2011

Beyond Race and Ethnicity: Predictors of Maternal Depressive Symptoms Across the Transition to Parenthood

Aya Kwegyirba-Kaiser Ghunney

University of Massachusetts Amherst, aghunney@psych.umass.edu

BEYOND RACE AND ETHNICITY: PREDICTORS OF MATERNAL DEPRESSIVE

SYMPTOMS ACROSS THE TRANSITION TO PARENTHOOD

A Thesis Presented

by

AYA KWEGYIRBA-KAISER GHUNNEY

Submitted to the Graduate School of the
University of Massachusetts, Amherst in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE

February 2011

Clinical Psychology

BEYOND RACE AND ETHNICITY: PREDICTORS OF MATERNAL DEPRESSIVE

SYMPTOMS ACROSS THE TRANSITION TO PARENTHOOD

A Thesis Presented

by

AYA KWEGYIRBA-KAISER GHUNNEY

Approved as to style and content by:

_____

Maureen Perry-Jenkins, Chair

_____

Enobong Hannah Branch, Member

_____

Elizabeth Harvey, Member

_____

Melinda Novak, Department Head
Psychology

ABSTRACT

BEYOND RACE AND ETHNICITY: PREDICTORS OF MATERNAL DEPRESSIVE

SYMPTOMS

February 2011

AYA KWEGYIRBA-KAISER GHUNNEY, B.S. UNIVERSITY OF MARYLAND

BALTIMORE COUNTY

M.S. UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Maureen Perry-Jenkins

This study investigated whether ethnic identity, financial and educational resources, and social support predicted levels and trajectories of maternal depressive symptoms above and beyond racial and ethnic categories. A sample of Black, Latina, and White working class mothers were interviewed at five time points during the first year of parenthood. Findings indicated that Latina mothers experienced significantly higher levels of depressive symptoms compared to Black mothers at the final time point. There was a significant interaction between race and ethnic identity in predicting symptoms such that Latino mothers saw an increase in the growth rate of symptoms compared to White mothers. Perceived social support from family was associated lower levels of symptoms at Time 5. Additionally, occupational prestige moderated the relationship between race and depressive symptoms. Compared to Latina mothers, Black mothers with high occupational prestige experienced a significant decline in depressive symptoms across the first year of parenthood and this change occurred more rapidly than for Latina mothers. There was also a trend for the interaction between ethnic identity and education predicting maternal depressive symptoms Mothers with high ethnic identity and more education experienced a rapid decline in

depressive symptoms across the transition to parenthood compared other mothers. These

findings highlight the importance of understanding the unique experiences of people of

different racial and ethnic groups.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

The transition to parenthood is a stressful and challenging period of time for most new parents, a time that has the potential to place parents and children at risk for negative outcomes (Cowan & Cowan, 1995, 2000). Researchers have found that the transition to parenthood is often linked to declines in psychological well-being, with increases in depression and anxiety occurring for both mothers and fathers (Perren, von Wyl, Burgen, Simoni, & von Klitzing, 2005). The National Institute of Health (2005) estimates that 50-80% of new mothers experience the "baby blues" characterized by feelings of anxiety, sadness, and anger which typically are alleviated within 7-10 days after childbirth. In contrast, postpartum depression involves more severe feelings of sadness, anxiety, and despair and occurs in 10-15% of women. Women who experience postpartum depression have a 50% of chance it reoccurring after subsequent childbirths; and they may also be at a greater risk for experiencing depression not related to pregnancy. Fathers have also been shown to experience depressive symptoms related to having a new child. The limited research in this vein indicates that the prevalence of paternal postpartum depression ranges from 10.1% to 28.6% (Goodman, 2004). Although a large literature has explored the predictors of new parents' well-being, only a limited number of studies have focused on the sociocultural factors that may shape parents' experiences across the transition to parenthood, factors such as race, ethnicity, and social class.

Historically, the populations most often studied in the transition to parenthood literature have been White, middle class parents. Far less is known about how new parenthood is experienced in different ways by parents of diverse races, ethnicities, and

social classes (Bronfenbrenner, 1986; Bronfenbrenner & Evans, 2000). The question of how race and ethnicity in particular, may differentially shape new parents' mental health outcomes is important. The United States is a multicultural society; thus it is essential that our research reflect the experiences of not only Whites but of people of all racial and ethnic backgrounds. A significant challenge, however, in studying race and ethnicity is the continued debate among scholars as to the meaning and conceptualization of these constructs in research. The primary goal of the current project is to examine the relationship between race and ethnicity and new parents' depressive symptoms with a critical eye towards the conceptualizations of both race and ethnicity.   In addition, the current study will examine the role of other related constructs, such as ethnic identity, social support and socioeconomic status (SES) indicators, as more substantive and meaningful factors than "race" or "ethnicity" to predict depressive symptoms.

In the following review, I will first address how race and ethnicity have been conceptualized in the psychological literature. I then review the research documenting links between race, ethnicity and depressive symptoms and discuss how race and ethnicity, taken alone, are not sufficient to explain differences in depressive symptomology in new mothers. I will then address how the use of more substantive constructs, specifically, ethnic identity, financial and educational resources, and social supports, may account for differences in maternal depressive symptoms beyond race and ethnicity.

CHAPTER 2

LITERATURE REVIEW

Conceptualizations of Race, Ethnicity, and Culture

The United States is becoming increasingly diverse (U.S. Census Bureau, 2001;

2007). As a result, there is a need to consider the influence of sociocultural factors, such as

race, ethnicity, social class, and gender in psychological research. Although race, in

particular, has been frequently used to explain differences in psychological phenomena

(Betancourt & López, 1993; Helms, Jernigan, & Mascher, 2005), the construct is often not

explicitly defined in research. Moreover, when race is defined, the definitions often vary

greatly, making the interpretation of findings difficult (Brown, Sellers, Brown, & Jackson,

1999). For example, some researchers define race as a biological construct, rooted in genes,

while others adopt a view that race is socially constructed (Brown, Sellers, Brown, &

Jackson, 1999; Helms, Jernigan, & Mascher, 2005); a distinction that will be discussed in

more detail later in this review.

In the U.S., the white majority group has a history of and presently imposes their

authority on minority racial groups. People of color have experienced a history of

discrimination in the United States as a function of their races. In a large national study of

adults between the ages of 25 and 74, 24.8% of Blacks and 17.4% of other people of color

reported experiencing day- to-day discrimination compared to 3.4% of Whites (Kessler,

Mickelson, & Williams, 1999). Additionally, 89.7% of Blacks and 76.6% of other people of

color attributed their experiences of discrimination to race and ethnicity, compared to only

21.1% of Whites. Research indicates that the experience of discrimination is a significant

stressor that is associated with negative mental health implications (Williams & Mohammed,

2009). To truly understand the impact of racial categories on individuals, it is important to first understand what we mean when we say race.

