food Sensations  
American Diabetes Association  
African American Program  
1—800-diabetes (342-2383)
3. American Heart Association  
An Eating Plan for Healthy Americans  
The web-site for the American Heart Association is: [www.americanheart.org](http://www.americanheart.org)
4. Signs and Symptoms of Diabetes
5. Food Guide Pyramid Handout  
United States Department of Agriculture (USDA)  
And the U. S. Department of Health and Human Services (USDHHS)
6. The First Step in Diabetes Meal Planning
7. Eating Smart: Diabetic Meal Plan and Exchange List
8. Portion Size Guidelines: Lean and Easy
9. Advertisement for Free Diabetes Screening at MLK Community Center
10. Thank you note
11. Certificate for participating in Focus Group

## APPENDIX G

### Focus Group Site Permission Letters

Suzette Clark, Church Representative  
c/o Bibleway Bible Church of Dallas  
2930 East Ann Arbor Avenue  
Dallas, Texas 75216  
(214) 374-1961

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December 1, 2000

Cheryl Reifer, M.S., RD/LD  
3909 Trellis Lane  
Plano, Texas 75075

Dear Ms. Reifer:

Reverend Eddie Lane has granted permission for you to use the "Bibleway Bible Church of Dallas" church to recruit participants for a focus group of 8-10 African-American women, which will elicit their perceptions and beliefs about diabetes and generate ideas for education, risk reduction and screening programs. As stated in your request, you will recruit African American women who are low to middle income, between the ages of 25 and 65, and who do not have a history of Type 2 diabetes mellitus.

The consent form that you use for the "Bibleway Bible Church of Dallas" church participants must include a statement that participation/non-participation in the focus group is voluntary. Please contact me prior to the beginning recruitment and to discuss the details of your project.

Sincerely,



Suzette Clarke  
Church Representative

cc: Reverend Eddie B. Lane, Pastor

Harriett Culver, Church Representative  
c/o Starlight Bethel Missionary Baptist Church  
3163 Cedar Crest Blvd.  
Dallas, Texas 75203  
(214) 943-9967

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October 3, 2000

Cheryl Reifer, M.S., RD/LD  
3909 Trellis Lane  
Plano, Texas 75075

Dear Ms. Reifer:

Reverend James Williams has granted permission for you to use the "Starlight Missionary Baptist" church to recruit participants for a focus group of 8-10 African-American women, which will elicit their perceptions and beliefs about diabetes and generate ideas for education, risk reduction and screening programs. As stated in your request, you will recruit African American women who are low to middle income, between the ages of 24 and 65, and who do not have a history of Type 2 diabetes mellitus.

The consent form that you use for the "Starlight Missionary Baptist" church participants must include a statement that participation/non-participation in the focus group is voluntary. Please contact me prior to the beginning recruitment and to discuss the details of your project.

Sincerely,

Harriet Culver  
Church Representative  
*Harriett Culver*  
cc: Reverend James Williams, Pastor



CITY OF DALLAS

August 21, 2000

Cheryl Reifer, M.S., RD/LD  
3909 Trellis Lane  
Plano, Texas 75075

Dear Ms. Reifer:

You have my permission to use one of the WIC clinic sites in the Dallas area to recruit participants for a focus group of 8-10 African-American women, which will elicit their perceptions and beliefs about diabetes and generate ideas for education, risk reduction and screening programs. As stated in your request, you will recruit African American women, who are low to middle income, between the ages of 24 and 65, and who do not have a history of Type 2 diabetes mellitus. I would recommend that you recruit from the WIC sites located at 2922 B Martin Luther King, Jr. Blvd. or 3200 S. Lancaster Road, #625. Both of these sites are located in Dallas and have a high population of African American WIC participants.

The consent form that you use for WIC participants must include a statement that participation/non-participation in the focus group is voluntary and will not affect their enrollment in WIC. I would also like to receive a copy of the document that shows your study was approved by your university's IRB. Please contact me prior to beginning recruitment, so that I can notify WIC staff about your project.

Sincerely,

Marie Zaczekowski, MS, RD  
WIC Program Manager

# TURNING HEADS

BEAUTY & BARBER SALON

**DIANA DAWSON**  
OWNER / STYLIST

*If Your Hair is Not Becoming To You, You Should Be Turning To Us*

207 FIELDER NORTH PLAZA  
ARLINGTON, TX 76012

SALON (817) 795-9999  
PAGER (817) 331-4185

August 24, 2000

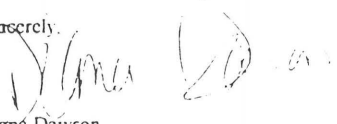
Cheryl Reifer, M.S., RD/LD  
3909 Trellis Lane  
Plano, Texas 75075

Dear Ms. Reifer:

You have my permission to use "Turning Heads" beauty shop to recruit participants for a focus group of 8-10 African-American women, which will elicit their perceptions and beliefs about diabetes and generate ideas for education, risk reduction and screening programs. As stated in your request, you will recruit African American women who are low to middle income, between the ages of 24 and 65, and who do not have a history of Type 2 diabetes mellitus.

The consent form that you use for beauty shop participants must include a statement that participation/non-participation in the focus group is voluntary. Please contact me prior to the beginning recruitment and to discuss the details of your project.

Sincerely,

  
Diana Dawson