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**PREDICTORS OF PSYCHOSOCIAL ADAPTATION TO PREGNANCY AMONG
URBAN AFRICAN-AMERICAN PRIMIPARAS**

by

JOAN MARIE VISGER

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2013

MAJOR: NURSING

Approved By:

Advisor

Date

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DEDICATION

The Road Not Taken

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim
Because it was grassy and wanted wear,
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I marked the first for another day!
Yet knowing how way leads on to way
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I,
I took the one less traveled by,
And that has made all the difference.

Robert Frost

This dissertation is dedicated to my daughters,
Becky, Laura, and Bub
and my grandchildren,
Annabel and Michaelangelo
who provide me with love, inspiration
and the courage to follow my path.

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I would like to acknowledge the chair of my dissertation committee, Dr. Judith Fry-McComish, for all her considerable efforts on my behalf during the dissertation process. Dr. McComish has served as an outstanding mentor and role model during my doctoral studies. I only hope that I can provide the same level of guidance, support, and encouragement to my future students that I have received during my studies.

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TABLE OF CONTENTS

Dedication _____	ii
Acknowledgements _____	iii
List of Tables _____	iv
List of Figures _____	v
Chapter 1: Background, Identification of Variables, and Significance _____	1
Psychosocial Adaptation to Pregnancy _____	1
Environmental Opportunities and Obstacles _____	2
Personal Attributes _____	3
Social Support _____	3
Personal Efforts _____	4
Significance _____	4
Statement of the Problem _____	6
Purpose Statement _____	6
Specific Aim 1 _____	6
Hypotheses: 1a-1d _____	6
Hypotheses: 1e-1h _____	7
Specific Aim 2 _____	7
Hypotheses: 2a-2f _____	7
Specific Aim 3 _____	7
Hypotheses: 3a-3j _____	8
Chapter 2: Theoretical Perspectives _____	9
Life Course Theory _____	9
Psychosocial Adaptation to Pregnancy _____	10
Chapter 3: Review of the Literature _____	14
Psychosocial Adaptation to Pregnancy _____	14
Labor and Birth Outcomes _____	14
Ethnic Differences _____	16

Postpartum Adaptation _____	16
Predictors of Psychosocial Adaptation to Pregnancy _____	17
Potential Predictors of Psychosocial Adaptation to Pregnancy within Life Course Theory _____	18
Environmental Opportunities and Obstacles _____	18
Socioeconomic Status _____	19
Experiences of Discrimination _____	19
Personal Attributes _____	21
Personal Control Beliefs _____	21
Social Support _____	23
Personal Efforts _____	25
Education _____	25
Planned Pregnancy _____	26
Model of Health Care _____	27
Summary _____	28
Chapter 4: Methodology _____	29
Introduction _____	29
Research Design _____	29
Sample _____	29
Settings _____	30
Measurement of Variables _____	30
Pregnancy Self - Evaluation Questionnaire – II _____	30
Internality, Powerful Others, and Chance Scales _____	31
Norbeck Social Support Questionnaire _____	32
Experiences of Discrimination _____	33
Demographics and Personal Characteristics _____	33
Data Collection Procedures _____	34
Human Subject Protection _____	34
Data Analysis _____	34

Specific Aim 1	35
Specific Aim 2	35
Specific Aim 3	35
Chapter 5: Results of Data Analysis	37
Description of the Sample	37
Specific Aim 1	39
Hypothesis 1a	39
Hypothesis 1b	39
Hypothesis 1c	39
Hypothesis 1d	40
Hypothesis 1e	40
Hypothesis 1f	40
Hypothesis 1g	41
Hypothesis 1h	41
Specific Aim 2	41
Hypothesis 2a	41
Hypothesis 2b	42
Hypothesis 2c	42
Hypothesis 2d	42
Hypothesis 2e	42
Hypothesis 2f	42
Specific Aim 3	43
Hypothesis 3a	43
Hypothesis 3b	43
Hypothesis 3c	44
Hypothesis 3d	44
Hypothesis 3e	45
Hypothesis 3f	45

Hypothesis 3g	45
Hypothesis 3h	46
Hypothesis 3i	46
Hypothesis 3j	46
Summary	47
Chapter 6: Discussion, Implications, and Recommendations	48
Environmental Opportunities and Obstacles	48
Personal Attributes	49
Social Support	50
Personal Efforts	51
Predictors of Psychosocial Adaptation to Pregnancy	53
Implications and Recommendations	53
Appendix A: I, P, & C Scales	56
Appendix B: Norbeck Social Support Questionnaire	57
Appendix C: Experiences of Discrimination	59
Appendix D: Prenatal Self-Evaluation Questionnaire (PSEQ-II)	60
Appendix E: Demographics and Personal Characteristics	63
References	65
Abstract	77
Autobiographical Statement	79

LIST OF TABLES

Table 1. <i>Sample Characteristics</i> _____	38
Table 2. <i>ANOVA Analysis: Income Level, or Planned Pregnancy, and Education</i> _____	40
Table 3. <i>T-Test Analysis: Income Enough, or Relationship with FOB, or Model of Health Care, and Education</i> _____	40
Table 4. <i>Correlation Analysis: Discrimination, or Personal Control Beliefs, or Social Support, and Education</i> _____	41
Table 5. <i>Chi Square Analysis: Income Level, or Income Enough, or Relationship with FOB, or Model of Health Care, and Planned Pregnancy</i> _____	41
Table 6. <i>ANOVA Analysis: Discrimination, or Personal Control Beliefs, or Social Support, and Planned Pregnancy</i> _____	42
Table 7. <i>ANOVA Analysis: Income Level, or Planned Pregnancy, and Psychosocial Adaptation to Pregnancy</i> _____	43
Table 8. <i>T-Test Analysis: Income Enough, or Relationship with FOB, or Model of Health Care, and Psychosocial Adaptation to Pregnancy</i> _____	43
Table 9: <i>Correlation Analysis: Discrimination, or Personal Control Beliefs, or Social Support, or Education, and Psychosocial Adaptation to Pregnancy</i> _____	44
Table 10: <i>Regression Coefficients, Adjusted R² for Predictors of Psychosocial Adaptation to Pregnancy</i> _____	46

LIST OF FIGURES

Figure 1: <i>Four Classes of Influence on Psychosocial Adaptation to Pregnancy</i> _____	12
Figure 2: <i>Conceptual, Theoretical, and Empirical Foundations for Predictors of Psychosocial Adaptation to Pregnancy among Urban African-American Primiparas</i> _____	13

CHAPTER 1

BACKGROUND, IDENTIFICATION OF VARIABLES, AND SIGNIFICANCE

The transition to motherhood has been described as a developmental process that begins early in pregnancy and continues throughout a woman's life (Lederman & Weis, 2009; Mercer, 2004; Rubin, 1984). Transitions are characterized by changes in identities or roles that occur over time (Schumacher & Meleis, 1994) and pregnancy marks the initiation of the maternal role (Lederman & Weis, 2009; Mercer, 2004; Rubin, 1984). Each pregnancy experience is unique; however, the transition to motherhood for a first time mother may be the most demanding transition she encounters during her lifetime (Clausen, 1986; Lederman & Weis, 2009).

Psychosocial Adaptation to Pregnancy

As a woman encounters the physical changes associated with pregnancy, she also faces a significant re-evaluation of her personal beliefs, priorities, and self-image. The quality of relationships and availability of support systems take on additional importance at this time (Lederman & Weis, 2009). *Psychosocial adaptation to pregnancy* is the woman's response to the challenges she experiences from the moment of discovering her pregnancy to the birth of the baby and is a key component of the transition to motherhood (Lederman & Weis, 2009). Although physical and emotional changes may be anticipated during this transition, the psychosocial developmental needs of the mother-to-be may be unforeseen.

Current perspectives regarding the pregnancy experience and psychosocial adaptation have evolved from a one-dimensional, woman-only focused view to a multidimensional perspective that includes the woman and her family. At the end of World War II, negative pregnancy experiences were regarded as evidence of neurosis (Deutsch, 1945). Bibring (1959) challenged this early theory and suggested that pregnancy is a normal developmental crisis that affects most women. Crisis was defined as a "decisive stage in the course of events – a turning point that brings with it the unsettling and dislodging of habitual solutions" (Bibring, 1966, p. 101). Successful resolution of this developmental crisis supports the healthy growth and development of women (Bibring, 1966). Using the term, "maturational integrity," Bibring and colleagues (Bibring, 1959; Bibring, Dwyer, Huntington, & Valenstein, 1961) documented that adaptation to pregnancy occurred gradually during pregnancy and had considerable effects on the early mother-child relationship.

Research focused on “maternal role attainment” or psychosocial adaptation to pregnancy as a multidimensional construct was initiated in the 1960’s and continues today (Lederman, 1996; Lederman & Weis, 2009; Mercer, 1985, 2004; Rubin, 1967a, 1967b, 1984). At the same time that research on the psychosocial dimensions of the adaptation to pregnancy intensified, researchers in the fields of sociology and social psychology were studying the life course, a perspective that focuses on events and roles throughout a person’s lifetime (Clausen, 1986; Giele & Elder, 1998).

Clausen’s (1986) research on the life course identified four classes of influence that may affect the transition to motherhood: environmental opportunities and obstacles, personal attributes, social support, and personal efforts. Environmental opportunities and obstacles include race, ethnicity, and the socio-economic environment. Personal attributes include personal control beliefs. Social support includes the amount, type, and availability of social support and relationship status with the father of the baby (FOB). Personal efforts include education, pregnancy planning, and model of health care utilized during pregnancy. These identified factors within the four classes of influence may predict psychosocial adaptation to pregnancy and will be discussed briefly in the remainder of this chapter. Following that, gaps in research are identified and the purpose of the study is addressed.

Environmental Opportunities and Obstacles

The term “African-American women” refers to females of non-Hispanic African descent while “European-American women” refers to females of non-Hispanic European descent (Giscombe & Lobel, 2005). African-American women may face additional challenges during the transition to motherhood. As members of a minority group, pregnant African-American women may experience elevated stress, suboptimal relationships with health care providers, and variations in availability of health-promoting resources (Gold et al., 2006). African-American women also face the additional burden of social status-related stressors such as socioeconomic disadvantage and experiences of discrimination (Myers, 2009). African-American women reporting low income levels encounter multiple stressors including inadequate social networks (Westdahl et al., 2007), and racial discrimination (Dailey & Humphreys, 2010). Exposure to discrimination is associated with adverse psychological symptoms including anxiety, somatization and obsessive-compulsive symptoms, interpersonal sensitivity, and depression (Greer, 2011).

The relationship between individual socioeconomic status and health may be influenced by community-level socioeconomic characteristics (Gold et al., 2006). Neighborhood socioeconomic factors, including racial composition, contribute to individual socioeconomic status and may influence perceptions of discrimination (Dailey, Kasl, Holford, Lewis, & Jones, 2010). A focus on African-American women and urban health can contribute to an understanding of health inequalities between racial/ethnic and socioeconomic groups (Becker, Israel, Schulz, Parker, & Klem, 2005).

The City of Detroit is an urban area with an estimated population of 713,777 as of July 2010 (U.S. Census Bureau, 2012). Of the nearly three quarters of a million residents, 82.7% were identified as non-Hispanic Black, and 36.4% of the total population was living in poverty (U. S. Census Bureau, 2012). Other recent economic indicators (as of May 2012) paint a grim picture of community-level socioeconomic characteristics in the City of Detroit: an unemployment rate of 16.9% (compared to Michigan 8.5%) and median household income in 2010 of \$28,357 (compared to Michigan \$48,432) (U.S. Census Bureau, 2012). These community-level socioeconomic characteristics in the City of Detroit provide a contextual backdrop for the individual socioeconomic status of urban African-American women residing within this area. Individual socioeconomic status and experiences of discrimination may predict psychosocial adaptation to pregnancy among African-American first-time mothers.

Personal Attributes

An important personal attribute of any female individual is her belief system. Personal control beliefs refer to the degree to which people believe that events, experiences, and/or outcomes are controlled by themselves (Internality), other persons (Powerful Others), and/or fate (Chance) (Lefcourt, 1991). Perceived control over one's life has been demonstrated to have positive effects on health in young urban African-American women (Becker et al., 2005). Having a high sense of control is related to positive psychological outcomes among new mothers (Keeton, Perry-Jenkins, & Sayer, 2008) and may be predictive of psychosocial adaptation to pregnancy.

Social Support

Social support is a multidimensional construct that has been described in the literature in terms of type of support; recipients' perceptions of support; support provider intentions or behaviors; reciprocity; and/or social networks (Hupcey, 1998). In a classic work, Kahn (1979) defined social support as

“interpersonal transactions that include one or more of the following: the expansion of positive affect of one person toward another; the affirmation or endorsement of another person’s behaviors, perceptions, or expressed views; the giving of symbolic or material aid to another” (p. 85). Social support has been linked to psychological well-being during pregnancy (Zachariah, 1994), and has been found to be protective against the effects of stressors in young, urban, African-American women (Becker et al., 2005). Most of the literature focusing on social support for childbearing women has centered on white, middle-class, adult women (Logsdon, 2005). With so little attention given to African-American women, it is important to examine social support within this population.

Personal Efforts

The efforts that an individual extends towards the attainment of life goals are important indicators of the potential for success in achieving personal goals (Clausen, 1986). Personal efforts that may affect psychosocial adaptation to pregnancy include educational level, pregnancy planning, and the model of health care experienced during pregnancy. Although environmental opportunities and obstacles, personal attributes, and social support may be factors beyond individual influence, personal efforts are intentional and motivated by the desire to achieve a specific goal (Clausen, 1986).

While researchers have investigated the role of psychosocial adaptation to pregnancy on labor and birth outcomes, predictors of psychosocial adaptation to pregnancy remain underexplored. Contributions of the following factors to psychosocial adaptation to pregnancy among urban African-American first-time mothers are currently unknown: experiences of discrimination, socioeconomic status, personal control beliefs, social support, educational level, pregnancy planning, and model of health care. This study has addressed that gap by investigating predictors of psychosocial adaptation to pregnancy among African-American first-time mothers.

Significance

Although studies have included diverse groups of women, research on psychosocial adaptation to pregnancy has focused mainly on white, middle class, partnered women (Lederman & Weis, 2009). This limited research focus has diminished our understanding of psychosocial adaptation to pregnancy among other ethnic groups, including African-American women. In 2010, the most current year for which data are

available, 247,778 African-American women in the United States birthed for the first time (Martin et al., 2012).

A primipara is a mother who is birthing for the first time. Important to understanding psychosocial adaptation to pregnancy among African-American primiparas is the identification of predictors. Predictors provide information about the facilitators and barriers to higher psychosocial adaptation to pregnancy. Few studies examining predictors of psychosocial adaptation to pregnancy have been found in the literature. None of the available studies were conducted in the United States. Predictors of psychosocial adaptation to pregnancy have been studied in Taiwan (Chou, Avant, Kuo, & Fetzer, 2008) and Switzerland (Sieber, German, Barbir, & Ehlert, 2006). In both studies, social support, including women's perceptions of general support and support provided by partners/husbands, was identified as an important predictor of increased psychosocial adaptation to pregnancy (Chou et al., 2008; Sieber et al., 2006). Choi et al. (2012) used structural equation modeling to determine explanatory variables of psychosocial adaptation to pregnancy among Hong Kong Chinese women. Four explanatory variables were identified: social support, uncertainty, self-efficacy, and commitment to pregnancy (Choi et al.).

Additional factors of experiences of discrimination, socioeconomic status, personal control beliefs, and personal efforts may contribute to psychosocial adaptation to pregnancy among urban, African-American primiparas. Social support has already been shown to contribute to psychosocial adaptation to pregnancy in other cultural groups (Choi et al., 2012; Chou et al., 2008; Sieber et al., 2006). The evidence supporting a link between psychosocial adaptation to pregnancy, factors associated with labor and birth outcomes, and postpartum adaptation reinforces the need to understand ethnic differences in psychosocial adaptation to pregnancy.