When defined in biological terms, race refers to an inbreeding group of people within a geographic area who share physical characteristics such as hair texture, facial features and skin color (Betancourt & López, 1993; Markus, 2008; Zuckerman, 1990). In contrast, Markus (2008) argues that as a social construct, race is a set of institutionalized ideas and practices that divide people into groups based on perceived physical and behavioral characteristics. These groups hold differential power, value, and privilege with certain groups being subject to prejudice and oppression as a result. Adding to the controversy in defining race is the fact that race and ethnicity are often used interchangeably, despite being conceptualized quite differently in the literature. Ethnicity pertains to a set of ideas and practices that permits people to identify within group divisions based on real and presumed common attributes including language, nationality, history, religion, and physical features (Betancourt & López, 1993; Markus, 2008). In the psychological literature, ethnicity and culture have also been used interchangeably even though the definitions suggest that culture reflects the values and meanings of an ethnicity. More specifically, "culture" as used in psychology refers to social norms, values, beliefs, attitudes, and behaviors (Betancourt & López, 1993; Phinney, 1996).

Over the past decade, a compelling literature has emerged documenting the controversy over biological and social definitions of race and ethnicity. Interestingly, these debates are not only theoretical. One only needs to look at the Census Bureau's system of categorization of race and ethnicity, as well as their caution that their race and ethnic categories are "sociopolitical constructs and should not be interpreted as being scientific or

anthropological in nature," to see the very real challenge in conceptualizing race and ethnicity (U.S. Census Bureau, 2006).

The racial and ethnic categories used by the Census Bureau emerged from federal standards established by the Office of Management and Budget (OMB). According to the Bureau's definitions, race and Hispanic origin (what some call ethnicity) are two unique concepts (Grieco & Cassidy, 2001). According to the OMB standards, there are only two ethnic categories: (1) of Spanish, Hispanic, or Latino origin, and (2) not of Spanish, Hispanic, or Latino origin. Those indicating that they are of Spanish, Hispanic, or Latino origin must then identify as Cuban, Mexican, Puerto Rican, or part of some other Spanish/Hispanic/Latino group (Grieco & Cassidy, 2001, U.S. Census Bureau, 2006). It is important to note that people of Spanish/Hispanic/Latino can be of any race.

Turning to racial categories, the OMB requires that a minimum of five racial categories be used: American Indian or Alaskan Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White (Grieco & Cassidy, 2001, U.S. Census Bureau, 2006). The Census Bureau also includes a sixth category entitled, "Some Other Race." People may select all the racial groups they belong to. Interestingly, only people who identify as American Indian or Alaskan Native, Asian, and Some Other Race can indicate their specific tribe, origin, or race. Respondents' written responses are examined and placed under the appropriate racial category based on definitions of what it means to be of a certain race. For example, White refers to "people having origins in any of the original peoples of Europe, the Middle East, or North Africa." Black or African American refers to "people having origins in any of the Black racial groups of Africa."

Although this system of categorization appears relatively clear and concise, in application, many complications arise. For example, many individuals of Hispanic or Latino origin have difficulty identifying with a particular race. In research by Perry-Jenkins (2003), the majority of the Hispanic or Latino participants reported Hispanic or Latino (or their specific heritage) as both their race and ethnicity. Thus, even when race and ethnicity are explicitly defined and conceptualized as separate constructs, problems exist in applying these categories to individuals' lived experiences.

Both race and ethnicity are dynamic constructs which can change across time and place. A recent example of how these constructs can change is the "racialization" of people of Middle Eastern descent (Markus, 2008). Previously considered an ethnic group, the events of 9/11 led to an increase in discrimination against people of Middle Eastern background; and the group is now often thought of as a racial group. It is clear that race, ethnicity, and culture are related, but distinct, constructs. Yet, many researchers continue to use the U.S. Census Bureau's definitions for categorizing race and ethnicity, despite recognizing the shortcomings of this system, presumably in an effort to reflect a common and shared definition of the constructs. It is my contention, however, that this approach simplifies the complexities of race, ethnicity, and culture in our research and society.

Racial Categories and Depressive Symptoms

Research that examines relationships between race, ethnicity, and mental health has yielded contradictory findings. A few studies suggest that depression and depressive symptoms are more prevalent in Whites than in people of color. For example, using data from the National Health and Nutrition Examination Survey, Riolo, Nguyen, Greden, and King (2005), found that major depressive disorder was more prevalent in Whites than in

African-American and Mexican-American individuals. In another national study, the National Survey of American Life, researchers found that major depressive disorder was less prevalent in African American and Caribbean Blacks than in Whites (Williams et. al, 2007). However, African American and Caribbean Blacks with major depressive disorder reported more severe symptoms than Whites with major depressive disorder. Other studies have found no significant racial and ethnic differences in depressive symptoms. In a national study of depressive symptoms in females from late adolescence to early adulthood, researchers found no differences in symptoms between Black and White girls (Franko et. al, 2004). The vast majority of studies, however, indicate that people of color experience more depressive symptoms than Whites (e.g. Dunlop, Song, Lyons, Manheim, & Chang, 2003; Myers et. al, 2002; Plant and Sachs-Ericsson, 2004; Sachs-Ericsson, Plant, & Blazer, 2005; Skarupski et. al, 2005). In a study of clinically depressed African American, Caucasian, and Latina women, researchers found that Latina and African-American women were more severely depressed and endorsed more depressive symptoms than Whites (Myers et. al, 2002). Plant and Sachs-Ericsson (2004) found that in a large sample of American Indian, Black, Hispanic, and White adults, people of color experienced more depressive symptoms than Whites. Additionally, major depression was marginally more prevalent in people of color than in Whites.

Much of the research just reviewed relies on the use of large samples of participants who range in age from 15 to 94. The question of how mental health in general, and depression in particular, may vary across the life-course and across major life transitions deserves attention. For example, in a longitudinal study of depressive symptoms in Black and Caucasian girls, Franko and colleagues (2004) found no racial and ethnic differences in

depressive symptoms; however, they found that the relationship between race and depression was moderated by age. Depressive symptoms in Caucasian girls tended to decrease as they got older, while depressive symptoms in Black girls did not vary with age. The researchers posited that this finding might partially explain the mixed results in racial and ethnic differences in depressive symptoms. Specifically, the experience of depression among difference races and ethnicities might vary at different ages and life stages.

Turning more specifically to studies that focus on depressive symptoms across the transition to parenthood, the majority of studies investigating maternal depressive symptoms indicate that mothers of Color experience higher levels of symptoms than Whites (Howell, Mora, & Levanthal, 2006; Horwitz, Briggs-Gowan, Strofer-Isser, & Carter, 2007; Orr, Blazer, James, & Reiter, 2007; Rich-Edwards et. al, 2006). Recent data from the Pregnancy Risk Assessment Monitoring System (PRAMS), an ongoing project coordinated by the Centers for Disease Control and Prevention (CDC) and participating states, revealed that during 2004-2005 non-Hispanic, White mothers had a lower prevalence of postpartum depression than women of other racial and ethnic groups in 13 of the 16 states for which data was available (CDC, 2008). In a study of maternal depressive symptoms during late pregnancy and early postpartum, African American mothers experienced higher levels of depressive symptoms compared to White mothers, even after considering sociocontextual factors such as income, marital status, and education (Segre, Losch, & O'Hara, 2006. Similarly, in a study of early postpartum depressive symptoms, Black and Hispanic mothers reported depressive symptoms more often than White mothers (Howell, Mora, Horowitz, & Carol, 2006). While these studies indicate that depressive symptoms vary by racial and

ethnic categories, research suggests that other contextual factors beyond these categories play an important role in mothers' experiences of depressive symptoms.

<u>Beyond Racial and Ethnic Categories</u>

Most researchers recognize that racial categories alone do not sufficiently explain differences in women's depressive symptoms. In the majority of studies that examine racial and ethnic differences in mental health, many other constructs which might impact maternal depression such as income, education and social support are included as predictors. Findings from studies that examine race and ethnicity effects in conjunction with the aforementioned constructs demonstrate that race and ethnicity alone do not adequately explain depressive symptoms in mothers. It is of interest to note, however, that even when unique race and ethnicity effects are found, there is usually little explanation offered to explain the "race" results. Thus, questions arise as to how other factors, beyond the simple categorical construct of race/ethnicity, explain differences in depression across the transition to parenthood, as well as what the unique effects of race and/or ethnicity actually mean.

Yee, Fairchild, Weizmann, and Wyatt (1993) argue that the ambiguity that is associated with defining race "inhibits scientific research and theory in psychology." Despite the obvious problems with defining race and ethnicity, many researchers continue to use racial categories (e.g., White, Black, Hispanic) as independent variables (Helms, Jernigan, & Mascher, 2005) with little, if any, theoretical grounding (American Psychological Association, 2003; Helms, Jernigan, & Mascher, 2005). Helms, Jernigan, and Mascher (2005) argue that use of racial categories reflects researchers' beliefs about race that have little to do with participants' characteristics and behaviors. The American Psychological Association (2003) cautions psychologists to recognize that their personal beliefs and

9

attitudes may negatively impact how they view people of different races and ethnicities. Thus, variations in psychological phenomena attributed to race and/or ethnicity may simply reflect the subjective views that the researcher holds (Helms, Jernigan, & Mascher, 2005; Yee, Fairchild, Weizmann, & Wyatt, 1993). Moreover, the use of racial categorizations in research can result in inaccurate findings of group differences and similarities (Helms, Jernigan, &Mascher, 2005). For these reasons, several researchers have proposed alternatives to using the racial categories as independent variables in models, alternatives that might better explain psychological phenomena such as depression.

One such alternative is to use ethnicity and ethnic categories in place of race and racial categories (Betancourt & López, 1993; Phinney, 1996). Proponents of this approach suggest that the term ethnicity includes race. Thus, using ethnicity instead of race eliminates the confusion surrounding what researchers mean by race (Phinney, 1996). Phinney (1996) suggests that ethnicity can be thought of in three different ways that are relevant and useful in psychology. First, ethnicity can be and often is thought of as culture. So, psychologists can consider the norms, values, attitudes, and behaviors that are characteristic of a given ethnic group. Phinney (1996) recognizes that thinking about ethnicity as culture can be problematic because of heterogeneity within ethnic groups and acculturation. A second way to think about ethnicity focuses on ethnic identity and how strongly individuals identify with their ethnic group. Thus, the relationship between ethnicity and psychological outcomes may differ as a function of individuals' ethnic identities. Third, Phinney (1996) states that ethnicity can be thought of as minority status. Being part of an ethnic group is associated with a history and current experiences of discrimination, prejudice, and oppression for people of color which might impact psychological outcomes.

In proposing yet another alternative to the study of racial categorization, Helms, Jernigan, and Mascher (2005) recommend a methodological strategy which allows researchers to determine whether substantive constructs associated with ethnicity and cultural factors can replace racial categories. In this vein, Betancourt and Lopez (1993) proposed that examining specific social and cultural factors (e.g. income, values, education) that underlie racial categorizations enables researchers to investigate what about racial categories are related to the phenomenon they are studying. In addition to looking at ethnic and cultural factors, Helms et al. suggests that researchers replace racial categories with theory-driven constructs based on people's experiences of categorizing others or being categorized in a "racial" group (Helms, Jernigan, & Mascher, 2005). For example, based on a racism theory, a researcher might use "level of racism experienced" as an independent variable. In order to use Helm's methodological strategy, researchers should first identify a "conceptually meaningful", theory-based, independent variable with which to replace race. Researchers should then make theory-based predictions which explain how the independent and dependent variables of interest are related. The racial categories which researchers want to replace are included in statistical models to see if they account for unique variance above and beyond the more substantive independent variable.

In the strategy proposed by Helms, Jernigan, and Mascher (2005), any construct can be used to replace race as long as there is a firm theoretical basis. Additionally, there is a basic statistical framework for analyzing data. Phinney (1996) and Betancort and Lopez (1993) specify the use of social and cultural constructs but do not suggest any methodological techniques. Both approaches require researchers to think about why certain

constructs might be related to psychological phenomena, instead of just using racial categories.

Based on this review, it is apparent that there is no one "correct" way to conceptualize race or ethnicity. As a result, researchers need to be clear about their rationale for using a particular set of racial categories along with other more substantive variables. To this end, the present study will incorporate aspects of the approaches previously described and include not only racial/ethnic categories as predictors, but also theoretically-driven variables hypothesized to better predict variability in maternal depressive symptoms. Specifically, I will examine how ethnic identity, social support, and financial and educational resources predict maternal depressive symptoms above and beyond racial and ethnic categories.

Ethnic Identity, Race, and Depression

A number of scholars have argued that it is important to look past "race" as an independent variable to consider how one's racial and ethnic identity are linked to mental health. Identity is one of the most widely researched topics in psychology (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009); and the development of a clear sense of identity in adolescence and emerging adulthood is a fundamental developmental task that is critical in promoting psychological well-being (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). People from ethnically and culturally diverse backgrounds not only define who they are on a personal level, but on an ethnic-group level as well (Schwartz, Montgomery, & Briones, 2006) and therefore often develop a sense of personal identity and ethnic identity (Phinney, 1990, 2003). As a result of the increasing diversity in this country, psychologists have begun to pay more attention to the concepts of racial identity and ethnic identity as key components of a sense of self.

Just as it is difficult to distinguish between race and ethnicity, the concepts of racial identity and ethnic identity are difficult to tease apart. Racial identity involves ones sense of group identity as a function of a perceived shared heritage with a particular racial group (Helms, 2007). Though it is a social construct, racial identity is often thought of in terms of shared skin color. In contrast, ethnic identity has both individual and group components (Phinney & Ong, 2007) and has to do with commitment to a group with whom one shares a common culture and engagement in cultural practices, regardless of race (Helms, 2007).