Long-term, knowledge of factors that may predict psychosocial adaptation to pregnancy may enable health care providers to develop, implement, and evaluate interventions focused on the unique needs of urban African-American first-time mothers. Predictors of psychosocial adaptation to pregnancy could be assessed early in the pregnancy to identify women at greater risk of low adaptation. Appropriate and effective interventions that increase psychosocial adaptation to pregnancy may contribute to positive labor and birth outcomes, better postpartum adaptation, and greater maternal sensitivity to infant cues.

Statement of the Problem

Psychosocial adaptation to pregnancy among urban, African-American primiparas has not been well researched. The number of African-American women birthing for the first time in the United States approached a quarter of a million in 2010 (Martin et al., 2012). Psychosocial adaptation to pregnancy, an important component of the transition to motherhood, may be significantly affected by social and cultural influences (Newman & Newman, 2007).

Much of the research focusing on childbearing African-American women has focused on negative factors such as low socio-economic status and poor birth outcomes (Abbyad, 2008; Sawyer, 1999). A focus on these factors limits our understanding of psychosocial adaptation to pregnancy among African-American women of all socioeconomic levels, and among women who experience healthy outcomes. Research focused on understanding predictors of psychosocial adaptation to pregnancy among urban African-American primiparas will contribute significantly to nurses' ability to develop effective interventions that specifically address the needs of this population of women.

Purpose Statement

The purpose of this study was: 1) to examine predictors of psychosocial adaptation to pregnancy among urban African-American primiparas, and 2) to explore relationships among personal control beliefs, experiences of discrimination, socioeconomic status, social support, pregnancy planning, and model of health care during pregnancy among urban African-American primiparas. The specific aims and hypotheses are as follows:

Specific Aim 1: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with the father of the baby, planned pregnancy, model of health care during pregnancy, and education among urban African American primiparas.

Hypothesis 1a: There is a relationship between socioeconomic status and education.

Hypothesis 1b: There is a relationship between experiences of discrimination and education.

Hypothesis 1c: There is a relationship between frequency of discrimination and education.

Hypothesis 1d: There is a relationship between personal control beliefs and education.

Hypothesis 1e: There is a relationship between social support as provided by the woman's partner, mother, and/or grandmother, and education.

Hypothesis 1f: There is a relationship between relationship status with the father of the baby and education.

Hypothesis 1g: There is a relationship between planned pregnancy and education.

Hypothesis 1h: There is a relationship between model of health care during pregnancy and education.

Specific Aim 2: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with the father of the baby, model of health care during pregnancy, and planned pregnancy among urban African-American primiparas.

Hypothesis 2a: There is a relationship between socioeconomic status and planned pregnancy.

Hypothesis 2b: There is a relationship between experiences of discrimination and planned pregnancy.

Hypothesis 2c: There is a relationship between frequency of discrimination and planned pregnancy.

Hypothesis 2d: There is a relationship between personal control beliefs and planned pregnancy.

Hypothesis 2e: There is a relationship between social support as provided by the woman's partner, mother, and/or grandmother, and planned pregnancy.

Hypothesis 2f: There is a relationship between relationship status with the father of the baby and planned pregnancy.

Hypothesis 2g: There is a relationship between model of health care during pregnancy and planned pregnancy.

Specific Aim 3: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with the father of the baby, education, model of health care during pregnancy, planned pregnancy, and psychosocial adaptation to pregnancy among urban African-American primiparas.

Hypothesis 3a: There is a relationship between socioeconomic status and psychosocial adaptation to pregnancy.

Hypothesis 3b: There is a relationship between experiences of discrimination and psychosocial adaptation to pregnancy.

Hypothesis 3c: There is a relationship between frequency of discrimination and psychosocial adaptation to pregnancy.

Hypothesis 3d: There is a relationship between personal control beliefs and psychosocial adaptation to pregnancy.

Hypothesis 3e: There is a relationship between social support as provided by the woman's partner, mother, and/or grandmother, and psychosocial adaptation to pregnancy.

Hypothesis 3f: There is a relationship between relationship status with the father of the baby and psychosocial adaptation to pregnancy.

Hypothesis 3g: There is a relationship between education and psychosocial adaptation to pregnancy.

Hypothesis 3h: There is a relationship between planned pregnancy and psychosocial adaptation to pregnancy.

Hypothesis 3i: There is a relationship between model of health care during pregnancy and psychosocial adaptation to pregnancy.

Hypothesis 3j: Socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship status with the father of the baby, education, planned pregnancy, and model of health care during pregnancy are significant predictors of psychosocial adaptation to pregnancy.

CHAPTER 2

THEORETICAL PERSPECTIVES

In this chapter, the theoretical perspectives guiding this study are presented. Major concepts and their applications to this study are described. The theoretical perspectives guiding this study are life course theory (Clausen, 1986; Giele & Elder, 1998) and psychosocial adaptation to pregnancy as conceptualized by Lederman (1996; Lederman & Weis, 2009).

Life Course Theory

The life course is a developmental process that occurs over the span of a person's lifetime (Giele & Elder, 1998). Trajectories, or life pathways, follow specific themes (Clausen, 1986; Elder, 1998). Common trajectories within the life course include family, education, and career (Newman & Newman, 2007). Within each trajectory are transitions that vary with each individual. Examples of transitions that may occur for women within the family trajectory are marriage, motherhood, grandparenthood, and widowhood (Newman & Newman, 2007). This study focuses on the transition to motherhood, specifically psychosocial adaptation to pregnancy, an important component of the transition to motherhood (Lederman & Weis, 2009).

Four principles guide life course theory and include: 1) historical time and place, 2) linked lives, 3) human agency, and 4) timing (Elder, 1998). The first principle of historical time and place refers to the historic, cultural, and socio-demographic influences on the trajectories and transitions in human development (Clausen, 1986; Elder & Giele, 2009; Newman & Newman, 2007). Each birth cohort within a specific geographic location experiences opportunities and challenges that are unique to that group (Elder & Giele, 2009; Newman & Newman, 2007). Psychosocial adaptation to pregnancy occurs within the context of historical time and place.

The principle of linked lives is focused on the social networks that individuals develop over their lifetime (Elder & Giele, 2009). Social networks, including the support and roles associated with them, may change during transitions. It is not uncommon for relationships to change during any of the transitions commonly experienced by women within the family trajectory: marriage, motherhood, grandparenthood, and widowhood (Newman & Newman, 2007). Psychosocial adaptation to pregnancy may be affected by

relationship changes that may occur during pregnancy, especially those with the new grandmother-to-be as well as the father of the baby.

The principle of human agency is focused on the decisions and actions taken by an individual within the constraints of historical time and place, and linked lives (Elder, 1998). The choices that people make form the foundation for their life course (Newman & Newman, 2007). This principle is closely related to the concept of personal efforts identified by Clausen (1986). Choices include educational attainment, career, choosing a partner, starting a family, and choosing a model of health care for pregnancy and birth. The fourth principle of timing is closely tied to the other principles of historical time and place, linked lives, and human agency (Newman & Newman, 2007). Timing refers to the point of entry of a transition within the trajectory of one's life course (Clausen, 1986). An important consideration of timing is "social timing", which refers to the "initiation of and departure from social roles, to the duration and sequence of social roles, and to relevant age expectations and beliefs" (Elder, 1996, p. 38). Thus culture, including social expectations on timing and sequencing of social roles, may play a significant role in the timing of transitions.

Differences in the timing and sequencing of pregnancy among European-American women and African-American women are found in the literature. Newman and Newman (2007) report that European-American women tend to view as ideal, initiating the career trajectory prior to initiating the transitions associated with the family trajectory. Thus, for this cultural group, within the family trajectory, the sequence of marriage followed by parenting has been associated with better mental health, including less depression and greater happiness (Newman & Newman, 2007). Among African-American women, initiating the career trajectory is also important prior to initiating the transitions associated with the family trajectory, however, the sequence of parenting and then marriage is associated with less depression and greater happiness (Jackson, 2004). Research suggests that social norms regarding sequencing of transitions along a trajectory may differ among ethnic groups.

Psychosocial Adaptation to Pregnancy

Rubin, Mercer, and Lederman are three preeminent nursing scholars who have been instrumental in advancing knowledge about the adaptive changes women experience as they transition to motherhood (Lederman, 1996; Lederman & Weis, 2009; Mercer, 1985, 2004; Rubin, 1967a, 1967b, 1984). Over the

past 50 years, many terms have been used to describe the transition to motherhood. The term “maternal role development” will be used to describe the entire process of transitioning to motherhood. Lederman (1996; Lederman & Weis, 2009) proposed that psychosocial adaptation to pregnancy was an important component of maternal role development and consisted of seven dimensions. The seven dimensions as conceptualized by Lederman (1996; Lederman & Weis, 2009) include: 1) acceptance of pregnancy, 2) identification of a motherhood role, 3) relationship with mother, 4) relationship with husband/partner, 5) preparation for labor, 6) fear of pain, helplessness, and loss of control in labor, and 7) concern for well-being of self and baby in labor. According to Lederman (1996), giving is the defining characteristic of motherhood.

During pregnancy and in preparation for motherhood, a woman undergoes significant physical, psychological, and social changes. These changes may be met with varying levels of anxiety and conflict, both of which are important indicators of psychosocial adaptation to pregnancy (Lederman & Weis, 2009). Increased anxiety and conflict near the end of pregnancy have been shown to influence a woman’s labor and birth experience (Lederman & Weis, 2009) as well as postpartum adaptation (Kiehl & White, 2003).

Life course theory considers the larger social environment within a specific historical place and time, as well as, respect for the personal choices and timing of those choices within individual trajectories of women as they transition to motherhood. Understanding psychosocial adaptation to pregnancy as an important component of the transition to motherhood within the family trajectory will provide rationale for future interventions to facilitate prenatal and postpartum adaptation. Clausen’s (1986) identification of areas of influence of the life course including environmental opportunities and obstacles, personal attributes, social support, and personal effort can guide researchers to identify and describe potential predictors of psychosocial adaptation to pregnancy. These relationships are portrayed in Figure 1. The conceptual, theoretical, and empirical foundations for this study are depicted in Figure 2.

Figure 1. Four Classes of Influence on Psychosocial Adaptation to Pregnancy

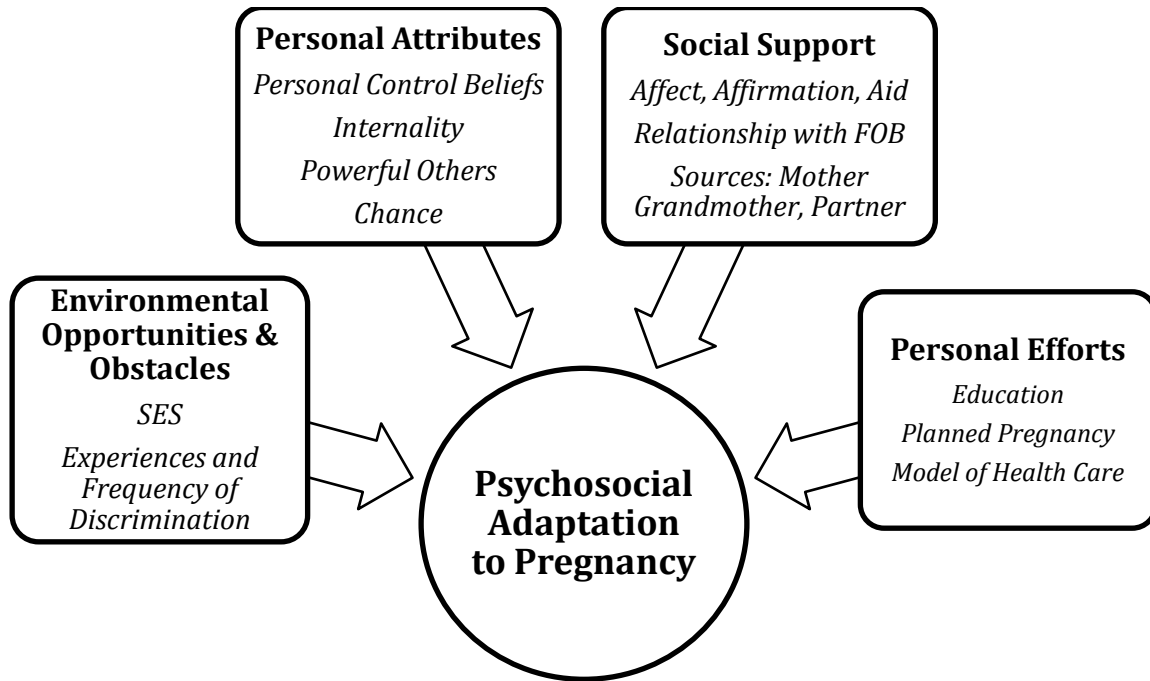
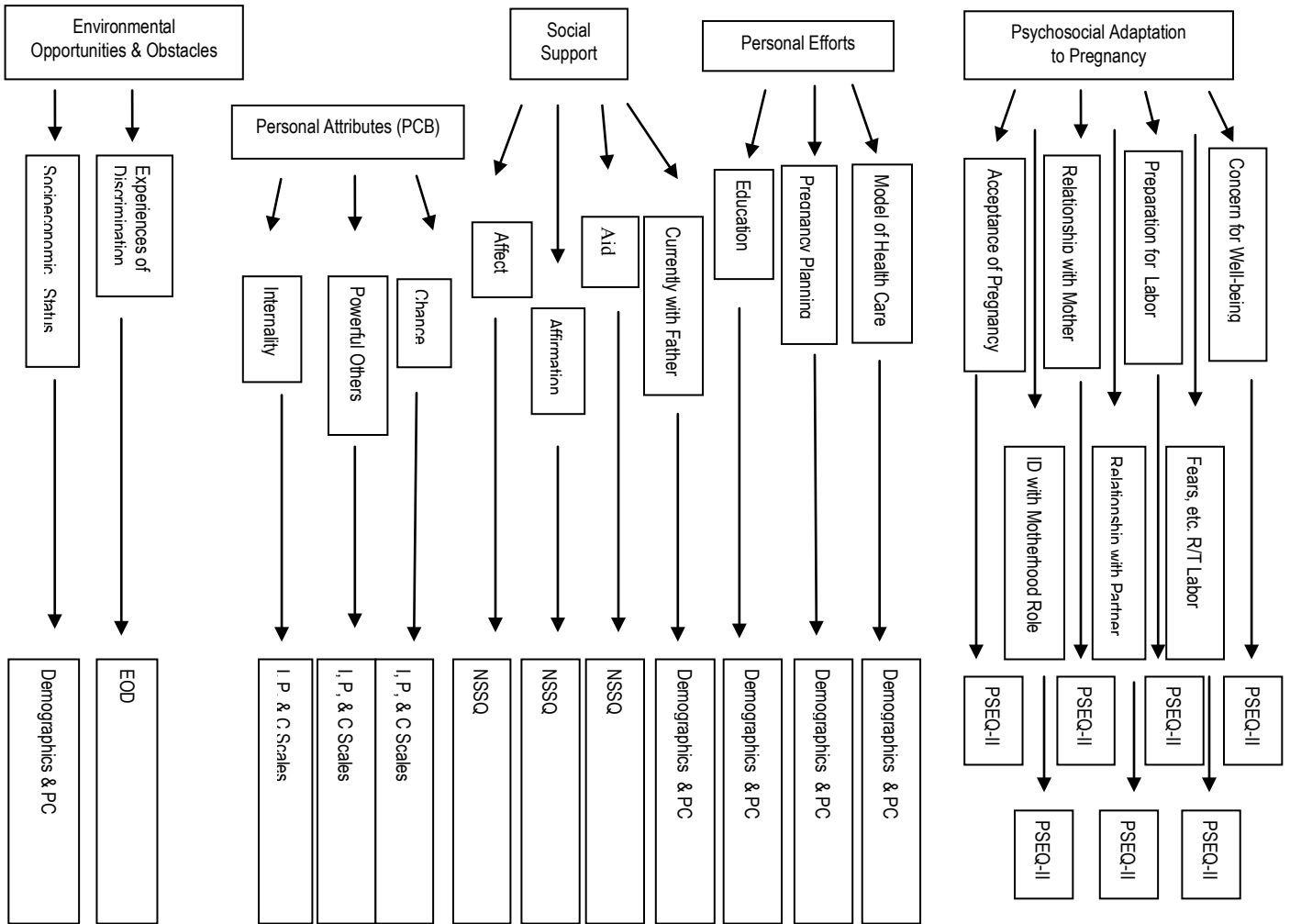


Figure 2. Conceptual, Theoretical, and Empirical Foundations for Predictors of Psychosocial Adaptation to Pregnancy among Urban African American Primiparas



CHAPTER 3

REVIEW OF THE LITERATURE

A review of the empirical literature relevant to the study variables is presented in this chapter. The search engines CINAHL, PSYCH Info, PubMed, Ebsco, and Proquest were used to identify research pertaining to psychosocial adaptation to pregnancy among African-American women and the variables associated with life course theory. Various keywords and combinations of keywords were used to identify empirical literature, and reference lists from selected publications were searched for additional research not previously identified using the search engines listed above.