Phinney (1992) proposed one of the most widely used models of ethnic identity. This model suggests that there are components of ethnic identity common across many ethnic groups. Phinney (1992) originally proposed that there are three elements of ethnic identity: 1) affirmation and belonging, 2) ethnic identity achievement, and 3) ethnic behaviors and practices. Affirmation and belonging is associated with an individuals' sense of membership to their ethnic group and their attitudes towards the group (Phinney, 1992; Roberts, et. al, 1999). Ethnic identity achievement is related to an individual achieving a secure sense of his or her ethnicity through exploration (Phinney, 1992; Phinney & Ong, 2007; Roberts, et. al, 1999). Ethnic behaviors and practices refer to an individuals' participation in cultural traditions and in social activities with other group members (Phinney, 1992; Roberts, et. al, 1999). This model is the basis of the Multigroup Ethnic Identity Measure (MEIM) which is described in detail in the measures section of this paper.

Using the MEIM, Roberts and colleagues (1999) modified the components of ethnic identity originally proposed by Phinney (1992), collapsing them into two: 1) affirmation and belonging and 2) exploration. Affirmation and belonging combines the original elements of affirmation and belonging and ethnic identity achievement. Thus, affirmation and belonging

refers to an individual's sense of group membership to his or ethnic group, commitment to their group, and his or her positive attitudes about the group. The second component of ethnic identity is exploration which involves exploring and learning about an individuals' ethnic group. Involvement in activities related to one's ethnic group, originally known as ethnic behaviors and practices, is also part exploration. It is important to note that the revision of Phinney's model retains all the elements of ethnic identity proposed in the original. The main differences are the addition of exploration as part of ethnic identity and the refinement of the structure of the model. Thus, it is not unusual for researchers to refer to both the original and revised components of this ethnic identity model.

Although the literature is limited, a handful of researchers have examined the relationship between ethnic identity and depressive symptoms. Many of these studies have focused on ethnic identity within a particular racial/ethnic group. For example, in a study of Filipino Americans, Mossakowski (2003) investigated how ethnic identity was related to levels of depression and perceived discrimination. The results indicated that a strong sense of ethnic identity was associated with lower levels of depression. Additionally, ethnic identity buffered the relationship between perceived discrimination and depression, such that a strong ethnic identity lessened the negative impact of racial/ethnic discrimination on depression.

Yasui, Dorham and Dishion (2004) conducted one of the few studies that looked at the relationship between ethnic identity and depressive symptoms in African-American and European-American youth. They examined the role of ethnic identity as a protective factor for positive psychological adjustment. Their findings revealed that lower ethnic identity was related to higher levels of depression for both African-American and European-American adolescents. Those who had negative attitudes or were uncommitted to their ethnicity were

14

more likely to experience negative psychological outcomes, including experiencing increased depressive symptoms. For African-American youth only, having less ethnic identity achievement was a significant predictor of negative psychological adjustment, depression and other internalizing problems.

From a developmental perspective, questions about identity begin to arise during adolescence (Cowan, 1991). This may explain why many of the studies investigating the relationship between ethnic identity and depression have been conducted with adolescent and young adult samples (e.g. McMahon & Watts, 2002; Simons et. al, 2002). However, it is likely that questions about identity are continually raised during key life transitions, including during the transition to parenthood (Cowan, 1991). New parents are not only thinking about their own new identities as parents but also about the identity of their child and their family. Thus, it is reasonable to assume that ethnic identity may be especially salient during this life course transition, as parents begin to think about beliefs and values they might want to instill in their child. The current study will be among the first to examine the relationship between ethnic identity and maternal depressive symptoms across the transition to parenthood. In contrast to the limited research on ethnic identity and mental health among new mothers, a large literature has arisen examining how SES indicators, specifically income, education, and occupational prestige, play a role in maternal depressive symptoms.

Financial and Educational Resources, Race, Ethnicity, and Depression

Many scholars have posited that one reason for the increased risk for maternal depression in racial and ethnic minority mothers may be because racial/ethnic minorities are more likely to have limited financial and educational resources than Whites. In 2007, the

15

poverty rate for Whites was 8.7%, compared to 24.5%, 21.5% and 10.2% for Blacks,

Hispanics and Asians, respectively (DeNavas-Walt, Proctor, & Smith, 2008). In addition,

Hispanic households had a median family income which was 70% of the median income of

Whites, while Black households had the lowest median income, only 62% of Whites'. Given

these vast economic disparities, it is essential for researchers to tease apart the unique effects

of race and economic resources on depression.

Many studies have shown that race and indicators of SES are key predictors of

maternal depression independent of each other. One study of depressive symptoms in

mothers with young children showed that high levels of maternal depression were associated

with minority race, difficulty paying bills, low education, and unemployment (Horwitz,

Briggs-Gowan, Strofer-Isser, & Carter, 2007). Similarly, another study found that Black

women and financially disadvantaged women reported the highest levels of depression in

mid-pregnancy (Holzman et. al, 2006).

In another attempt to examine race and class effects, Howell, Mora, & Levanthal

(2006) investigated racial differences in the reporting of postpartum depressive symptoms in

a sample of Black, Hispanic, and White mothers. The researchers found that Black and

Hispanic mothers reported significantly more depressive symptoms than White mothers.

These differences persisted even when demographic variables (i.e., income, education) as

well as personal, and situational factors (i.e., maternal age, history of depression, social

support, and maternal self-efficacy) were controlled for. In addition, the researchers found

the relationship between such demographic, personal, and situational factors and depressive

symptoms was the same across all three groups. Specifically, less social support, less

maternal self-efficacy, and less access to healthcare were associated with reports of more

depressive symptoms in mothers of all races and ethnicities. Although race had a unique contribution to depressive symptoms, above and beyond the significant predictors just discussed, an explanation for this effect was not offered by the authors.

Some researchers contend that when examining the effects of race, ethnicity, and SES on mental health, it is important to conceptualize socioeconomic status more broadly than has been traditionally done. Specifically, Stewart, Dean, Gregorich, Brawarsky, and Haas (2007) took a unique approach in operationalizing SES by assessing traditional indicators (income and education) as well as non-traditional indicators (public assistance, material deprivation and subjective social standing). The researchers found that racial and ethnic variation in depression in pregnancy persisted after accounting for SES indicators. Furthermore, findings indicated that there were several interactions between race and ethnicity and SES indicators. The researchers suggested that examining interactions between race, ethnicity, and SES can be useful in understanding why racial and ethnic disparities exist. For example, material deprivation was more strongly associated with depression for Asian/Pacific Islander and White women than for Latinas and more strongly related for Whites than for African Americans. The researchers posited that material deprivation is less common and more stigmatizing for Asian/Pacific Islander and White women and thus is associated with more negative outcomes for women of these groups.

Rich-Edwards and colleagues (2006) investigated a number of demographic factors, including race, ethnicity, and financial resources, that might predict prenatal and postpartum depression. The two indicators of financial resources used by the researchers were household income and financial hardship. Financial hardship was defined by mothers' reporting not having enough money to buy infant formula and baby food, buy diapers, buy food, or pay

rent or mortgage. Prior to accounting for factors often associated race and ethnicity, the researchers found that Black and Hispanic mothers were at a higher risk of experiencing depressive symptoms than White mothers. When household income was factored in, this risk was weakened. However, upon further examination, they found that this increased risk was entirely explained by financial hardship. In other words, race/ethnicity did not independently predict antenatal and postpartum depression; the higher risk to mothers of Color was instead a result of financial hardship.