Psychosocial Adaptation to Pregnancy

Although several leaders in the field: Lederman, Kiehl, White, Weis, Halman, and Oakley have studied psychosocial adaptation to pregnancy over the past 30 years, this research has focused on outcomes that result from high or low psychosocial adaptation to pregnancy. Studies on predictors of psychosocial adaptation to pregnancy have been published only in the last seven years, and none of these studies were conducted in the United States (Choi et al., 2012; Chou et al., 2008; Sieber et al., 2006). In this section, studies focusing on the relationships among psychosocial adaptation and labor and birth outcomes, ethnic differences, and postpartum adaptation will be reviewed. Following that review, the three published studies on predictors of psychosocial adaptation will be discussed.

Labor and birth outcomes. In an early study, Lederman, Lederman, Work, and McCann (1979) investigated relationships among neurotransmitters/hormones (epinephrine, norepinephrine, and cortisol) and labor and birth outcomes. This study formed the foundation for Lederman's later work on psychosocial adaptation to pregnancy. Thirty-two married primiparas were enrolled in the study (30 European-American, 2 African-American) and participated in three structured interviews held during the last trimester of pregnancy. During labor, data was collected on epinephrine, cortisol, and norepinephrine plasma levels, anxiety, and uterine activity. Initial domains of psychosocial adaptation to pregnancy were identified and included: acceptance of pregnancy, identification with motherhood role, relationship with own mother, fears about labor – loss of control, fears about labor – helplessness, fears about labor – pain, and loss of self-esteem (Lederman et al.). Higher adaptation was indicated by lower scores on the Prenatal Development Dimensions instrument (precursor to the Pregnancy Self-Evaluation

Questionnaire). All identified domains demonstrated significant negative correlations with uterine activity: acceptance of pregnancy ($r = -0.70, p < 0.01$), identification with motherhood role ($r = -0.59, p < 0.01$), relationship with mother ($r = -0.53, p < 0.05$), fears about labor – loss of control ($r = -0.67, p < 0.01$), fears about labor – helplessness ($r = -0.49, p < 0.05$), fears about labor – pain ($r = -0.60, p < 0.01$), and loss of self esteem ($r = -0.66, p < 0.01$) (Lederman et al.). Negative correlations indicated less uterine activity. Significant positive correlations were noted among duration of labor and the following domains: acceptance of pregnancy ($r = 0.58, p < 0.01$), identification with the motherhood role ($r = 0.41, p < 0.05$), fears about labor – loss of control ($r = 0.41, p < 0.05$), and fears about labor – pain ($r = 0.48, p < 0.01$). Positive correlations indicated shorter duration of labor. Data suggest that psychosocial variables are related to progress in labor and “anxiety manifested in early labor is predictive of progress in second stage labor and likelihood of a forceps-assisted delivery” (Lederman & Weis, 2009, p. 6). Half of the women in this study birthed with the assistance of forceps, several received analgesia during labor, and almost all of the women received some form of anesthesia prior to birth. The use of analgesia during labor may affect uterine activity, and the use of forceps and anesthesia may also affect the duration of labor.

In a later study by Lederman and colleagues (Lederman, Weis, Camune, & Mian, 2002) pregnancy-specific anxiety, social support, and family functioning were examined to determine their relationships with pregnancy complications and birth outcomes. Participants included 106 pregnant women (27 African Americans, 47 Latino Americans, and 32 Anglo Americans). Higher scores indicate lower adaptation. Results indicated that age was associated with acceptance of pregnancy ($r = -0.24, p < 0.05$), and higher educational level was associated with better preparation for labor ($r = -0.22, p < 0.05$) and a greater sense of maternal/fetal well-being ($r = -0.26, p < 0.05$). Single status was associated with acceptance of pregnancy ($r = 0.32, p < 0.05$), relationship with husband/partner ($r = 0.37, p < 0.05$), and preparation for labor ($r = 0.23, p < 0.05$). Positive correlations indicate lower adaptation to pregnancy. Acceptance of pregnancy was related to intrapartum complications ($r = 0.24, p < 0.05$) and identification with a motherhood role was related to antepartum complications ($r = 0.28, p < 0.01$). These results indicate lower adaptation to pregnancy was related to increased incidence of complications.

Ethnic differences. Lederman and Miller (1998) conducted a study examining psychosocial adaptation to pregnancy in three ethnic groups: Latin-American, African-American, and Anglo-American women. Results focused on the African-American participants indicated they most often expected help from their extended family and other family members (39%, $\chi^2 = 15.2$, $p < 0.05$) and least often anticipated life changes as a result of pregnancy (44%, $\chi^2 = 8.7$, $p < 0.01$), chose to stay home with their infant (18%, $\chi^2 = 8.6$, $p < 0.01$), and anticipated household help from their partner (13%, $\chi^2 = 14.0$, $p < 0.01$) compared to the Latin-American and Anglo-American participants (Lederman & Miller).

Postpartum adaptation. The relationship between psychosocial adaptation to pregnancy and postpartum adaptation has been studied among primiparous women. Halman, Oakley, and Lederman (1995) studied the relationship between psychosocial adaptation to pregnancy and postpartum adaptation among women who had experienced fertility treatments. No differences were found among 261 women who had conceived without assisted reproduction and 103 women who had conceived with assisted reproduction. In a more recent international study, Kiehl and White (2003) examined the relationship between maternal adaptation during pregnancy and postpartum adaptation. Among a total of 147 primiparas, 47 were from Norway, 60 from Sweden, and 40 from the United States. Mothers who demonstrated greater prenatal adaptation on the identification with a motherhood role domain were more confident in their ability to cope with the tasks of motherhood during postpartum ($r = 0.37$, $p = 0.02$), more satisfied with life ($r = 0.37$, $p = 0.02$), and more satisfied with their motherhood role ($r = 0.33$, $p = 0.03$) (Kiehl & White). Participants in the United States were recruited from prenatal classes and clinics, and all had private insurance. Mothers from the United States perceived greater identification with the motherhood role during pregnancy than mothers from Norway or Sweden [$F(2,144) = 7.77$, $p = 0.0006$] (Kiehl & White). Mothers from the United States and Sweden reported a more positive relationship with their partner [$F(2,144) = 6.63$, $p = 0.002$] and confidence in their ability to cope with the tasks of motherhood during postpartum [$F(2,144) = 7.27$, $p = 0.001$] (Kiehl & White). Differences in health care delivery models among the three countries may have influenced the results as well as the potential additional resources available to women in the United States who have private insurance.

Weis and Lederman (2010) examined relationships between psychosocial adaptation to pregnancy and postpartum adaptation in a sample of 113 women who were associated with the military,

either on active duty themselves or dependent wives of active duty men. The participants were healthy women with singleton pregnancies and 10% of the sample was comprised of African-American women. Five of Lederman's seven dimensions of psychosocial adaptation to pregnancy were found to predict women's postpartum satisfaction with motherhood and infant care (Adjusted $R^2 = 0.34$, $p < 0.001$): acceptance of pregnancy ($p < 0.05$), identification with motherhood role ($p < 0.001$), relationship with mother ($p < 0.001$), relationship with husband ($p < 0.01$), and preparation for labor ($p < 0.01$). Greater parity predicted greater adaptation with postpartum maternal role adjustment ($p < 0.001$), and infant attachment ($p < 0.001$)(Weis & Lederman).

Predictors of psychosocial adaptation to pregnancy. Recently, three studies were published that examined predictors of psychosocial adaptation to pregnancy, the topic of this study. All three of these studies were conducted outside of the United States of America.

The first study, which was conducted in Switzerland (Sieber et al., 2006), used Lederman's Pregnancy Self-Evaluation Questionnaire (PSEQ-II) (2006) to examine predictors of psychosocial adaptation to pregnancy with a convenience sample of 61 primiparas recruited from childbirth education classes in Zurich. Birth anxiety, impaired health conditions of the mother, low social support from the partner, and low general social support predicted low adaptation to pregnancy (Adjusted $R^2 = 0.56$) (Sieber et al.).

The second study, conducted by Chou et al. (2008) in Taiwan, also used Lederman's PSEQ II (Lederman, 2006) to examine relationships between nausea and vomiting, perceived stress, social support, and their ability to predict psychosocial adaptation to pregnancy. Participants included 243 women in early pregnancy (6-16 weeks gestation). All three predictor variables correlated significantly with psychosocial adaptation to pregnancy: nausea and vomiting ($r = 0.17$, $p < 0.01$), perceived stress ($r = 0.52$, $p < 0.01$), and social support ($r = -.49$, $p < 0.01$). Unplanned pregnancy ($r = 0.19$, $p < 0.01$) also correlated significantly with psychosocial adaptation to pregnancy (Chou et al.). A positive correlation indicated unplanned pregnancy was associated with lower adaptation to pregnancy. Women who had unplanned pregnancies, nausea and vomiting, increased stress, and decreased social support were at risk for lower psychosocial adaptation to pregnancy.

Choi, et al. (2012) conducted a study to investigate explanatory variables of psychosocial adaptation to pregnancy among 550 Chinese Hong Kong women during late pregnancy. Using structural equation modeling, four explanatory variables were identified: social support, uncertainty, self-efficacy, and commitment to pregnancy. In the model, social support correlated negatively with uncertainty ($r = -0.24, p < 0.05$), while uncertainty correlated negatively with efficacy ($r = -0.80, p < 0.05$) and with commitment to pregnancy ($r = -0.33, p < 0.05$). Both efficacy ($r = 0.80, p < 0.05$) and commitment to pregnancy ($r = 0.33, p < 0.05$) had positive impacts on psychosocial adaptation to pregnancy. No significant differences in adaptation were noted among first-time mothers and women who had already birthed at least one child (Choi, et al.).

These high-quality international studies highlight the significance of social support as a predictor of psychosocial adaptation to pregnancy. In addition, the use of Lederman's PSEQ-II (Lederman, 2006) instrument among women internationally supports its applicability to multiple cultural groups, including African-American women. Even with that strength, generalizability of the findings of these studies to American women is limited by the cultural differences between the United States and the countries where these studies were conducted.

In summary, this review of the literature reveals a significant gap regarding predictors of psychosocial adaptation to pregnancy among urban African-American primiparas in the United States. Research has focused on labor and birth outcomes, ethnic differences, and postpartum adaptation on psychosocial adaptation to pregnancy. It is known that supportive relationships with a pregnant woman's mother and her partner contribute to a positive experience in the transition to motherhood among African-American primiparas (Savage, 2006, Sawyer, 1999). However, psychosocial adaptation to pregnancy, as well as its predictors, has not been studied among African-American primiparas. This study aims to fill that gap.

Potential Predictors of Psychosocial Adaptation to Pregnancy within Life Course Theory

Environmental Opportunities and Obstacles. Two potential predictors of psychosocial adaptation to pregnancy within the category of environmental opportunities and obstacles are socioeconomic status and experiences of discrimination. A review of the literature relevant to each of these potential predictors is presented below.

Socioeconomic Status. Socioeconomic status (SES) and health disparities have provided a foundation from which much of the research focusing on African-American childbearing women is based (Abbyad, 2008; Cricco-Lizza, 2008; Haldeman, 2005; Sawyer, 1999). In a qualitative study focusing on African-American women of middle and upper socioeconomic levels, Haldeman (2005) provided in-depth analyses of the lived experiences of pregnancy, childbirth, and motherhood among 62 women. Women described their experiences of pregnancy, childbearing, and motherhood within the social context of racism, gender, and class. Several participants expressed perceptions that they were perceived to be of the “lowest class” during pregnancy and, according to Haldeman, ‘Such pregnancies have been racialized by the larger society *and* members of African-American communities to the extent that a black pregnant woman invokes perceived assumptions about her marital status, her (ir)responsibility as a mother, and the economic burden she and her children are imposing on “taxpayers.” ’ (p. 262). In that study, a European-American researcher conducted all of the interviews, although the physicians providing care to the participants were African Americans.

Socioeconomic status or social class is frequently measured by objective indicators including level of education, occupation, and household income (Kraus, Piff, & Keltner, 2009; Ostrove, Adler, Kupperman, & Washington, 2000). Subjective SES measures provide a method to assess an individual’s perception of available resources (Kraus et al., 2009). In the study reported here, both objective (household income level) and subjective measures (perception of adequate income to meet daily needs) of socioeconomic status were used to predict psychosocial adaptation to pregnancy among urban African-American primiparas.

Experiences of Discrimination. Qualitative methodology has been used to elicit the perceptions, experiences, and meaning of pregnancy and the transition to motherhood for African-American women (Abbyad, 2008; Cricco-Lizza, 2008; Haldeman, 2005; Sawyer, 1999). Sawyer (1999) used grounded theory methodology to describe the pregnancy and motherhood experiences of 17 African-American primiparas. Study participants had a mean age of 30 years, were married (65%), employed prior to pregnancy (100%), were middle income or above (70%), and were college-educated with the majority having earned an associate degree (Sawyer, 1999).

Engaged mothering was identified as the core category in Sawyer's (1999) study and was defined as, "an active, involved, and mutual process in which a woman prepares to be a mother, cares for herself and her infant, and dreams about and plans for the future" (p. 16). The outcome of engaged mothering was a "healthy, happy, safe, strong, and secure child" (p. 18). Inhibitors of a healthy transition to motherhood included the effects of stereotyping, negativity from others, or being "treated like public property" (Sawyer, 1999, p. 18). Women described effects of racism and stereotyping of African-American women as "young, single, and on welfare" (Sawyer, 1999, p. 19) and being "judged before you even open your mouth" (Sawyer, 1999, p. 17). This finding is supported by Haldeman (2005) who found that for African-American women, negatively felt experiences and perceptions during pregnancy were predominately based on skin color.

Abbyad (2008) used grounded theory to describe processes used by urban black women to prepare for childbirth and the social context within which these processes occurred. Twenty-two women in the last four months of pregnancy participated in focus groups and individual interviews. Participants ranged in age from 19-34 years. The majority of participants were partnered (77%), employed (68%), had completed some college (78%), and reported income adequate to meet daily needs (55%). The theory that resulted from the study, *weighing the impact on me*, described the process used for birth preparation as *discovering pregnancy, managing pregnancy, preparing for delivery, and experiencing personal change* (Abbyad, 2008). More than half of the women reported experiences of racism or discrimination during their pregnancy, including experiences within health care settings (Abbyad, 2008).

Cricco-Lizza (2008) used ethnographic methods to explore the cultural context of prenatal and infant care practices within a group of 11 mainly single ($n = 10$), low-income, urban African-American primiparas. According to Cricco-Lizza (2008), participants reported daily concerns regarding race, class, and gender inequities, lack of resources, and racism or experiences of discrimination. Cricco-Lizza (2008) reported that several participants demonstrated distrust during recruitment, which may have influenced information received during interviews.

Qualitative research that has focused on perceptions, experiences, and meaning of pregnancy and the transition to motherhood for African-American women has demonstrated that the experience of discrimination is a relevant factor to be considered in a study of African-American women during

pregnancy. These studies suggest the need to include a measure of discrimination experiences as well as socioeconomic indicators (objective and subjective) as potential predictors of psychosocial adaptation to pregnancy among urban African-American primiparas and this study has done that.

Personal Attributes

Personal Control Beliefs. The construct of control, originating in Rotter's social learning theory (Rotter, Chance, & Phares, 1972), has been of great interest to researchers for several decades. Control is defined as, "a generalized expectancy pertaining to the connection between personal characteristics and/or actions and experienced outcomes" (Lefcourt, 1991, p. 414). According to Rotter (1966), internal locus of control is the belief that individual effort determines outcomes, while external locus of control is the belief that outcomes are determined by external forces. Levenson (1981) expanded the external locus concept to include an ordered and predictable external force (powerful others) and an unpredictable and disordered external force (chance). In the present study, personal control beliefs were conceptualized as three dimensions of locus of control as proposed by Levenson (1981): internality, powerful others, and chance.