Mossakowski (2008) also expanded the definition of SES to include an assessment of "wealth", operationalized as net worth and home ownership, along with the other more traditional indicators. Mossakowski (2008) was interested in examining the relationship between race, ethnicity, SES, and mental health in a sample of Black, Latino, and White, young adults,. Findings indicated that Blacks and Latinos had higher levels of depressive symptoms than Whites. Consistent with other studies, unemployment and poverty were significantly associated with depressive symptoms across groups. Education protected against negative psychological outcomes while there was no significant relationship between occupational prestige and depressive symptoms. Having zero or negative net wealth and not owning a home was negatively associated with depressive symptoms across groups. Wealth was also found to partially mediate the effects of race and ethnicity on depressive symptoms. Mossakowski (2008) examined a number of interactions between race, ethnicity and SES on depressive symptoms with results indicating that the relationship between SES and depressive symptoms did not differ as a function of race and ethnicity.

In a related study on race, ethnicity and class, Jang, Chiriboga, Kim, and Philips (2008) examined differences and similarities in the predictors of depressive symptoms across

African American, Cuban, non-Cuban Hispanic, and White older adults. The researchers found that across racial groups, lower income, more negative life events, greater functional disability, and more chronic health conditions were associated with higher levels of depressive symptoms. They also found race-specific risk factors. For example, younger Cuban and non-Cuban Hispanic adults experienced higher levels of depressive symptoms than all other groups. Some of the most interesting findings emerged when the researchers examined interactions among the risk factors within the racial and ethnic groups. For example, less education was associated with more depressive symptoms for African Americans only. Findings from this study provide a good example of how researchers can examine the complexity of the relationship between race and related constructs through interactions, as opposed to examining only main effects.

Social Support, Race, and Depression

The importance of social support during the transition to parenthood has been widely documented and researchers agree that social support, including both actual received support and perceived support, is a key predictor of maternal depressive symptoms. A meta-analysis of 84 published studies revealed that social support is a moderate predictor of postpartum depression with mean effect sizes ranging from .36 to .41 (Beck, 2001).

The question of how race and social support independently and in combination are related to mental health has received some attention in the literature. Studies have shown that being a Person of Color and having low social support are associated with elevated depression levels independent of each other (Horwitz, Briggs-Gowan, Storfer-Isser & Carter, 2007; Howell, Mora, & Levanthal, 2006). Logsdon and Usui (2001) directly assessed social support in predicting maternal depression in a sample of Caucasian and African American

mothers of differing SES and children with varying health statuses. The researchers found that perceived importance of support, and actual support received had both indirect effects, through their relationship with self-esteem, and direct effects on depression. Despite the fact that participants differed in their levels of self-esteem and support, there were no racial differences in the effect of social support on depression. These findings suggest that social support might be equally important in predicting depression across diverse samples.

A similar study examined the relationship between social networks, social support, and depressive symptoms in a sample of Black, Hispanic, and White new mothers (Surkan, Peterson, Hughes, & Gottlieb, 2006). Results indicated that mothers who reported having two or more available friends and family members had significantly fewer depressive symptoms than those who had zero or one. Additionally, mothers with less social support reported experiencing more depressive symptoms. The impact of social support and social networks on depression did not vary across race and ethnicity.

CHAPTER 3

THE CURRENT STUDY

Although racial and ethnic categories have been found to be related to mental health, questions about the utility of using race/ethnicity categories as a meaningful independent variable have been raised. Research indicates that when more substantive variables such as ethnic identity, SES, and social support are included in explanatory models, the influence of race/ethnic categories on mental health diminishes. The proposed study will examine factors that may account for racial and ethnic differences in final levels and changes in depressive symptoms across the transition to parenthood within a sample of working-class mothers.

This study will further test the idea that factors which are related to race and ethnicity, such as ethnic identity, financial and educational resources, and social support, might enhance our understanding of psychological phenomena and produce insight into key areas for prevention and treatment interventions. This study will also provide insight into the factors that should be addressed in clinical interventions with diverse groups of mothers transitioning to parenthood who experience depressive symptoms.

Question #1

Do racial and ethnic categories (i.e., Black, Latina, and White) predict differences in final levels of depressive symptoms as well as change in depressive symptoms across the transition to parenthood in working-class mothers?

Consistent with the literature, it is hypothesized that at the final time point, Black and Latina mothers will have higher levels of depressive symptoms than Whites (Howell, Mora, & Levanthal, 2006; Horwitz, Briggs-Gowan, Strofer-Isser, & Carter, 2007; Orr, Blazer, James, & Reiter, 2007; Rich-Edwards et. al, 2006). In terms of change in depressive

symptoms over time, there is little past research to suggest why there would be group differences in trajectories of change in mental health outcomes. However, it is hypothesized that all groups will experience an initial decline in depressive symptoms after the baby's birth, with a possible increase in symptoms upon mothers' return to work (Perry-Jenkins, Goldberg, Pierce, & Sayer, 2007).

Question 2

Does ethnic identity account for differences in final levels and change in depressive symptoms across the first year of parenthood across all mothers and above and beyond racial and ethnic categories? Does the interaction between race and ethnic identity account for differences in the level, slope, and rate of growth of depressive symptoms?

Compared to White mothers, Black and Latina mothers with a strong sense of ethnic identity are predicted to have lower levels of depressive symptoms at the final time point; however, there is no evidence that these prediction would differ when examining change in depressive symptoms across the transition to parenthood. Thus, it is hypothesized that greater ethnic identity will predict a greater decline in depressive symptoms for all mothers.

Question #3

Do financial and educational resources and perceived social support account for differences in final levels and change in depressive symptoms across the first year of parenthood across all mothers and above and beyond racial and ethnic categories?

It is hypothesized that mothers with more financial and educational resources and more social support will report lower levels of depressive symptoms (Yasui, Dorham, & Dishion, 2004). It is also hypothesized that having more financial and educational resources and more social support will predict greater declines in depressive symptoms for all mothers.

Though there is a small literature that uses racial categories as moderating variables in predicting outcomes (e.g. Stewart, Dean, Gregorich, Brawarsky, & Haas, 2007), I found no studies that focus on how the relationship between economic resources, social support and maternal depressive symptoms might differ as a function of ethnic identity. Using Helms, Jernigan, and Mascher's (2005) rationale that racial and ethnic categories tell us little about the possible processes linking more substantive variables to mental health outcomes, it is my contention that a positive ethnic identity, as opposed to race or ethnicity, may serve to diminish the link between low economic resources and depressive symptoms.

Turning to social support, research suggests that having more social support is associated with lower levels of depressive symptoms across racial and ethnic groups. However, Almeida, Moinar, Kawachi, & Subramanian (2009) suggest that social support is more protective for people of color, particularly for Latinos, than for Caucasians They also posit that in addition to ethnicity, retention of culture might also play an important role in people's health. Based on this, it is my contention that social support will have protective effects for Black and Latino mothers and that ethnicity identity will serve as a buffer between social support and depressive symptoms.