Keeton, Perry-Jenkins, & Sayer (2008) explored how an individual's sense of control relates to psychological adjustment during the transition to first-time parenthood. In 153 predominantly European-American, dual-income working class couples, sense of control was conceptualized as internal or external and psychological adjustment was reported using self-reported anxiety and depressive symptoms (Keeton et al., 2008). Lower levels of anxiety and depression were associated with higher income and internal sense of control (Keeton et al.). The study presented in this report provides additional information related to the associations between sense of control conceptualized as personal control beliefs and psychosocial adaptation to pregnancy within a group of economically diverse African-American primiparas.

Internal locus of control has been studied in both pregnant and non-pregnant women. Weisman et al. (2008) examined non-pregnant women's beliefs regarding their ability to influence their future baby's health and birth outcomes. Researchers conducted telephone surveys with 614 women and results demonstrated that higher levels of internal locus of control were associated with older age, higher education, married or partnered, and good physical health (Weisman et al.). The results must be

interpreted with caution as the sample was not racially diverse; 93% described themselves as white. Healthy, married, educated, and older women could also have access to increased resources not easily available to other women.

Green and Baston (2003) conducted a study to explore internal and external control and involvement in decision-making. The sample included 1146 participants in their last month of pregnancy; 43% of whom were first-time mothers ($n = 494$). In all cases, women who had already experienced birth reported feeling more in control than primiparas: feeling in control of what staff were doing, feeling in control of behavior, and feeling in control during contractions. A limitation of this study was lack of racial diversity among the participants; 96.4 % described themselves as white.

Perception of control is an important construct in research on studies of childbearing women (Bryanton, Gagnon, Johnston, & Hatem, 2008; Green & Baston, 2003; Green, Coupland, & Kitzinger, 1990). Willmuth (1975) examined factors involved with a woman's satisfaction with her birth experience and found that perception of control was a major factor associated with childbirth satisfaction. Women were asked to provide written retrospective evaluations of their childbirth preparation program (Willmuth). The evaluations focused on the women's perception of control, which varied in meaning and ranged from having control over emotions, staying on top of the contraction, maintaining a sense of control in their interactions with the staff, and having the ability to participate in the decision-making process (Willmuth). Although this study took place over 35 years ago, its relevance to women birthing in current times is well supported by the literature (Green et al., 1990; Namey & Lyerly, 2010). Women credited childbirth preparation as beneficial to their ability to maintain control (Willmuth). Research demonstrates that having a sense of control leads to more positive adaptation to stressors associated with health issues (Shapiro, Schwartz, & Astin, 1996).

Understanding relationships between personal control beliefs and psychosocial adaptation to pregnancy is an important factor in facilitating psychosocial adaptation to pregnancy among African-American childbearing women. Much of the research regarding the construct of control among childbearing women has focused on European-American women. Personal control beliefs among African-American primiparas are likely to differ from findings of prior research focused on the construct of control among European-American women. This gap in the literature has been addressed by including personal

control beliefs as one potential predictor in this study of psychosocial adaptation to pregnancy among African-American primiparas.

Social Support

Social support can be measured in various ways including perceived support, adequacy of support network, and satisfaction with support (Logsdon & Davis, 2003). Specific conditions that are needed for support to be beneficial include 1) a complement between needs and expectations, 2) acceptable cost, and 3) must be provided by a preferred support person (Logsdon & Davis, 2003). Recipients of support may not perceive all social support as positive and acceptance of support may depend on the support provider (Hupcey, 1998).

Among sources of support in the African-American community, two that are highly regarded are the family and the church (Chatters, Taylor, Lincoln, & Schroeder, 2002). Family and church networks are an important aspect of the African-American culture and guide the health beliefs and practices of African-American childbearing women (Ahern & Ruland, 2003; Landrine & Klonoff, 1992). Types of support that may be provided by the family include total support and instrumental support, which includes providing goods and services, financial assistance, and transportation (Chatters et al.). Friends may provide support in the form of companionship (Chatters et al.). Church support can include advice, encouragement, prayer, and affective support during illness and/or life transitions (Chatters et al.).

African-American families value children (Hill, 2001) and the mothering role is perceived as intergenerational (Blake & Darling, 2000; Koniak-Griffin, Logsdon, Hines-Martin, & Turner, 2006). Extended family networks in the African-American culture provide additional support and economic resources (Flaherty, 1988) and may or may not include biological relatives (Blake & Darling, 2000). Flaherty used qualitative analysis to identify seven caring functions among African-American grandmothers of first-time mothers: managing, care taking, coaching, assessing, nurturing, assigning and patrolling. These caring functions among grandmothers provided the foundation for the development of mothering skills in the new mother (Flaherty). Tangible support was identified as transportation, information related to pregnancy and childcare, and infant care items (Savage et al., 2007). This finding was supported by Abbyad (2008) who found that pregnant African-American women look to their extended family for health advice and support.

Social support has been examined among African-American women during pregnancy (Abbyad, 2008; Savage et al., 2007; Zachariah, 2009). Abbyad (2008) found that social support from friends and family offset the negative aspects of racism and discrimination. Savage et al. (2007) used ethnographic methods to explore the cultural contexts of prenatal and infant care practices among African-American women of childbearing age living in an urban community. Seven women participated in the study (Savage et al., 2007). The central theme identified was family support from mothers and sisters in obtaining needed resources related to pregnancy and childcare (Savage et al., 2007). All of the women described the importance of support and help from the women in their families (Savage et al., 2007). Zachariah (2009) examined social support, life stress, anxiety, and psychological well-being among 111 African-American, low-income women in early and late pregnancy. Women experiencing complications during pregnancy reported less emotional, tangible, and total functional support ($t = 2.11, p = 0.04$). Findings suggest that African-American women disproportionately experience socioeconomic disadvantages (Zachariah, 2009).

Social support has been associated with health behavior practices during pregnancy, with maternal sensitivity, and infant care practices (Aaronson, 1989; Goldstein, Diener, & Mangelsdorf, 1996). Aaronson (1989) explored the effects of several measures of social support on 3 health behavior practices during pregnancy in a study that included 529 participants. Results demonstrated that both perceived and received support contribute to pregnant women's adherence to recommended health behaviors (Aaronson, 1989). Goldstein et al. (1996) examined associations among personality, mood, stress, and social support during the transition to motherhood among 70 primiparous women. Social support was associated with adaptation to parenthood and positive mother-infant interactions (Goldstein et al., 1996).

Partner support may be particularly beneficial during pregnancy and the early postpartum period (Bilszta, Tang, Meyer, Milgrom, Ericksen, & Buist, 2008). Sawyer (1999) identified support from partners as an important component of the transition to motherhood for a group of African-American first-time mothers. A supportive relationship with a husband during pregnancy has been shown to be the most important predictor of a woman's state anxiety (Norbeck & Anderson, 1989) and to lead to greater confidence and satisfaction in the motherhood role (Zachariah, 1994). In a study involving 332 young

African American women, Affable-Munsuz, and colleagues (2006) found that pregnancy was viewed as an opportunity to bring a young woman closer to her family and boyfriend. Poor or lack of partner/husband support has been linked to depressive symptoms among pregnant women (Bilszta et al., 2008; Lancaster, Gold, Flynn, Yoo, Marcus, & Davis, 2010). In a study of 1044 black women (Blake et al., 2007), women who were happy to be pregnant were more likely to have partners. Unhappy women had higher odds of experiencing intimate partner violence (Blake et al., 2007).

Social support during pregnancy has been demonstrated to have positive benefits for childbearing women. Research demonstrates that African-American women utilize family and religious support networks (Abbyad, 2008). According to Latendresse (2009), individuals with adequate and supportive social networks may view stressors as less threatening due to the ready availability of support. Social support must be viewed from the perspective of the recipient, as there may be a significant discrepancy between the perception of needs, expectations, and adequacy between the recipient and provider of support. Understanding the relationship between social support within the context of African-American primiparas and psychosocial adaptation to pregnancy is an important factor in facilitating psychosocial adaptation to pregnancy. This study focused on several sources of social support (partner, mother, grandmother) that are important to African-American women.

Personal Efforts

Personal efforts are under the control of the individual and motivated by a desire to achieve specific goals (Clausen, 1986). Educational level, pregnancy planning, and model of health care experienced during pregnancy are examples of personal efforts that may predict psychosocial adaptation to pregnancy among childbearing women.

Education. Education has been studied in regards to unintended pregnancy. In a study using data from the National Survey of Family Growth (NSFG), Finer and Henshaw (2006) found that women who did not complete their high school education had an unintended pregnancy level three times that of college graduates. Using more recent data, Kost, Finer, and Singh (2012) found that educational level is inversely associated with unintended pregnancy rates. Lederman and Weis (2009) reported women

($n = 109$) with higher level of education were better prepared for labor ($r = -0.22, p < 0.05$) and experienced a greater sense of maternal/fetal well-being ($r = -0.26, p < 0.05$). Higher scores are indicative of lower adaptation.

Planned Pregnancy. An important characteristic of accepting pregnancy is the extent to which a woman plans her pregnancy (Lederman & Weis, 2009). *Listening to Mothers II* revealed that four out of 10 mothers did not intend to be pregnant (Declercq et al., 2007). Among African-American women in Michigan, 65% of pregnancies are unintended (Michigan Department of Community Health, 2006). National data (69% African American, 40% White, 54% Hispanic) similarly demonstrates that unintended pregnancies disproportionately occur among women from racial/ethnic minorities (Finer & Henshaw, 2006).

For many women, becoming a mother is a planned and highly anticipated transition. The following study illustrates that this is not the case for all women and highlights the importance of considering the social and cultural contexts of pregnancy planning. Canady, Tiedje, and Lauber (2008) used a qualitative design to explore the meaning of pregnancy planning among 168 African-American women who participated in 19 focus groups. The authors concluded that many of the women involved in the study had little knowledge regarding pregnancy planning, however, those who had some understanding did not consistently practice pregnancy prevention. Pregnancy planning was considered “Eurocentric” and not reality (Canady et al., 2008, p. 95). Other researchers have found that pregnancy planning contributes to higher psychosocial adaptation to pregnancy (Chou et al., 2008), and unintended pregnancy is associated with less overall social support ($p = 0.02$) (Sable, Washington, Schwartz, & Jorgenson, 2007). Research on unintended pregnancies reveals elevated risk for emotional and physical health problems among both parents and infants (Peacock, et al, 2001).

Bergum (1986) identified the decision to have a child as a major transformative theme of the transition to motherhood. “Pregnancy acceptance” describes pregnancy ambivalence or degree of happiness about being pregnant (Isipa, Sable, Porter, & Csizmadia, 2007). In a study of 173 low-income black women, pregnancy acceptance was a negative predictor of parenting stress and a positive predictor of toddler attachment security (Isipa et al., 2007).

Model of Health Care. In the United States, the primary care providers for most pregnant women are medical doctors (MDs) (Johantgen, Fountain, Zangaro, Newhouse, Stanik-Hurt, & White, 2012). In 2009, Certified Nurse-Midwives attended 7.6% of all hospital births in the United States (Martin et al., 2012). Midwives view birth as a normal process and rely less on technology than physicians during labor and birth, focusing instead on “watchful waiting and nonintervention in normal processes” (ACNM, 2012). A systematic review was conducted to compare midwife-led models of care with other models of care for childbearing women (Hatem, Sandall, Devane, Soldani, & Gates, 2008). The review included eleven trials with 12,276 women and reported midwifery-led care demonstrated many benefits with no adverse effects. Women who had midwifery-led care were less likely to use regional anesthesia (RR 0.81, 95% CI 0.73 – 0.91), experience episiotomy (RR 0.82, 95% CI 0.77 – 0.88), instrumental vaginal birth (RR 0.86, 95% CI 0.78 – 0.96), and antenatal hospitalization (RR 0.90, 95% CI 0.81 – 0.99). Women cared for by midwives were more likely to feel in control during birth (RR 1.74, 95% CI 1.32 – 2.30), experience a spontaneous vaginal birth (RR 1.04, 95% CI 1.02 – 1.06), and initiate breastfeeding (RR 1.35, 95% CI 1.03 – 1.76). The review recommended midwifery-led care for women without medical or obstetrical complications (Hatem et al.). Midwives consider themselves to be partners in care rather than providers of care to low-risk women (ACNM) and view birth as a normal life event rather than a potential medical emergency. The model of care provided to African-American first-time mothers was examined in the study reported here to determine if a specific model of health care during pregnancy (midwifery model or medical model – physician care) predicted psychosocial adaptation to pregnancy.

Summary

In summary, a review of the literature reveals a significant gap regarding predictors of psychosocial adaptation to pregnancy among urban African-American primiparas. To date, research on psychosocial adaptation to pregnancy has focused on ethnic differences and the outcomes of labor and birth, and postpartum adaptation. Although, studies examining African-American women’s perceptions of social support, and planned pregnancy have been reported in the literature, a significant gap in research on psychosocial adaptation to pregnancy is noted focusing on socioeconomic status, personal control beliefs, education, and model of health care among urban African-American primiparas. To address this gap, the study presented in this report examined socioeconomic status, experiences and frequency of

discrimination, personal control beliefs, social support, education, planned pregnancy, and model of health care as potential predictors of psychosocial adaptation to pregnancy among urban African-American primiparas.

CHAPTER 4

METHODOLOGY

Introduction

The purpose of this study was: 1) to examine predictors of psychosocial adaptation to pregnancy among urban African-American primiparas, and 2) to explore relationships among potential predictors of psychosocial adaptation to pregnancy: socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship status with father of the baby, planned pregnancy, and model of health care during pregnancy among urban African-American primiparas. The research design and methods used to collect and analyze the data for this study are described in this chapter. Sections include: design, sample, settings, measurement of variables, data collection, human subject protection, and data analysis.

Research Design

A descriptive, cross-sectional, correlational design was used to examine predictors of psychosocial adaptation to pregnancy among urban, African-American primiparas, and to explore relationships among the potential predictor variables of socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support, relationship status with father of baby, education, planned pregnancy, and model of health care. A descriptive and correlational study design is appropriate since little is known about relationships among potential predictors of psychosocial adaptation to pregnancy among urban African-American primiparas. The cross-sectional design allows for a substantial amount of information to be obtained efficiently at one point in time (Polit & Beck, 2012).

Sample

All women who met the inclusion criteria during the enrollment period were invited to participate in the study. Inclusion criteria for sample selection were: 1) age 18 years or greater, 2) singleton pregnancy, 3) first pregnancy to viability (gestation greater than 24 weeks), 4) self-identified as African American, 5) 34 weeks or greater gestation, 6) no severe medical or psychiatric problems, or pregnancy complications requiring additional prenatal surveillance identified prior to enrollment, and 7) able to read and understand English. Women who reported regular alcohol use (greater than once per week, greater than one drink per episode) and/or illicit drug use during their pregnancy were excluded from the study.

A power analysis using G*Power 3.1.2 was performed to determine the number of participants needed to detect a true relationship if one does exist. Using a power analysis with a significance level of $\alpha = 0.05$, power of 0.80, a moderate effect size of 0.15, and multiple regression with 8 predictor variables, (G*Power 3.1.2, 2010), a sample size of 109 participants was needed. Attrition was not an issue due to the cross-sectional design of the study.

Settings

Three settings were used for data collection: Grace Ross Health Clinic, University Physicians Group, and the Labor Reception Center within Hutzel Women's Hospital. Various locations and practice models were selected in an effort to maximize diversity among the African-American primiparas recruited to participate in this study. Data was collected at these locations utilizing pre-arranged office or examination room space to maximize participants' confidentiality and comfort.