Keeping all this in mind, I examine two exploratory research questions, namely, (1) does race and/or ethnic identity moderate the relation between financial and educational resources and final levels of depressive symptoms as well as changes in symptoms across the first year of parenthood?; (2) does race and/or ethnic identity moderate the relation between

23

social support and both final levels of depressive symptoms and changes in symptoms across the first year of parenthood?

CHAPTER 4

RESEARCH DESIGN AND METHOD

<u>Participants</u>

Participants in this study are from the Work and Family Transitions Project (WFTP), a longitudinal study, funded by the National Institute of Mental Health that examines working-class families experiencing the transition to parenthood. Data collection began in 2003 and was completed in 2009. Participants are primarily unmarried mothers, some single, some cohabiting, and a smaller subsample of married mothers, recruited from prenatal class at various hospitals, prenatal birth clinics, and Women, Infant, and Children (WIC) offices throughout Western Massachusetts. The study originally included 207 mothers of whom 47 were Black, 75 were White, 74 were Latina, 1 was Asian, and 10 were Multiracial. The majority of the Latina mothers (90%) identified as Puerto Rican. The mean age of mothers was 24.5. Mothers who participated in the study had between one and seven children (including the target child). For the majority of mothers, (41.3%), the target child was their first and only one mother had seven children. At the initial interview, 32 mothers were married, 75 were cohabiting and 89 were single.

Inclusion criteria for the study was as follows: 1) the participant was employed for at least 20 hours a week prior to the birth of their baby, 2) the mother planned to return to work within six months after having the baby, 3) the participant was "working class" which was defined by restricting the highest educational level to an Associate's degree and employed in unskilled or semiskilled occupations.

<u>Procedure</u>

Interviews were conducted at five time points, from the third trimester of pregnancy though the first year of the child's life. The first interview was conducted during the mothers' third trimester of pregnancy. The second and third interview were conducted one month after the baby's birth and one month after mothers returned to employment respectively. The timing of the third interview was dependent on when mothers returned to work, thus there was some variability. Mothers were contacted a month before they indicated they would return to work to keep track of the timing and were interviewed one month after returning to work. For mothers who reported that they would not return to work, interviews were conducted at 12 weeks the mean length of parental leave offered through federal policy. For mothers who were unsure of their work plans, the interview was conducted by fifth month, regardless of their final decision. The fourth interview was conducted when the baby was 6-months and the final interview when the baby was one year old. With the exception of the fourth interview, interviews were conducted in person by trained graduate students and research staff. The fourth interview was completed by parents via mail. Participants received $50 for each of the four in-home interviews they took part in and $25 for the mail-in interview.

<u>Measures</u>

Depressive symptoms. Depressive symptomology was assessed using the Center for Epidemiological Studies-Depression Scale (CES-D), a 20-item measure developed by the National Institute of Mental Health, to assess depressive symptoms (Radloff, 1977). Participants were asked to indicate the frequency or duration they had experienced certain thoughts and moods during the previous seven days. Participants responded to items such as

26

"I felt hopeful about the future" and "My sleep was restless" on a four-point scale ranging from 0 (rarely or none of the time --less than once a day) to 3 (most or all of the time –5 - 7 days). This measure was administered at all five time points. The Cronbach's alpha reliability score for the measure is .78 at Phase 1, .76 at Phase 2, .74 at Phase 3, .76 at Phase 4, and .81 at Phase 5.

Race and Ethnicity. Participants were asked to "self-identify" their race and ethnicity during the first interview. These responses were coded into categories based on the U.S. Census Bureau's racial categories. Since most of participants of Hispanic or Latino origin did not identify with a racial category, Latino was included with the other racial categories. Only three groups were included in analyses: Latino, White, and Black. The participants who identified as Asian and Mixed/Multiracial were not be included in analyses due to their small number (n=11).

Ethnic Identity. Ethnic identity was assessed using the Multigroup Ethnic Identity Measure (MEIM, Phinney, 1992). The MEIM was first used with adolescents; however, there is evidence that the measure is appropriate for use across ages (Avery, Tonidandel, Thomas, Johnson, & Mack, 2007). The MEIM was originally a 14-item measure assessing three components of ethnic identity: 1) affirmation and belonging; 2) ethnic identity achievement; and 3) ethnic behaviors. The revised measure used in the present study consists of 12 items which assess two components of ethnic identity: 1) affirmation and belonging and 2) exploration. Participants responded to items such as "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs" and "I have a strong sense of belonging to my own ethnic group." Items were scored on a scale of 1(strongly disagree) to 4(strongly agree). The scale reliability alpha for the 12 items is .92.

The MEIM was originally collected during the fourth interview, however after the investigators realized that many families did not return the mail interview; the measure was added to the phase 3 or phase 5 interviews. For families who did not complete the measure during any interviews, the MEIM was completed over the phone by undergraduate and graduate research assistants. Multiple imputations were performed to account for the missing MEIMs in analyses.

Financial and Educational Resources. Information about financial and educational resources was obtained during the first interview. Three distinct variables were used to assess financial resources: (a) mothers' earned income, (b) mothers' income from other sources (such as unemployment compensation, WIC, Social Security, and investments), and (c) occupational prestige. Based on the employment information obtained, participants were given Occupational Prestige Scores based on codes developed for the 1980 Census (Nakao & Treas,1992). Mothers also reported the highest level of education they had completed. Their responses were coded to create an education index, a continuous variable which ranged from 0 (lowest level of education) to 3 (highest level of education). To ensure that the assumptions of normality and heterogeneity of variance were met the following transformations were conducted: a square root transformation on earned income, a cube root transformation on other income, and a log transformation occupational prestige.

Social Support. Participants completed the Perceived Social Support- Friend Scale (PSS-FR) and the Perceived Social Support- Family Scale (PSS-FA), measures of emotional and instrumental social support (Procidano & Heller, 1983). Both measures consist of 20 items and have been shown to have strong psychometric properties. Items for both measures are similar and often only interchange the words friends and family. Examples of items in the

28

PSS-FR are "I feel that I'm on the fringe in my circle of friends" and "My friends are sensitive to my personal needs." Examples of items in the PSS-FA are "When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable" and "There is a member of my family I could go to if I were just feeling down, without feeling funny about it later". Participants responded to items on a scale from 1 (generally false) to 4 (generally true) for both measures. Participants' responses during the Phase 1 interview were used for analyses. The Cronbach's alpha reliability score for the PSS-FA is .71 and for the PSS-FR is .64. Cubic transformations were performed on both social support from family and social support from friends to meet the assumptions of normality and heterogeneity of variance

Control Variables. Three variables that have been found to be related to depressive symptoms in much of the literature, specifically maternal age, family structure (i.e., single, married, cohabiting), and number of children, served as controls in the present study. Participants reported their birthday during the first interview as well as the number of children they had. Participants indicated whether they were single, cohabiting and unmarried, or married at Phase 1 and whether there was a change in their family structure at the remaining phases. This information was recoded to reflect whether participants' family structure remained stable across the study or not.