Grace Ross Health Clinic is an ambulatory care clinic located in the City of Detroit. Prenatal care is provided by Certified Nurse-Midwives to a client population of largely low-income, Medicaid-eligible, inner city women. University Physicians Group provides prenatal care services at locations in Detroit and Southfield, and serves a diverse socioeconomic and ethnic population. The Labor Reception Center within Hutzel Hospital provides care to pregnant women on a walk-in basis. Emergent care is provided as well as routine prenatal assessments

Measurement of Variables

With the exception of the socio-demographic variables, all study variables were measured using standardized instruments with established reliability and validity. Information about the instruments, construct(s) being measured, scoring, and reliability and validity for each instrument are described below.

Prenatal Self-Evaluation Questionnaire II. The Prenatal Self-Evaluation Questionnaire II (PSEQ-II) (Lederman, 2006) (Appendix D) measures psychosocial adaptation to pregnancy along seven dimensions of maternal role development: acceptance of pregnancy; identification of a motherhood role; relationship with mother; relationship with husband/partner; preparation for labor; fear of pain, helplessness, and loss of control in labor; and concern for well-being for self and baby in labor. PSEQ-II is 79-item self-report instrument with four response categories (very much so, moderately so, somewhat so, not at all) and takes about 10-20 minutes to complete. Total scores range from 79-316, with lower scores

indicating higher levels of adaptation and lower levels of conflict. Cronbach alpha reliability coefficients of the subscales of the PSEQ-II, for a group of pregnant women ($N = 119$), ranged from 0.75 to 0.92 (Lederman & Weis, 2009). The intercorrelation coefficients among the seven subscales ranged from 0.06 to 0.54, indicating that the subscales are relatively independent, and separate measures are justified for each of these dimensions (Lederman & Weis, 2009). Predictive validity was demonstrated in a study ($n = 53$) examining the effects of prenatal developmental conflict on maternal anxiety in labor (Lederman, Lederman, & Kutzner, 1983a, 1983b). The PSEQ-II has demonstrated reliability for use in the African-American population ($n = 93$) with Cronbach alpha reliability coefficients ranging from 0.76 to 0.92 across the seven subscales (Lederman, 1996). In this study, Cronbach's alpha reliability coefficients ranged from 0.67 to 0.91 for the domains and an alpha coefficient of 0.89 for the total score.

Internality, Powerful Others, and Chance Scale. The Internality (I), Powerful Others (P), and Chance (C) Scale (Levenson, 1981) is a 24-item self-report instrument that measures the construct of personal control beliefs (Appendix A). The I, P, and C subscales each contain 8 items with six response categories (strongly disagree, disagree, slightly disagree, slightly agree, agree, strongly agree). The scores for each response are summed with the addition of 24 as a constant to eliminate negative scores (Levenson, 1981). Possible scores on each subscale range from 0 to 48. Higher scores on each of the subscales indicates an individual preference for that specific personal control belief.

The I, P, and C Scale has been used within a variety of populations from diverse ethnic and socioeconomic backgrounds including college students, adults, psychiatric patients, and prisoners (Lefcourt, 1991). Internal reliability studies using the Kuder-Richardson statistic have included students ($n = 152$) and adults ($n = 115$). The reliabilities for the student sample were 0.64 for the I subscale, 0.77 for the P subscale, and 0.78 for the C subscale (Levenson, 1974). Similar results were reported in the adult sample: 0.51 for the I subscale, 0.72 for the P subscale, and 0.73 for the C subscale (Wallston, Wallston, & DeVellis, 1978). Test-retest reliabilities ranged between 0.60 and 0.79 with a 1-week interval, and 0.66 to 0.73 in a 7-week interval (Lefcourt, 1991). In this study, the initial Cronbach's alpha was 0.33 for the I subscale, 0.65 for the P subscale, and 0.61 for the C subscale. After deletion of one item per subscale, the subsequent Cronbach alpha scores for the subscales were as follows: I (0.39), P (0.69), and C (0.68)

Validity of the I, P, and C Scales has been demonstrated through convergent and discriminant methods (Lefcourt, 1991). The P and C subscales have been found to correlate with each other from 0.41 to 0.60, and the P and C subscales correlated with the I subscale between -0.25 and 0.19. The P and C subscales correlated with Rotter's Internal-External Locus of Control Scale (Rotter, 1966) with values of 0.25 and 0.56, while the I subscale correlated negatively ($r = -0.41$) (Lefcourt, 1991). The P and C subscales would be expected to positively correlated to each other since both beliefs reflect a "source of control external to the self" (Levenson, 1981, p. 23). In this study, the P and C subscales correlated with each other at 0.51 ($p < 0.001$), P with I (0.14, $p = 0.15$), C with I (0.11, $p = 0.26$). According to Levenson (1981), the I subscale would be expected to be negatively correlated with external sources of control (P and C). That was not the case in this study.

Norbeck Social Support Questionnaire. The Norbeck Social Support Questionnaire (NSSQ) (Norbeck, Linsdsey, & Carrieri, 1981) (Appendix B) is designed to measure perceived social support. The NSSQ is a 9-item instrument that is formatted to provide the participant with an opportunity to list the persons who provide personal support and then answer 8 questions specific to each identified person. The first 6 of the 8 questions includes 3 subscales: affirmation, affect, and aid. Each subscale contains two questions. A 5-point rating scale is used (not at all, a little, moderately, quite a bit, a great deal) for the first 6 questions. Two additional questions focus on the duration of the relationship and frequency of contact with each identified support provider. These two questions are also scored using a 5-point rating scale, however, each rating scale is specific to the question. The last question addresses possible recent losses of important relationships that the individual may have experienced. Scores are summed, with higher scores indicating higher support. The NSSQ has been used during pregnancy in low-income African American women ($N = 111$) in a study that examined attachment, social support, life stress, anxiety, and psychological well-being (Zachariah, 2009).

Test-retest reliability of the NSSQ using a 1-week interval yielded a range of 0.85 to 0.92 (Norbeck, Linsdsey, & Carrieri, 1981). Concurrent and construct validity have been established (Norbeck, Linsdsey, & Carrieri, 1981) using the Social Support Questionnaire (Schaefer, Coyne, & Lazarus, 1981), Profile of Mood States (McNair, Lorr, & Doppleman, 1971), and the Life Experiences Survey (Sarason, Johnson, & Siegel, 1978). Affect, affirmation, and aid correlated significantly with the emotional subscale

of the Social Support Questionnaire ($p < 0.001$, $p < 0.001$, $p < 0.05$ respectively) (Norbeck, Linsdsey, & Carrieri, 1981). Although none of the mood subscales correlated significantly with the NSSQ subscales (range: 0.03 - 0.10), there was a significant relationship ($p < 0.05$) between total loss and the depression subscale ($r = 0.24$) and confusion subscale ($r = 0.26$) (Norbeck, Linsdsey, & Carrieri, 1981). Gigliotti (2006) performed a confirmatory factor analysis of situation-specific NSSQ items and determined that the NSSQ is reliable (6-items: $\alpha = 0.97$; affect = 0.98, affirmation = 0.97, aid = 0.91) and valid in situation-specific circumstances. The NSSQ has been used with diverse ethnic and racial groups including African-American pregnant women (Norbeck, DeJoseph, & Smith, 1996; Zachariah, 2009). In this study, Cronbach alpha values were 0.86 (affect), 0.83 (affirmation), 0.84 (aid), 0.96 (total functional support), and 0.88 (total network).

Experiences of Discrimination. The Experiences of Discrimination (EOD) (Krieger, 1990; Krieger & Sidney, 1996; Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005) (Appendix C) instrument is used to assess two components of racial discrimination: experiences of racial discrimination and response to unfair treatment (Krieger, 1990). Two items relate to response to unfair treatment and 9 items focus on self-reported experiences of racial discrimination. Internal reliability was determined by Cronbach's alpha of 0.74 or greater among African-American ($n = 159$), Latino ($n = 249$), and European-American ($n = 208$) populations (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). All the items for experiences of discrimination were positively correlated, with inter-item correlations ranging from 0.14 to 0.53 and factor analysis indicating a single underlying factor (Kreiger et al., 2005). These findings support the use of the EOD as a valid and reliable self-report measure of racial discrimination (Krieger et al., 2005). In this study, Cronbach's alpha was 0.82.

Demographics and Personal Characteristics Questionnaire. A researcher-developed tool (Appendix E) was used to obtain data regarding maternal demographic and personal characteristics. These characteristics included maternal age, gestational age, marital and partner status, household composition, total household income, educational level, subjective social status, employment, pregnancy intention, birth control use, and choice of health care provider.

Data Collection Procedure

Potential participants were invited to participate by written invitation and/or flyers posted at each of the study locations. Letters of invitation describing the study were distributed by staff members (receptionist, clerk) of Grace Ross Health Clinic, University Health Physician group locations, and/or Labor Reception Center to all potential participants in their third trimester of pregnancy. For women who met the study criteria, the study was explained in detail, all questions answered, and informed consent obtained by the researcher. A survey packet containing the I,P& C Scales, NSSQ, EOD, PSEQ-II, and the Demographic and Personal Characteristics Questionnaire was provided for each of the participants. To account for possible low literacy, the investigator used the structured interview process and read each question aloud to participants. Each questionnaire was color-coded with matching cue cards that contained specific survey response options for each question on the instrument. Each participant was provided with cue cards to refer to as questions were read aloud. Upon completion of the surveys, each participant was provided with a \$10.00 Target gift card, and entered into a drawing for a \$150.00 Target gift card. The drawing for the \$150.00 Target gift card was held at the conclusion of data collection.

Human Subject Protection

Permission to conduct the study was obtained from the Wayne State University Human Investigation Committee prior to data collection. All data packets were coded with an identification number to maintain privacy and confidentiality of all participants. Although the potential for anxiety related to thoughts and feelings generated by answering survey questions existed, risk to participants was minimal.

Data Analysis

Data analysis was performed according to the data analysis plan outlined by Polit and Beck (2012), which includes the preanalysis phase and analysis phase. In the preanalysis phase, data were coded and entered in SPSS 20. Following data entry, data were inspected for outliers and irregularities. Once the data analysis file was set up, data were cleaned, and preliminary assessments were initiated. Preliminary assessments included an evaluation to determine missing values, data quality, bias, and assumptions for inferential tests (Polit & Beck, 2012). Once the preliminary assessments were performed, preliminary actions were undertaken.

Preliminary actions in the data analysis included performing needed transformations and recodes, and addressing missing values (Polit & Beck, 2012). The next steps in the data analysis plan were the principal analyses. Principal analyses include the performance of descriptive statistical analyses, bivariate inferential statistical analyses, multivariate analyses, and needed ad hoc tests. The interpretive phase was the last step of the data analyses. The analyses were integrated and synthesized and any needed supplementary interpretive analyses performed (Polit & Beck, 2012).

The principal analyses included a variety of statistical tests. Descriptive statistics used included frequency distributions, percentages, means and standard deviations, and inclusive ranges as appropriate for the level of the data. Descriptive statistics were performed on the demographic and personal characteristic variables. Chi-square, Pearson's correlation analysis, *t*-test, and ANOVA were used to determine the significance of the relationship among the variables. Spearman rank correlation coefficient was considered for variables if the normality assumptions were not met. The specific aims are listed below with the statistical method(s) relevant to the variables being studied.

Specific Aim 1: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship status with father of the baby, planned pregnancy, model of health care during pregnancy and education among urban African American primiparas. Relationships among the variables were examined using Pearson's Product Moment Correlation (*r*) (2-tailed), *t*-test, or ANOVA as appropriate.

Specific Aim 2: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship status with father of the baby, model of health care during pregnancy and planned pregnancy among urban African American primiparas. Relationships among the variables were examined using chi square, *t*-test, or ANOVA as appropriate.

Specific Aim 3: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship status with father of the baby, education, planned pregnancy, model of health care during pregnancy and psychosocial adaptation to pregnancy among urban African American primiparas. Relationships among continuous variables were examined using Pearson's Product Moment Correlation (*r*) (2-tailed).

Relationships among the variables were examined using *t-test* or ANOVA as appropriate. Multiple regression equations were utilized to evaluate the potential impact of the variables on psychosocial adaptation to pregnancy. In predicting psychosocial adaptation to pregnancy, step-wise regression analysis was used to obtain the optimal model.

CHAPTER 5

RESULTS OF DATA ANALYSIS

In this chapter, the results of the statistical analyses used to describe the sample and test hypotheses are presented. First, the characteristics of the sample will be described. Following that, the results of each hypothesis will be presented and summarized.

Description of the Sample

A total of 109 African-American primiparas participated in the study. Demographic characteristics are presented in Table 1. Ages of the participants ranged from 18 to 42 years, with a mean of 21.94 years ($SD = 4.31$) and over 60% of the sample ($n = 66$) were between the ages of 18 – 21 years old. Gestational age ranged from 34 to 41 weeks with a mean of 37.72 ($SD = 1.96$). Educational level of the participants ranged from completion of 8th grade to completion of two years of graduate school ($Mean = 12.22$, $SD = 1.53$, $Median = 12$). Over three fourths of the sample were high school graduates (76%, $n = 74$), with 27.5% of the participants ($n = 30$) having completed at least one year of post-secondary education.

Seventy-seven percent of the participants ($n = 84$) reported their marital status as married or single with a partner. Women who reported their status as single with a partner comprised the largest group (69.7%, $n = 76$). Living arrangements included living with partner, parent(s), siblings, other relatives, friend(s), or alone. The majority of the participants reported that they were currently living with their parents (45%, $n = 49$). The largest group of participants who reported their marital status as single with a partner reported they lived with their parents (32%, $n = 35$), followed by the group who reported living with their partner (24%, $n = 26$). Categories of main sources of income include self, partner, parent(s), other relatives, Family Independence Agency (FIA), and other. FIA was the major source of income for almost 30% of the participants (28%, $n = 31$). About 20% of the participants were employed (22%). Although over half (58%, $n = 63$) of the participants reported an income of less than \$10,000, only about 40% (42%, $n = 46$) stated the income was not adequate to meet daily needs. Sixty-seven (61%) of the participants reported that they had experienced discrimination.

Table 1

<i>Characteristics of the Sample (N = 109)</i>					
Variable	Number	Mean	SD	Minimum	Maximum
Maternal age	109	21.94	4.31	18	42
Gestational age	109	37.72	1.96	34	41
Education	109	12.22	1.53	8	18
Marital Status	Frequency	%			
Married	8	7.3			
Separated	1	0.9			
Single with Partner	76	69.7			
Single without Partner	16	14.7			
Other	8	7.3			
Living Arrangements	Frequency	%			
Partner	36	33			
Parent(s)	49	45			
Siblings	1	0.9			
Other Relatives	8	7.3			
Friends	4	3.7			
Alone	11	10.1			
Income Source	Frequency	%			
Self	19	17.4			
Partner	28	25.7			
Parent(s)	19	17.4			
Other Relatives	4	3.7			
FIA	31	28.4			
Other	8	7.3			
Employment	Frequency	%			
Yes	24	22			
No	85	78			
Household Income	Frequency	%			
\$10,000 or under	63	57.8			
\$10,001 - \$30,000	30	27.5			
\$30,001 - \$50,000	9	8.3			
\$50,001 - \$70,000	5	4.6			
\$70,001 and over	2	1.8			
Subjective Income – Income Enough	Frequency	%			
Yes					
No					
Discrimination	Frequency	%			
Experiences	67	61			
Frequency	67	61			
Partner Status	Frequency	%			
With FOB	80	73.4			
Not with FOB	29	26.6			
Social Support Source	Frequency	%			
Partner	71	65			
Mother	96	88			
Grandmother	27	25			
Pregnancy #	Frequency	%			
1	61	56			
2	34	31.2			
3 or more	14	12.8			
<i>Characteristics of the Sample (cont.)</i>					
Planned Pregnancy	Frequency	%			
Yes, very much so	17	15.6			
Somewhat	15	13.8			
No, not at all	77	70.6			
Using Birth Control	Frequency	%			
Yes	23	21.1			
No	86	78.9			
Health Care Model	Frequency	%			
Certified Nurse-Midwife	51	46.8			
Physician	58	53.2			

Data collected on personal characteristics included relationship status with father of baby, number of pregnancies, pregnancy planning, birth control use, and model of health care during pregnancy. Almost three quarters of the participants (73.4%, $n = 80$) reported they were currently in a relationship with the father of the baby. Fifty-six percent of the women reported that the current pregnancy was their first ($n = 61$), while 44% reported that the current pregnancy was at least their second ($n = 48$), with the prior pregnancies resulting in spontaneous or voluntary terminations. Although only about 15% of the participants ($n = 17$) reported the current pregnancy was planned, 78.9% ($n = 86$) used no birth control methods to prevent pregnancy. Nearly half of the women ($n = 51$, 46.8%) received prenatal care from a Certified Nurse-Midwife, and 58 (53.2%) received their care from a physician.