CHAPTER 5

RESULTS

Descriptive Statistics

Prior to addressing the research questions, descriptive statistics of the independent and dependent variables were examined. Multiple data imputations were used to account for missing data. However, to provide an accurate depiction of the sample, all descriptive statistics presented reflect the data that was originally collected. As a result, sample sizes vary.

Means and standard deviations of depressive symptoms, the dependent variable, at each time point and for the whole sample and by racial category are presented in Table1. A one-way ANOVA revealed that there were no racial differences in depressive symptoms at each of the five time points. Table 2 provides descriptive statistics on the independent variables. One-way ANOVAs were conducted to examine the relationship between race and the independent variables (Table 2). Tukey posthoc comparison tests indicated that Latina mothers in the sample had significantly lower annual incomes than White mothers, $F(2, 193) = 3.38$, $p < .05$ and significantly lower education levels than Black mothers, and White mothers, $F(2, 193) = 10.78$, $p < .001$. Latina mothers also reported having significantly less social support from friends than their White counterparts, $F(2, 176) = 5.37$, $p < .01$. White mothers had a lower sense of ethnic identity than both Black and Latina mothers, $F(2, 125) = 25.35$, $p < .001$.

To assess multicollinearity among the predictor variables, correlations were examined, first across the whole sample and then by race (Tables 3 and 4). The correlations among the variables measuring financial and educational resources ranged between .12 and

.42. Though these relationships were statistically significantly (with the exception of the relationship between other income sources and education), all correlations ranged from small to moderate in effect size. Thus in subsequent analyses, all predictors were examined separately. Correlations between the predictor variables and depressive symptoms at each time point were also examined across the whole sample and by race (Tables 5 and 6).

Past research has found some key demographic characteristics to be related to depressive symptoms, namely mothers' age, number of children, and marital status (i.e. single, cohabiting, or married). Since many mothers in this sample experienced changes in their marital status across the first year of parenthood, stability in marital status was also used as a potential control variable. In order to determine whether these variables might account for some of the variability in depressive symptoms, correlations were run between mothers' age, number of children, and depressive symptoms. Neither age nor number of children was related to depressive symptoms and hence were not included in subsequent models. Initial ANOVA tests indicated that marital status and stability in marital status were related to depressive symptoms; however when added to the HLM model they did not significantly account for symptomatology and thus were also removed from subsequent models.

Testing the Unconditional Model for Depressive Symptoms - Level 1

The first set of analyses examined average levels of and change in depressive symptoms across the first year of parenthood, as well as variability in both levels and rates of change in depression. The Level 1 model was defined by three parameters that characterized mothers' average trajectories over time: 1) the mean level of depressive symptoms at time 0 which was designated to be Time 5 (one-year postnatal timepoint); 2) the average linear rate of change in depressive symptoms across all five time points, and 3) the rate of acceleration

or deceleration (curvature) in the trajectories of depressive symptoms (quadratic effect). The

Level 1 model is represented be the following equations:

$Y_{ij} = \beta_{0j} + \beta_{w1j} \text{ (mother)} + \beta_{w2j} \text{ (mother linear)} t_{ij} + \beta_{w3j} \text{(mother quadratic)} t_{ij} + r_{ij}$

where Y_{ij} is the scale score (depressive symptoms) with $i = 1, 2, 3, 4, 5$ data points, $j = 1, 2, 3,$

…196 mothers, and $t_{ij} = $ Data point -1. β_{0j} represents the true depressive score of person j

when at the final time point. The rate of change in depressive symptoms is represented by

β_{w1j} and the rate of change in the slope (curvature) is represented by β_{w3j}.

Analyses revealed that there was a significant amount of variability around the final

level and rate of growth in depressive symptoms, warranting the examination of predictor

variables (Table 7). The outcome, depressive symptoms, was centered at the final time point

(Time 5) for all analyses. The predicted mean maternal depression score at the final time

point was 12.40

($p < .001$). There was significant positive linear change in depressive symptoms across the

five time points, $\beta = 4.99$, $t = 3.81$, $p < .001$. Additionally, there was significant quadratic

change in depressive symptoms across time, $\beta = 7.47$, $t = 5.67 p < .001$ such that there was a

steep decline in the level of symptomatology between Time 1 and Time 2, followed by a

gradual increase after Time 3 through Time 5 (Figure 1).

Question 1

The first research questions addressed whether racial and ethnic categories (i.e.,

Black, Latina, and White) predicted differences in levels of depressive symptoms one-year

postpartum as well as change in depressive symptoms across the transition to parenthood. To

address this question, race was added as a Level 2 predictor to determine if there were

differences in depressive symptoms as a function of racial categories. Analyses showed that

32

Black mothers experienced significantly lower levels of depressive symptoms at the final time point than Latino mothers, $\beta = -3.85$, $t = -1.98$, $p < .05$. There were no significant race effects on the slope and rate of growth of depressive symptoms. Figure 2 shows that mothers trajectories mirror each other, however, Latina mothers have consistently higher depressive symptoms.

Question 2

The second research question asked whether ethnic identity significantly predicted depressive symptoms across all mothers and beyond race and ethnicity. The models are shown below:

$\beta_{2j} = \gamma_{10} + \gamma_{11}(\text{Ethnic Identity}) + u_{1j}$

$\beta_{3j} = \gamma_{10} + \gamma_{11}(\text{Black}) + \gamma_{12}(\text{Latina}) + \gamma_{13}(\text{Ethnic Identity}) + u_{1j.}$

White mothers were used as the reference point in the model shown. Analyses were run multiple times using each racial category as the reference group.

Results indicated that ethnic identity did not significantly account for differences in the final level, slope, and rate of change of depressive symptoms. However, Black mothers experienced significantly lower levels of depressive symptom at Phase 5 than Latino mothers, even when ethnic identity was accounted for, $\beta = -4.46$, $t = -2.27$, $p < .05$.

The second research question also asked whether the relationship between race and depressive symptoms was moderated by ethnic identity. Findings show that the interaction between race and ethnic identity significantly predicted the rate of acceleration of depressive symptoms, $\beta = 10.72$, $t = 2.19$, $p < .05$. As shown in Figure 3, there was an increase in the growth rate of depressive symptoms in Latino mothers with low ethnic identity such that their symptoms increased across the first year of parenthood. This pattern differed from that

of White mothers with low ethnic identity who experienced a decline in depressive

symptoms until they returned to work when an increase in symptoms was seen. All other

groups experienced a similar pattern with the exception of White mothers with high ethnic

identity. White mothers with high ethnic identity saw a steady decline in depressive

symptoms, with no increase in symptoms after returning to work.

Question 3

The third research question, shown in the models below, addressed whether financial

and educational resources and social support predicted the final levels, slope, and the

acceleration of the slope of depressive symptoms across all mothers above and beyond racial

categories.