Specific Aim 1: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with father of the baby, planned pregnancy, model of health care during pregnancy and education among urban African American primiparas.

Hypothesis 1a: There is a relationship between socioeconomic status and education. Hypothesis 1a was partially supported. Household income level was significant for education ($F = 3.12$, $p = 0.02$). Table 2 displays the average educational levels associated with income levels. Most of the participants reported an income level less than \$10,000 ($n = 63$, 58%). The mean educational level for that group of participants was 11.87 ($SD = 1.29$), which is below the overall mean of the sample ($M = 12.22$, $SD = 1.53$). The mean educational level for participants in the highest income category (\$70,000 or above) was 14.00 ($SD = 2.83$). No significant differences were found between women who stated that their income was “enough” and those who stated it was not (Table 3).

Hypothesis 1b: There is a relationship between experiences of discrimination and education. Hypothesis 1b was supported. Experiences of discrimination was significantly associated with education ($r = 0.29$, $p = 0.002$) (Table 4).

Hypothesis 1c: There is a relationship between frequency of discrimination and education. Hypothesis 1c was supported. Frequency of discrimination was significantly associated with education ($r = 0.26$, $p = 0.007$) (Table 4).

Hypothesis 1d: There is a relationship between personal control beliefs and education. Hypothesis 1d was partially supported. The personal control belief of chance demonstrated a significant negative correlation to education ($r = -0.35, p < 0.0001$), while no significant relationships were

Table 2

<i>ANOVA Analysis: Income Level, or Planned Pregnancy, and Education</i>					
Variable	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p value</i>
Income Level				3.12	0.02
\$10,000 or under	63	11.87	1.29		
\$10,001 - \$30,000	30	12.47	1.61		
\$30,001 - \$50,000	9	12.67	1.50		
\$50,001 - \$70,000	5	13.60	2.30		
\$70,001 and over	2	14.00	2.83		
Planned Pregnancy				5.51	0.005
Yes, very much so	17	13.29	2.09		
Somewhat	15	12.20	0.94		
No, not at all	77	11.99	1.39		

found between the personal control beliefs of internality or powerful others and education (Table 4).

Hypothesis 1e: There is a relationship between social support as provided by the womans' partner, mother, or grandmother and education. Hypothesis 1e was partially supported. The only social support source variable significant with education was partner (affirmation) ($r = 0.19, p = 0.05$). None of the support variables associated with support sources of mother and grandmother demonstrated significance (Table 4).

Table 3

<i>T-test Analysis: Income Enough, or Relationship with FOB, or Model of Health Care, and Education</i>					
Variable	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>p value</i>
Income Enough				-1.63	0.11
Yes	63	12.41	1.71		
No	46	11.96	1.21		
Relationship with FOB				-2.07	0.04
With FOB	80	12.40	1.54		
Not with FOB	29	11.72	1.41		
Model of Health Care				1.46	0.15
Certified Nurse-Midwife	51	12.00	1.10		
Physician	58	12.41	1.82		

Hypothesis 1f: There is a relationship between relationship status with the father of the baby and education. Hypothesis 1f was supported. A current relationship with the father of the baby was significantly associated with education ($t = 2.07, p = 0.04$) (Table 3).

Hypothesis 1g: There is a relationship between planned pregnancy and education. Hypothesis 1g was supported. Planned pregnancy was significantly associated with education ($F = 5.51, p = 0.005$) (Table 2).

Table 4

Correlation Analysis: Discrimination, or Personal Control Beliefs, or Social Support, and Education (N = 109)

Variables	<i>r</i>	<i>p value</i>
Discrimination		
Experiences	0.29	0.002
Frequency	0.26	0.007
Personal Control Beliefs		
Internality	0.14	0.15
Powerful Others	-0.18	0.07
Chance	-0.35	<0.0001
Social Support		
Partner (Affect)	0.18	0.06
Partner (Affirmation)	0.19	0.05
Partner (Aid)	0.16	0.09
Mother (Affect)	0.07	0.45
Mother (Affirmation)	0.09	0.37
Mother (Aim)	0.09	0.37
Grandmother (Affect)	0.05	0.61
Grandmother (Affirmation)	0.09	0.35
Grandmother (Aid)	0.07	0.45

Hypothesis 1h: There is a relationship between model of health care during pregnancy and education. Hypothesis 1h was not supported in this study. No significant relationship was determined between model of health care during pregnancy and education (Table 3).

Specific Aim 2: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with father of the baby, model of health care during pregnancy, and planned pregnancy among urban African-American primiparas.

Table 5

Chi square Analysis: Income Level, or Income Enough, or Relationship with FOB, or Model of Health Care, and Planned Pregnancy (N = 109)

Variable	χ^2	<i>p Value</i>
Income Level	8.67	0.37
Income Enough	0.66	0.72
Relationship with FOB	10.34	0.006
Model of Health Care	1.64	0.44

Hypothesis 2a: There is a relationship between socioeconomic status and planned pregnancy. Hypothesis 2a was not supported. No significant relationships were identified in either measures of socioeconomic status: income level or income enough, and planned pregnancy (Table 5).

Hypothesis 2b: There is a relationship between experiences of discrimination and planned pregnancy. Hypothesis 2b was not supported. No significant relationship was identified (Table 6).

Hypothesis 2c: There is a relationship between frequency of discrimination and planned pregnancy. Hypothesis 2c was supported. A significant relationship between frequency of discrimination and planned pregnancy was revealed ($F = 3.27, p = 0.04$) (Table 6).

Table 6

ANOVA Analysis: Discrimination, or Personal Control Beliefs, or Social Support, and Planned Pregnancy (N = 109)

Variable	F	p Value
Discrimination		
Experiences	2.07	0.17
Frequency	3.27	0.04
Personal Control Beliefs		
Internality	0.35	0.71
Powerful Others	2.11	0.13
Chance	1.33	0.27
Social Support		
Partner (Affect)	3.74	0.03
Partner (Affirmation)	4.29	0.02
Partner (Aid)	4.57	0.01
Mother (Affect)	0.20	0.82
Mother (Affirmation)	0.23	0.80
Mother (Aid)	0.41	0.66
Grandmother (Affect)	3.08	0.05
Grandmother (Affirmation)	3.10	0.05
Grandmother (Aid)	3.03	0.05

Hypothesis 2d: There is a relationship between personal control beliefs and planned pregnancy. Hypothesis 2d was not supported. No significant relationships were found between the personal control beliefs of internality, powerful others, chance, and planned pregnancy (Table 6).

Hypothesis 2e: There is a relationship between social support as provided by the woman's partner, mother, or grandmother and planned pregnancy. Hypothesis 2e was partially supported. Social support provided by the partner (affect: $F = 3.74, p = 0.03$; affirm: $F = 4.29, p = 0.02$; aid: $F = 4.57, p = 0.01$) and the grandmother (affect: $F = 3.08, p = 0.05$; affirm: $F = 3.10, p = 0.05$; aid: $F = 3.03, p = 0.05$) demonstrated significance. None of the mother-provided social support variables demonstrated significance with planned pregnancy (Table 6).

Hypothesis 2f: There is a relationship between relationship status with the father of the baby and planned pregnancy. Hypothesis 2f was supported. Relationship status with the father of the baby and planned pregnancy demonstrated a significant relationship ($X^2 = 10.34, p = 0.006$) (Table 5).

Hypothesis 2g: There is a relationship between model of health care during pregnancy and planned pregnancy. Hypothesis 2f was not supported. No significant relationship was found between model of health care during pregnancy and planned pregnancy (Table 5).

Specific Aim 3: To examine relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with father of the baby, education, model of health care during pregnancy, planned pregnancy and psychosocial adaptation to pregnancy among urban African-American primiparas.

Table 7

ANOVA Analysis: Income Level, or Planned Pregnancy, and Psychosocial Adaptation to Pregnancy (N = 109)

Variable	WELLBEING	ACCEPT	IDROLE	LBRPREP	FEAR	R-MOTHER	R-PARTNER	TOTAL
Income Level								
<i>F</i>	2.51	0.84	0.82	1.92	0.38	1.76	1.19	0.86
<i>p Value</i>	0.80	0.50	0.52	0.11	0.83	0.14	0.32	0.49
Planned Pregnancy								
<i>F</i>	1.14	8.11	2.94	0.80	1.49	0.04	3.00	4.84
<i>p Value</i>	0.32	0.001	0.06	0.45	0.23	0.97	0.05	0.01

Hypothesis 3a: There is a relationship between socioeconomic status and psychosocial adaptation to pregnancy. Hypothesis 3a was not supported. No significant relationships were found between the objective (income level)(Table 7) or subjective (income enough) (Table 8) indicators of socioeconomic status and any of the domains or the total PSEQ-II score.

Table 8

T-Test Analysis: Income Enough, or Relationship with FOB, or Model of Health Care, and Psychosocial Adaptation to Pregnancy (N = 109)

Variable	WELLBEING	ACCEPT	IDROLE	LBRPREP	FEAR	R-MOTHER	R-PARTNER	TOTAL
Income Enough								
<i>t</i>	1.07	0.43	0.45	1.84	1.48	0.64	1.55	1.74
<i>p Value</i>	0.29	0.67	0.65	0.07	0.14	0.53	0.13	0.09
Relationship with FOB								
<i>t</i>	1.18	2.95	1.04	1.35	1.27	0.73	5.65	3.71
<i>p Value</i>	0.24	0.004	0.30	0.18	0.21	0.47	<0.0001	<0.0001
Model of Health Care								
<i>t</i>	2.38	1.71	2.09	1.14	0.005	2.20	1.20	2.54
<i>p Value</i>	0.02	0.09	0.04	0.26	0.99	0.03	0.23	0.01

Hypothesis 3b: There is a relationship between experiences of discrimination and psychosocial adaptation to pregnancy. Hypothesis 3b was partially supported. Experiences of discrimination significantly correlated with the domain of identification with motherhood role ($r = 0.19$, $p < 0.05$) (Table 9). The positive correlation indicates lower psychosocial adaptation to pregnancy.

Table 9

Correlation Analysis: Discrimination, or Personal Control Beliefs, or Social Support, or Education, and Psychosocial Adaptation to Pregnancy (N = 109)

Variable	WELLBEING	ACCEPT	IDROLE	LBRPREP	FEAR	R-MOTHER	R-PARTNER	TOTAL
Discrimination Experiences	0.06	0.04	0.19*	-0.07	-0.01	0.17	-0.08	0.07
Frequency	0.09	0.03	0.24*	-0.04	-0.02	0.12	-0.06	0.07
Personal Control Beliefs Internality	-0.06	-0.05	-0.08	-0.11	-0.11	-0.12	-0.06	-0.13
Powerful Others	0.30**	0.21*	0.32**	-0.02	0.05*	-0.08	0.18	0.22*
Chance	0.37**	0.26**	0.38**	0.05	0.22*	-0.06	0.35**	0.36**
Social Support Partner (Affect)	-0.17	-0.20*	-0.20*	-0.12	-0.11	0.07	-0.57**	-0.31**
Partner (Affirm)	-0.18	-0.18	-0.18	-0.18	-0.14	0.09	-0.55**	-0.30**
Partner (Aid)	-0.14	-0.18	-0.21*	-0.11	-0.10	0.06	-0.58**	-0.30**
Mother (Affect)	-0.01	-0.10	0.02	-0.17	0.05	-0.55**	-0.15	-0.22*
Mother (Affirm)	-0.03	-0.14	-0.02	-0.14	0.07	-0.65**	-0.12	-0.25**
Mother (Aid)	0.00	-0.09	0.05	-0.20*	0.00	-0.53**	-0.01	-0.21*
Grandmother (Affect)	0.06	0.05	0.10	0.16	0.02	0.04	0.10	0.12
Grandmother (Affirm)	0.00	-0.03	0.05	0.13	-0.04	0.02	0.08	0.04
Grandmother (Aid)	0.04	0.02	0.08	0.16	-0.02	0.03	-0.10	0.09
Education	-0.27**	-0.16	-0.11	-0.24*	-0.27**	-0.01	-0.05	-0.25**

* $p < 0.05$

** $p < 0.01$

Hypothesis 3c: There is a relationship between frequency of discrimination and psychosocial adaptation to pregnancy. Hypothesis 3c was partially supported. Frequency of discrimination demonstrated a significant positive relationship with the domain of identification with motherhood role ($r = 0.24$, $p < 0.05$) (Table 9). No other significant relationships were identified with the total PSEQ-II score or any of the other domains.

Hypothesis 3d: There is a relationship between personal control beliefs and psychosocial adaptation to pregnancy. Hypothesis 3d was partially supported. The personal control belief of powerful others demonstrated a significant relationship with the domains of wellbeing ($r = 0.30$, $p < 0.01$),

acceptance ($r = 0.21, p < 0.05$), identification with motherhood role ($r = 0.32, p < 0.01$), and the overall PSEQ-II score (total) ($r = 0.22, p < 0.05$) (Table 9). The personal control belief of chance demonstrated significant relationships with the following domains: wellbeing ($r = 0.37, p < 0.01$), acceptance ($r = 0.26, p < 0.05$), identification with motherhood role ($r = 0.38, p < 0.01$), and relationship with partner ($r = 0.35, p < 0.01$). The personal control belief of chance also was significantly correlated with the total PSEQ-II score ($r = 0.36, p < 0.01$) (Table 9). It should be noted that all significant correlations of psychosocial adaptation to pregnancy and the personal control beliefs of powerful others and chance are positive correlations, indicating lower psychosocial adaptation to pregnancy.

Hypothesis 3e: There is a relationship between social support as provided by the woman's partner, mother, or grandmother and psychosocial adaptation to pregnancy. Hypothesis 3e was partially supported. Results are displayed in Table 9. Social support as provided by the partner demonstrated significance in the following domains: acceptance (affect: $r = -0.20, p < 0.05$), identification with motherhood role (affect: $r = -0.20, p < 0.05$)(aid: $r = -0.21, p < 0.05$), relationship with partner (affect: $r = -0.57, p < 0.01$)(affirm: $r = -0.55, p < 0.01$)(aid: $r = -0.58, p < 0.01$) and the total PSEQ-II score (affect: $r = -0.31, p < 0.01$)(affirm: $r = -0.30, p < 0.01$)(aid: $r = -0.30, p < 0.01$). Social support provided by the mother demonstrated significance in the following domains: labor preparation (aid: $r = -0.20, p < 0.05$), relationship with mother (affect: $r = -0.53, p < 0.01$)(affirm: $r = -0.65, p < 0.01$)(aid: $r = -0.53, p < 0.01$) and the total PSEQ-II score (affect: $r = -0.22, p < 0.05$)(affirm: $r = -0.24, p < 0.01$)(aid: $r = -0.21, p < 0.05$). Support provided by the grandmother did not demonstrate significance for any of the domains or the total score for psychosocial adaptation to pregnancy.

Hypothesis 3f: There is a relationship between relationship status with the father of the baby and psychosocial adaptation to pregnancy. Hypothesis 3f was partially supported. Having a relationship with the father of the baby demonstrated significant relationships with the following domains: acceptance ($t = 2.95, p = 0.004$) and relationship with partner ($t = 5.65, p < 0.0001$), as well as the total PSEQ-II score ($t = 3.71, p < 0.0001$)(Table 8).

Hypothesis 3g: There is a relationship between education and psychosocial adaptation to pregnancy. Education demonstrated significant negative relationships with 3 of the domains: wellbeing

($r = -0.27, p = 0.004$), labor preparation ($r = -0.24, p = 0.01$), and fear ($r = -0.27, p = 0.005$), as well as the total PSEQ-II score ($r = -0.25, p = 0.008$)(Table 9). Significant negative correlations indicate greater psychosocial adaptation to pregnancy.

Hypothesis 3h: There is a relationship between planned pregnancy and psychosocial adaptation to pregnancy. Hypothesis 3h was partially supported. Planned pregnancy demonstrated significant relationships with 2 of the domains: acceptance ($F = 8.11, p = 0.001$) and relationship with partner ($F = 3.00, p = 0.05$) and the total PSEQ-II score ($F = 4.84, p = 0.01$)(Table 7).

Hypothesis 3i: There is a relationship between model of health care during pregnancy and psychosocial adaptation to pregnancy. Hypothesis 3i was supported. The midwifery model of health care during pregnancy was significantly associated with wellbeing ($t = 2.38, p = 0.02$), identification with motherhood role ($t = 2.09, p = 0.04$), relationship with mother ($t = 2.20, p = 0.03$), and the total PSEQ-II score ($t = 2.54, p = 0.01$)(Table 8).

Table 10

Regression Coefficients, Adjusted R² for Predictors of Psychosocial Adaptation to Pregnancy

	Unstandardized Coefficients		Standardized Coefficients		Sig.	Adj. R Square	Std. Error of the Estimate	F	Sig.
	B	Std. Error	Beta	t					
Model (Constant)	167.72	5.631		29.78	0.000	0.29	20.31	9.64	.000
Relationship with Father of Baby	-9.70	4.78	-0.18	-2.03	0.05				
PCB – Chance	0.96	0.26	0.30	3.62	0.000				
Planned Pg	-5.85	2.77	-0.18	-2.11	0.04				
Model of Health Care	-11.42	3.97	-0.24	-2.88	0.005				
Mother (Affirm)	-1.30	0.62	-0.18	-2.10	0.04				

Hypothesis 3j: Socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support including relationship with the father of the baby, education, planned pregnancy, and model of health care during pregnancy are significant predictors of psychosocial adaptation to pregnancy. Variables that demonstrated significance with the total PSEQ-II score were entered into the regression equation to determine which of the variables fit within the best model for predictors of psychosocial adaptation to pregnancy: personal control beliefs of chance and powerful others, relationship with the father of the baby, planned pregnancy, model of health care during

pregnancy, education, and social support provided by the partner (affect, affirm, aid) and mother (affect, affirm, aid). Five variables predicted psychosocial adaptation to pregnancy and included: personal control belief of chance, relationship with the father of the baby, planned pregnancy, model of health care during pregnancy, and social support provided by the mother (specifically affirmation). Each of the five variables were significantly associated with psychosocial adaptation to pregnancy and cumulatively explained 29% of the variance. Statistical results of the regression analysis are presented in Table 10.

Summary

The results of the statistical analyses that were used to describe the sample and test the hypotheses have been presented in this chapter. Among the variables examined to test Hypothesis 1, income level, experiences and frequency of discrimination, personal control belief of chance, social support provided by the partner (affirmation), relationship with the father of the baby, and planned pregnancy demonstrated significant relationships with education. Statistical analyses to test Hypothesis 2 revealed significant relationships between frequency of discrimination; social support provided by the partner (affect, affirmation, aid) and the grandmother (affect, affirmation, aid); relationship with the father of the baby; and planned pregnancy. Five predictors of psychosocial adaptation to pregnancy were identified during statistical analysis for Hypothesis 3: personal control belief of chance, social support provided by the mother (affirmation), relationship with the father of the baby, planned pregnancy, and model of health care. Specifically, the personal control belief of chance predicted lower adaptation to pregnancy. Social support from the mother (affirmation), a relationship with the father of the baby, planned pregnancy, and receiving care from a Certified Nurse-Midwife predicted higher adaptation to pregnancy. A discussion of the findings, implications for practice, and recommendations for future research is presented in Chapter 6.

CHAPTER 6

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was: 1) to examine predictors of psychosocial adaptation to pregnancy among urban African-American primiparas, and 2) to explore relationships among socioeconomic status, experiences of discrimination, personal control beliefs, social support, planned pregnancy, education, and model of health care during pregnancy among urban African-American primiparas. In this chapter, the results of this study are discussed as well as implications and recommendations for further research. Clausen's (1986) four classes of influence affecting the transition to motherhood: environmental opportunities and obstacles, personal attributes, social support, and personal effort, serve as the organizing framework for this discussion of predictors of psychosocial adaptation to pregnancy.

Environmental Opportunities and Obstacles

Environmental opportunities and obstacles include socioeconomic status and experiences of discrimination. Neither subjective socioeconomic status (income enough) or the participant's household income level demonstrated significance with any domain of psychosocial adaptation to pregnancy. Almost 60% of the participants reported their household income level as less than \$10,000, which is below the poverty threshold of \$11,484 as identified by the U.S. Census Bureau (2012) for a family of one. Since most of the participants ($n = 98$, 89.9%) reported living in households with more than one member, the actual number of participants whose household income falls below the poverty threshold may be much higher. Poverty is an economic stressor that exposes women to additional social stressors (Dailey & Humphreys, 2010). Social stressors are defined as "adverse circumstances encountered in everyday life that impacts health and well-being" (Dailey & Humphreys, p. 204).

Discrimination is an additional social stressor affecting African-American women (Dailey & Humphries, 2010; Dominguez, Dunkel-Schetter, Hobel, & Sandman, 2008; Greer, 2011). Of the 109 women who participated in the study, 67 reported they had experienced discrimination (61.4%), while 42 (38.6%) reported that they had never experienced racial discrimination. Both experiences of discrimination and frequency of discrimination were significantly positively correlated with the domain of identification with a motherhood role. A positive correlation indicates lower adaptation to pregnancy. Results of this study demonstrate a significant positive correlation between experiences of discrimination

and frequency of discrimination, and education. Literature suggests that individuals with higher education experience greater discrimination due to increased interactions with people of European-American ethnicity (Dailey, Kasl, Holford, Lewis, & Jones, 2010; Sigelman & Welch, 1991).

At the end of the data collection session, each participant was asked if she had any questions in regards to the study. In response to this question, a small group of participants asked why they were being questioned about situations in which they would never place themselves. When asked to elaborate, the participants stated that they lived, worked, shopped, and socialized only in locations where they felt comfortable and free from discrimination. Perspectives of the participants are important considerations when interpreting study results regarding experiences of discrimination. In this study, reports that the woman had not experienced discrimination and the number of times that discrimination was experienced may not represent absence of discrimination, but the result of successful strategies used to avoid discrimination. This perspective is supported by Shorter-Gooden (2004), who found that African-American women use avoidant strategies when facing potential discriminatory situations. Fear of discrimination, instead, may be viewed as a constant stressor that significantly restricted opportunities and life experiences for several participants in this study. According to Dominguez et al. (2008), discrimination is pervasive in the lives of African-American women and negatively affects well-being. Clark, Anderson, Clark, and Williams (1999) cautioned researchers not to underestimate the significance of exposure to subtle racism and how these subjective experiences are appraised.

Another factor that must be considered when interpreting results regarding discrimination is the potential underreporting of racial discrimination to a researcher of a different racial background. The investigator in this study was European-American. Social desirability, in combination with the sensitive nature of the topic, may have contributed to the findings about the experiences and frequency of discrimination (Barnes et al, 2008). It is unclear how many women used an avoidant strategy when faced with potential discrimination.

Personal Attributes.

Personal attributes include the personal control beliefs of internality, chance, and powerful others. Internality did not demonstrate a significant relationship with any of the other variables. A personal control belief of internality would be expected to contribute to higher psychosocial adaptation to pregnancy. It is

possible that given the low internal reliability of the Internality Scale, it did not actually measure concepts associated with a belief that events, experiences, and outcomes can be controlled by the individual herself. The personal belief of chance demonstrated a significant negative correlation with education indicating higher education was associated with less reliance on an external source of control. The personal control beliefs of chance and powerful others correlated positively with domains of well being, acceptance, identification with a motherhood role, and the total PSEQ-II score. These findings indicate that personal control beliefs that focus on external sources of control contribute negatively to psychosocial adaptation to pregnancy. Keeton, Perry-Jenkins, and Sayer (2008) found lower levels of anxiety and depression could be predicted by sense of internal control.

Social Support.

Social support includes the amount, type, and availability of social support. This study considered the source of support (partner, mother, grandmother) as well as the type of support (affect, affirmation, aid). Affect support refers to the level of love, respect, and/or admiration provided to the woman by a listed source (Norbeck, Linsdsey, & Carrieri, 1981). Affirmation support refers to the woman's perception that her named source of support serves as a confidante and agrees or supports her actions and/or thoughts (Norbeck et al.). The third type of support, aid, refers to the level of tangible support the woman expects from specific sources (Norbeck et al.).

Social support provided by the partner and the woman's mother were significantly correlated with higher psychosocial adaptation to pregnancy, while support provided by the woman's grandmother was not significantly correlated with any of the PSEQ-II domains or the total score. Specifically, affect support from the *partner* was associated with acceptance of pregnancy, identification with the mothering role, relationship with partner, and the total PSEQ-II score. Affirmation support was associated with relationship with partner and the total PSEQ-II score. Support, in the form of aid, was associated with identification of the mothering role. These findings are supported in the literature by Weis, Lederman, Lilly, and Schaffer (2008), who found partner presence improved psychosocial adaptation to pregnancy. In this study, both affect and affirmative support by the woman's mother were associated with relationship with mother and total PSEQ-II score. Aid was associated with the domains of preparation for labor, relationship with mother, and total PSEQ-II score. Taken together, these findings indicate social support

provided by the woman's partner and mother contribute significantly to greater psychosocial adaptation to pregnancy. Literature suggests increased social support results in greater psychosocial adaptation to pregnancy (Choi et al, 2012; Chou et al., 2007; Sieber et al., 2006), contributes to well-being in pregnancy (Zachariah, 2009), and serves as a protective mechanism from daily stress (Agrouch, Reisine, Lim, Sohn, & Ismail, 2010).

While this study did not examine the quality or length of the relationships among the women and their partners, it did examine the association between being in a relationship with the father of the baby and psychosocial adaptation to pregnancy. Women who reported that they were in a relationship with the father of the baby demonstrated greater psychosocial adaptation to pregnancy based on total PSEQ-II scores. However, studies that compared women without partners to women with unsupportive partners, found that mothers without partners were at increased risk for adverse birth outcomes (Young & Declercq, 2010). Additionally, other studies that examined unsupportive partners found mothers were at higher risk for antenatal depression than mothers without partners (Bilszta et al., 2008) and had a negative effect on the health of mothers (Newsome, Mahan, Rook, & Kraus, 2008).

Families in which the parents are not married at the time of the baby's birth are considered fragile families (Hummer & Hamilton, 2010). The family structure of nearly 93% ($n = 101$) of the women in this study would fit the category of a fragile family. Fragile families have fewer socioeconomic resources and increased relationship instability among new parents (Hummer & Hamilton, 2010). Relationship status varies among fragile families and may include parents who never had a close, committed relationship; parents who have ended a close, committed relationship; and those who are currently involved in a committed relationship (McHale, Waller, & Pearson, 2012). The study reported here did not examine the type of relationship between the women and their partners.

Personal Efforts.

Personal efforts are under the control of the individual and are motivated by a desire to achieve specific goals (Clausen, 1986). Personal efforts include education, planned pregnancy, and model of health care during pregnancy. The associations among education, planned pregnancy, and relationship status with the father of the baby found in this study are supported by Finer and Henshaw (2006) who

reported that unplanned pregnancies were reported more often in women who were African-American, unmarried, and less educated.

Although, in this study, few of the pregnancies were planned ($n = 17$, 15.6%), most of the participants ($n = 86$, 78.9%) reported they did not use contraception to prevent pregnancy. It was expected that a personal control belief based on external influences (chance or powerful others) would have a significant negative relationship with planned pregnancy, and the personal control belief of internality would have a significant positive relationship with planned pregnancy. No significant relationships were found between planned pregnancy and any of the personal control beliefs. The lack of significant findings of a relationship among unplanned pregnancy and personal control beliefs focused on external sources of control is supported in the literature (Bryant, Nakagawa, Gregorich, & Kupperman, 2010). Nettleman, Brewer, and Ayoola (2007) performed a qualitative study to explore the reasons for unprotected intercourse among women who did not intend to become pregnant. Findings indicated that pregnancy prevention requires more consideration than simply contraceptive methods.

In this study, planned pregnancy demonstrated significant relationships with increased frequency of discrimination, relationship with the father of the baby, and all measures of social support provided by the woman's partner and grandmother. The significant finding of a relationship between planned pregnancy and social support provided by the grandmother is a new finding and supports the importance of extended family support in this sample of urban African-American primiparas. However, grandmother support was not related to psychosocial adaptation to pregnancy.

The midwifery model of health care during pregnancy demonstrated a significant relationship with psychosocial adaptation to pregnancy. Qualitative studies have examined the characteristics of healthcare providers that are important to African-American women (Dale, Polivka, Chaundry, & Simmonds, 2010; Lori, Yi, & Martyn, 2010). Four themes emerged in the Lori, et al. study and included: quality patient-provider communication, continuity of care, respectful treatment, and compassionate care. The Dale et al. study found similar characteristics were important to African-American women including communication style, understanding and listening skills, and genuine interest. An additional characteristic that was important in this group was female gender of the health care provider (Dale et al.). Midwifery

care offers continuity of care and focuses on the development of a relationship between provider and recipient of care.

Predictors of Psychosocial Adaptation to Pregnancy.

Twelve variables demonstrated significant overall relationships with psychosocial adaptation to pregnancy. Overall, higher adaptation was associated with social support provided by the partner (affect, affirmation, aid) and mother (affect, affirmation, aid), relationship with the father of the baby, planned pregnancy, education, and the midwifery model of health care. Lower adaptation was associated with the personal control beliefs of chance and powerful others. The regression model in this study included five variables that explained 29% of the variance. Predictors of psychosocial adaptation to pregnancy among urban African-American primiparas included the personal control belief of chance, relationship with the father of the baby, planned pregnancy, affirmative social support provided by the mother and model of health care during pregnancy. Earlier studies examining predictors of psychosocial adaptation to pregnancy identified social support as a significant predictor (Choi et al, 2012; Chou et al., 2008; Sieber et al., 2006). Additionally, planned pregnancy was identified as a predictor in the Chou et al. study, and low partner support predicted lower psychosocial adaptation to pregnancy in the Sieber et al. study. The study reported here has identified two new predictors of psychosocial adaptation to pregnancy: affirmation support provided by the woman's mother and midwifery care.

Study limitations include convenience sampling and the cross-sectional design of the study. The potential influence of the European-American ethnicity of researcher and social desirability regarding the sensitive topic of discrimination must also be considered when interpreting results of this study. Low reliability on the Internality Scale limits its use in identifying significant relationships with other variables.

Implications and Recommendations

Women's experiences during pregnancy can influence birth and the transition to motherhood (Nakamura, 2009). Psychosocial adaptation to pregnancy, as a key component of the transition to motherhood (Lederman & Weis, 2009) was predicted by the personal control belief of chance, a relationship with the father of the baby, planned pregnancy, affirmative social support provided by the woman's mother, and midwifery care. Knowledge of predictors enables health care providers to develop, implement, and evaluate interventions focused on the unique needs of urban African-American

primiparas. One such intervention is promoting the supportive involvement of the father of the baby with the new mother during pregnancy. Fagan (2008) demonstrated benefits of a prenatal group intervention for young expectant unmarried fathers to foster co-parenting communication and support for the mother. Assessment of the living arrangements, partner status, and quality and length of time in a relationship with the father of the baby are important considerations when planning care for pregnant women. The mother's family of origin may present barriers to father's involvement, especially if she is living with her parents (Perry, 2009). Since many of the participants in this study reported living with their parents and being in a relationship with the father of the baby, health care providers could develop assessment tools and interventions to support this important relationship. Assessing the level and type of support available to the primiparas by their mothers is an additional area of focus for nursing.

Another area of intervention is pregnancy planning. One of the objectives of Healthy People 2020 is to increase the proportion of intended pregnancies from a national average of 51% to a goal of 56% (Healthy People 2020, 2012). According to data provided by Healthy People 2020, African-American women have an intended pregnancy rate of 31%. Knowledge of barriers and effective contraceptive methods in this population of women are needed before the intended pregnancy rate can increase. Midwifery care offers individualized health care in partnership with women and is well-suited to the development, implementation, and evaluation of interventions focused on effective contraception for women who seek to prevent pregnancy. Additional research is needed to explore the multidimensional aspects of successful pregnancy prevention. Psychosocial adaptation to pregnancy is greater in women with planned pregnancies. This study provides a foundation for further research on the role of grandmothers and the support they provide in relation to planned pregnancies.

Although socioeconomic factors and experiences and frequency of discrimination did not predict psychosocial adaptation to pregnancy in this study, additional studies are needed to determine the effects of socioeconomic challenges and discrimination on the transition to motherhood for African-American women. The study reported here provides further evidence of a relationship with the father of the baby and planned pregnancy as predictors of psychosocial adaptation to pregnancy. This study is the first to identify midwifery care and affirmation support provided by the woman's mother as predictors of psychosocial adaptation to pregnancy. More research is needed to identify specific features of midwifery

care that contribute to psychosocial adaptation to pregnancy. African-American families value children (Hill, 2001) and view the mothering role as intergenerational (Blake & Darling, 2000; Koniak-Griffin et al., 2006). The significance of the woman's mother as a specific source of support may be characteristic of urban African-American primiparas. Further research is needed to determine if the importance of the primipara's mother as a source of affirmative support is unique to this population, or is common among women from ethnic groups that highly value children and see the mothering role as intergenerational.

As 71% of the variance in psychosocial adaptation to pregnancy remains unexplained by the predictive model in this study, further research is needed to identify additional predictors of psychosocial adaptation to pregnancy among urban African-American primiparas. This study has added two new predictors to the existing body of literature regarding psychosocial adaptation to pregnancy and explored predictors of adaptation in a previously unstudied population, urban African-American primiparas.

APPENDIX A

I, P, AND C SCALES

-3	-2	-1	+1	+2	+3
STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE

1. Whether or not I get to be a leader depends on my ability.
2. To a great extent my life is controlled by accidental happenings.
3. I feel like what happens in my life is mostly determined by powerful people.
4. Whether or not I get into a car accident depends mostly on how good a driver I am.
5. When I make plans, I am almost certain to make them work.
6. Often there is no chance of protecting my personal interests from bad luck happenings.
7. When I get what I want, it's usually because I'm lucky.
8. Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power.
9. How many friends I have depends on how nice a person I am.
10. I have often found that what is going to happen will happen.
11. My life is chiefly controlled by powerful others.
12. Whether or not I get into a car accident is mostly a matter of luck.
13. People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups.
14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.
15. Getting what I want requires pleasing those people above me.
16. Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time.
17. If important people were to decide they didn't like me, I probably wouldn't make many friends.
18. I can pretty much determine what will happen in my life.
19. I am usually able to protect my personal interests.
20. Whether or not I get into a car accident depends mostly on the other driver.
21. When I get what I want, it's usually because I worked hard for it.
22. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.
23. My life is determined by my own actions.
24. It's chiefly a matter of fate whether or not I have a few friends or many friends.

APPENDIX B

NORBECK SOCIAL SUPPORT QUESTIONNAIRE

List each significant person in your life on the right. Consider all the persons who provide personal support for you or who are important to you now.

Personal Network

First name or initials	Relationship
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

For each person you listed, please answer the following questions by writing in the number that applies.

- 1 = not at all
- 2 = a little
- 3 = moderately
- 4 = quite a bit
- 5 = a great deal

Question 1:

How much does this person make you feel liked or loved?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 2:

How much does this person make you feel respected or admired?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 3:

How much can you confide in this person?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 4:

How much does this person agree with or support your actions or thoughts?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 5:

If you needed to borrow \$10, get a ride to the doctor, or some other immediate help, how much could this person usually help?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 6:

If you were confined to bed for several weeks, how much could this person help you?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

- 1 = less than 6 months
- 2 = 6 to 12 months
- 3 = 1 to 2 years
- 4 = 2 to 5 years
- 5 = more than 5 years

- 1 = once a year or less
- 2 = a few times a year
- 3 = monthly
- 4 = weekly
- 5 = daily

Question 7:

How long have you known this person?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Question 8:

How frequently do you usually have contact with this person? (phone calls, visits or letters)

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

9. During the past year, have you lost any important relationships due to moving, a job change, divorce or separation, death, or some other reason?

- _____ 0 = No
- _____ 1 = Yes

IF YES,

9a. Please indicate the number of persons from each category who are *no longer available* to you.

- _____ spouse or partner
- _____ family members or relatives
- _____ friends
- _____ work or school associates
- _____ neighbors
- _____ health care providers
- _____ counselor or therapist
- _____ minister/priest/rabbi
- _____ other (specify)

9b. Overall, how much of your support was provided by these people who are no longer available to you?

- _____ 0 = None at all
- _____ 1 = a little
- _____ 2 = a moderate amount
- _____ 3 = quite a bit
- _____ 4 = a great deal

APPENDIX C**EXPERIENCES OF DISCRIMINATION (EOD)**

(Krieger, 1990; Krieger & Sidney, 1996; Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005)

Directions

This next section is going to ask about how you and others like you are treated, and how you typically respond:

If you feel you have been treated unfairly, do you usually: (please select the best response):

1. accept it as a fact of life
2. try to do something about it

If you have been treated unfairly, do you usually: (please select the best response)

1. talk to other people about it
2. keep it to yourself

Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your race, ethnicity, or color? If yes, how many times did this happen?

	No	Yes	Once	2-3	4 or more
1. At school?	A	B	C	D	E
2. Getting hired or getting a job?	A	B	C	D	E
3. At work?	A	B	C	D	E
4. Getting housing?	A	B	C	D	E
5. Getting medical care?	A	B	C	D	E
6. Getting service in a store or restaurant?	A	B	C	D	E
7. Getting credit, bank loans, or a mortgage?	A	B	C	D	E
8. On the street or in a public setting?	A	B	C	D	E
9. From the police or in the courts?	A	B	C	D	E

APPENDIX D

PRENATAL SELF-EVALUATION QUESTIONNAIRE (PSEQ-II)

(Lederman, 2006)

Directions

The statements below have been made by expectant women to describe themselves. Read each statement and decide which response best describes your feelings. Then circle the appropriate letter next to each statement.

	(4) Very Much So	(3) Moder- ately So	(2) Some- what So	(1) Not at All
1. This is a good time for me to be pregnant.	A	B	C	D
2. I like to watch other parents and children together.	A	B	C	D
3. I can bear the discomforts I've had with this pregnancy.	A	B	C	D
4. My husband/partner and I talk of the coming baby.	A	B	C	D
5. My husband/partner criticizes me during this pregnancy.	A	B	C	D
6. I feel that raising children is rewarding.	A	B	C	D
7. I feel I need to know what happens in labor.	A	B	C	D
8. I can cope well with pain.	A	B	C	D
9. It's hard to get used to the changes that come with pregnancy.	A	B	C	D
10. My husband/partner is understanding (calms me) when I get upset.	A	B	C	D
11. I think I can do well during labor.	A	B	C	D
12. I think my labor and delivery will be normal.	A	B	C	D
13. I believe there is nothing I can do to prepare for labor.	A	B	C	D
14. My mother shows interest in the coming baby.	A	B	C	D
15. I am confident that I can maintain emotional control in labor.	A	B	C	D
16. I am worried that the baby will be abnormal.	A	B	C	D
17. I think the worst when I have a pain.	A	B	C	D
18. Realizing that labor will end will help me maintain control.	A	B	C	D
19. I look forward to caring for the baby.	A	B	C	D
20. My mother is happy about my pregnancy.	A	B	C	D
21. My mother offers helpful suggestions.	A	B	C	D
22. I have enjoyed this pregnancy.	A	B	C	D
23. My husband/partner is interested in discussing the pregnancy with me.	A	B	C	D

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|---|---|---|---|---|
| 24. I have a good idea of what to expect during labor and birth. | A | B | C | D |
| 25. I understand how to work with the contractions in labor. | A | B | C | D |
| 26. I look forward to giving birth. | A | B | C | D |
| 27. I am afraid the doctors and nurses will not listen to my concerns in labor. | A | B | C | D |
| 28. It's easy to talk to my mother about my problems. | A | B | C | D |
| 29. I wonder whether I can be a good mother. | A | B | C | D |
| 30. I worry about all the problems the baby might have. | A | B | C | D |
| 31. My mother looks forward to this grandchild. | A | B | C | D |
| 32. I am glad I'm pregnant. | A | B | C | D |
| 33. I like having children around me. | A | B | C | D |
| 34. It will be hard for me to balance childcare with everything else I do. | A | B | C | D |
| 35. My husband/partner helps me at home when I need it. | A | B | C | D |
| 36. My husband/partner is willing to talk about changes in our sex life. | A | B | C | D |
| 37. I feel good when I'm with my mother. | A | B | C | D |
| 38. I am preparing myself for labor. | A | B | C | D |
| 39. I am concerned that I will lose control in labor. | A | B | C | D |
| 40. I can count on my husband/partner's support in labor. | A | B | C | D |
| 41. I am afraid that I will be harmed during delivery. | A | B | C | D |
| 42. I feel that caring for babies might not be much fun. | A | B | C | D |
| 43. My husband/partner thinks I bother him with my feelings and problems. | A | B | C | D |
| 44. When we get together, my mother and I tend to argue. | A | B | C | D |
| 45. It will be difficult for me to give enough attention to a baby. | A | B | C | D |
| 46. I think the baby will be a burden to me. | A | B | C | D |
| 47. I feel prepared for what happens in labor. | A | B | C | D |
| 48. I know some things I can do to help myself in labor. | A | B | C | D |
| 49. When the time comes in labor, I'll be able to push even if it's painful. | A | B | C | D |
| 50. I have ideas about the kind of mother I want to be. | A | B | C | D |
| 51. I am anxious about complications occurring in labor. | A | B | C | D |
| 52. I feel that the stress of labor will be too much for me to handle. | A | B | C | D |
| 53. I think I can bear this discomfort of labor. | A | B | C | D |
| 54. I am concerned that caring for a baby will leave me little | A | B | C | D |

- time for myself.
- | | | | | |
|--|---|---|---|---|
| 55. My mother reassures me when I have doubts about myself. | A | B | C | D |
| 56. I feel well informed about labor. | A | B | C | D |
| 57. I am worried that something will go wrong during labor. | A | B | C | D |
| 58. It's difficult to accept this pregnancy. | A | B | C | D |
| 59. My mother encourages me to do things in my own way. | A | B | C | D |
| 60. I think my husband/partner would say he is satisfied with the
sexual adjustment we have made during this pregnancy. | A | B | C | D |
| 61. This has been an easy pregnancy. | A | B | C | D |
| 62. I wish I wasn't having the baby now. | A | B | C | D |
| 63. I worry that I will lose the baby in labor. | A | B | C | D |
| 64. If I lose control in labor, it will embarrass me. | A | B | C | D |
| 65. My mother criticizes my decisions. | A | B | C | D |
| 66. I'm having problems adjusting to this pregnancy. | A | B | C | D |
| 67. I wonder if the baby will like me. | A | B | C | D |
| 68. I focus on all the terrible things that could happen in labor. | A | B | C | D |
| 69. This pregnancy has been a source of frustration to me. | A | B | C | D |
| 70. I can count on my husband/partner to share in the care of the
baby. | A | B | C | D |
| 71. I am confident that I will have a normal childbirth. | A | B | C | D |
| 72. I feel that childbirth is an exciting event. | A | B | C | D |
| 73. I feel I already love the baby. | A | B | C | D |
| 74. I have found this pregnancy gratifying. | A | B | C | D |
| 75. I believe I can be a good mother. | A | B | C | D |
| 76. I have regrets about being pregnant at this time. | A | B | C | D |
| 77. I find many things about pregnancy disagreeable. | A | B | C | D |
| 78. I feel I will enjoy the baby. | A | B | C | D |
| 79. I am happy about this pregnancy. | A | B | C | D |

APPENDIX E

DEMOGRAPHICS AND PERSONAL CHARACTERISTICS

1. What is your date of birth? _____ (month/day/year) Age: _____ years
2. When is your baby due? _____ (month/day/year) Gest. Age: _____ weeks
3. How do you describe yourself? (Check one).
 - a. _____ Married
 - b. _____ Separated
 - c. _____ Single with a partner
 - d. _____ Single without a partner
 - e. _____ Widowed
 - f. _____ Divorced
 - g. _____ Other
4. Are you with the father of the baby? Yes No
5. Who do you currently live with? (Check all that apply.)
 - a. _____ Partner/Husband
 - b. _____ Parent(s)
 - c. _____ Brothers or Sisters
 - d. _____ Other Relatives
 - e. _____ Friend(s)
 - f. _____ No one (live alone)
6. Highest completed grade?
 - a. High School Grades: 8 9 10 11 12
 - b. College (years): 1 2 3 4
 - c. Graduate School (years): 1 2 3 4 5 6
7. Are you currently employed? Yes No
8. What is your current employment level?
 - a. _____ Full-time
 - b. _____ Part-time
 - c. _____ Not Working
9. Would you say your income is enough to meet your everyday needs? Yes No
10. Who (what) is your main source of financial support?
 - a. _____ Me – my job(s)
 - b. _____ Partner/Husband
 - c. _____ Parents or Guardian
 - d. _____ Other Relatives
 - e. _____ Family Independence Agency
 - f. _____ Other (describe)

11. What amount best describes your total current household income?
- \$10,000 or less
 - \$10,001 - \$30,000
 - \$30,001 - \$50,000
 - \$50,001 - \$70,000
 - \$70,001 or more
12. How many times have you been pregnant (including the current pregnancy)?
- 1
 - 2
 - 3 or more
13. Was this a planned pregnancy?
- Yes, Very much so
 - Somewhat
 - Not at all
14. Is this pregnancy wanted? Yes No
15. Were you using any birth control methods to prevent pregnancy? Yes No
16. If so, what method(s) did you use when you became pregnant? (Circle all that apply).
- Condoms
 - Diaphragm
 - IUD
 - Pills
 - Shot
 - Patch
 - Withdrawal
 - Rhythm
 - None
17. What is your religious affiliation?
- _____ Christian, specify _____
 - _____ Jewish
 - _____ Muslim
 - _____ Other, specify _____
 - _____ None
18. How many times do you attend religious services?
- More than once/week
 - About once/week
 - 1 -2 times a month
 - On major holidays only
 - Seldom or never

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ABSTRACT**PREDICTORS OF PSYCHOSOCIAL ADAPTATION TO PREGNANCY AMONG
URBAN AFRICAN-AMERICAN PRIMIPARAS**

by

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Psychosocial adaptation to pregnancy among urban African-American women has not been well-researched. The purpose of this study was to examine predictors of psychosocial adaptation to pregnancy and to explore relationships among socioeconomic status, experiences and frequency of discrimination, personal control beliefs, social support, planned pregnancy, and model of health care among urban African-American primiparas using life course theory and Lederman's model of psychosocial adaptation to pregnancy as the framework.

One hundred and nine women participated in this descriptive, cross-sectional, correlational study. Participants were recruited from three clinical sites that provided care using medical and/or midwifery models of care. Study variables were measured using the Prenatal Self-Evaluation Questionnaire – II; Internality, Powerful Others, and Chance Scales; Norbeck Social Support Questionnaire; Experiences of Discrimination instrument; and a researcher-developed Demographics and Personal Characteristics Questionnaire.

Descriptive and inferential statistics were used to describe the sample and identify predictors of psychosocial adaptation to pregnancy. Higher adaptation was associated with social support received from the woman's partner or mother, a relationship with the father of the baby, planned pregnancy, and receiving care from a Certified Nurse-Midwife. Lower adaptation to pregnancy was associated with the personal control belief of chance. Five variables predicted psychosocial adaptation to pregnancy and explained 29% of the variance: personal control belief of chance, current relationship with father of the baby, planned pregnancy, midwifery model of care, and affirmation social support provided by the woman's mother.

Knowledge of predictors of psychosocial adaptation to pregnancy assists health care providers to develop and implement intervention strategies to assess relationships important to urban African-American first-time mothers and provide needed support during the transition to motherhood. This study explored predictors of adaptation in a previously unstudied population, urban African-American primiparas; and added two new predictors to the existing body of literature regarding psychosocial adaptation to pregnancy: affirmation support provided by the woman's mother, and midwifery care.

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