$\beta_{5j} = \gamma_{10} + \gamma_{11}$ (Resources) + γ_{12} (Social Support) + u_{1j}

$\beta_{6j} = \gamma_{10} + \gamma_{11}$ (Black) + γ_{12} (Latina) + γ_{13} (Resources) + γ_{14} (Social Support) + u_{1j}

Tables 8 and 9 summarize the results related to this research question.

Findings indicated that financial and educational resources did not predict levels of

depressive symptoms at Phase 5. The rate of growth and instantaneous rate of change of

depressive symptoms were also not predicted by resources. Turning to the effects of social

support, perceived social support from friends also did not predict postnatal depressive

symptoms one-year postnatally nor the rate of growth, or the acceleration in the rate of

growth of depressive symptoms across the five time points. However, perceived social

support from family was a significant predicator of the level of depressive symptoms at

Phase 5, such that having higher amounts of perceived social support from family was

associated with lower levels of depressive symptoms, $\beta = -.12$, $t = -2.73$, $p < .05$. Perceived

social support continued to be a significant predictor of the final level of depressive

symptoms when racial categories were added to the model. Race effects persisted even after

adding financial and educational resources and social support into the model, with Black

mothers experiencing significantly lower levels of depressive symptoms compared to Latina

mothers, $\beta = -4.06$, $t = -2.04$, $p < .05$.

<u>Exploratory Questions</u>

The exploratory research questions addressed whether racial categories and ethnic

identity moderated the relationship between financial and educational resources and

depressive symptoms and social support and depressive symptoms. Analyses indicated that

there was a significant interaction between race and occupational prestige. As shown in

Figure 4, compared to Latina mothers, Black mothers with high occupational prestige,

experienced a significant decline in depressive symptoms across the first year of parenthood,

$\beta = 34.80$, t $= 2.08$, $p < .05$, and this change occurred more rapidly than for Latina mothers, β

$= 39.55$, t $= 2.26$, $p < .05$. Black mothers with high occupational prestige had the steepest

declines in depression among all groups of mother. Race did not moderate the relationship

between depressive symptoms and income and level of education. Turning to race as a

moderator of the relationship between social support and depressive symptoms, results

indicated that social support from friends was still unrelated to depression for all groups. The

interaction between race and social support from family also did not predict depressive

symptoms.

There was a trend for the interaction between ethnic identity and education predicting

maternal depressive symptoms (slope: $\beta = 5.27$, $t = 1.90$, $p = .058$; acceleration: $\beta = 5.93$, $t =$

1.93, $p = .054$). As seen in Figure 5, compared to other mothers, mothers with high ethnic

identity and more education experienced a rapid decline in depressive symptoms across the

transition to parenthood with an increase in symptoms occurring after returning to work. All

other mothers experienced similar patterns of depressive symptoms, with mothers with low

ethnic identity and more education seeing the least change in symptomatology.

CHAPTER 6

DISCUSSION

The goal of this study was to look beyond racial categories to understand how ethnic identity, economic resources, and social support predict depressive symptoms for mothers experiencing the transition to parenthood. Specifically, analyses examined whether ethnic identity, financial and educational resources, and social support accounted for differences in the level, linear, and curvature of maternal depressive symptoms across the first year of parenthood, above and beyond simple racial and ethnic categories. Findings indicated that on average across all mothers, maternal depressive symptoms were quite high at the prenatal time point and steadily declined until they returned to work at which time depressive symptoms began to increase again. Though mothers of all racial categories experienced similar patterns in their trajectories, there was a significant difference in the final levels of depressive symptoms between Black and Latina mothers. Black mothers experienced significantly lower levels of depression than Latina mothers at the final time point. Interestingly, there were no significant differences between Black and White mothers and White and Latina mothers.

The question of why Latina mothers report the highest levels of depressive symptoms one year postpartum is an interesting one. One explanation may be related to differing beliefs about mothers' roles across the transition to parenthood. A number of studies have indicated that Latina mothers hold more traditional views about woman's roles in the family (Roehling, Jarvis, & Swope, 2005; Vazquez & Clauss-Ehlers, 2005) and thus may experience more "negative spillover" from work to family, and consequently more depressive symptoms. Counter to our hypotheses, Black mothers did not report significantly higher

depression levels than Whites. One possible explanation for this may be that we were examining our research questions within a fairly homogenous sample based on socio-economic status. Thus, once social class differences are accounted for, the race effect disappeared.

Ethnic identity was not a significant predictor of depressive symptoms and when race was added to the model, the aforementioned difference between Black and Latina mothers persisted. An interesting interaction emerged between race and ethnic identity in predicting depressive symptoms. Analyses revealed that White and Latina mothers' trajectories differed such that Latina mothers with low ethnic identity experienced a steady rise in depressive symptoms across time compared to White mothers with low ethnic identity whose symptoms declined, followed by a rise sometime after they returned to work. As hypothesized, these findings suggest that high ethnic identity among Latina mothers serves as a buffer of depressive symptoms. This finding is consistent with the literature that indicates although ethnic identity is experienced by individuals of all racial and ethnic groups, it is more salient and more important for people of color (Phinney, 1992, 2003).

In contrast to our hypotheses, ethnic identity did not diminish Black mothers' depressive symptoms This finding might reflect an underlying assumption in our hypothesis that ethnic identity would influence people of color in the same way. In a study examining the trajectories of ethnic identity among Black and Latino youth, Pahl and Way (2006) found that Black adolescents experienced continuously high levels of ethnic identity exploration and affirmation with very little change occurring over time. Latino youth on the other hand experienced a decrease in ethnic identity exploration over time, seemingly "recovering" from their "identity crisis" at a fast rate. In this study, Black and Latino youth experienced ethnic

38

identity very differently, possibly as a function of the fact that people of color in North America have distinct histories and experience different sociocultural conditions. Black people in the U.S. have experienced significant oppression and discrimination across history and have had to fight against the negative stereotypes placed on them (Demo & Hughes, 1990; Pahl & Way, 2006). As a result, from an early age, Black youth are socialized to have pride in their heritage. Though ethnic identity is important to Latino youth, Pahl and Way (2006) posit that they may not have a reason to question their group membership to the extent that Black youth do. The Latino youth in their sample were the majority in their schools and most lived in the same neighborhood. Since ethnicity is only salient when there is a "discrepancy between the self and the context," the Latino youth had no real reason to be thinking about their ethnicity.

While this sample is quite different from that of the Pahl and Way (2006) study, it points to the likelihood that Black mothers and Latina mothers experience ethnic identity in different ways. Perhaps during the stressful transition to parenthood, ethnicity becomes more salient to Latina mothers, as they think about how their child will navigate society as a minority. Latina mothers with a strong sense of ethnic identity might be at an advantage and be buffered from negative outcomes. On the other hand, Black mothers may be accustomed to thinking about their race and how they and their child navigate society as people of color. While their sense of ethnic identity may be high, it may not have the same protective effect as it does for Latinas. It is also possible that the sample of Black mothers (n=47) was not large enough for significant findings to emerge.

Turning to financial and educational resources, none of the variables which made up this construct (income, occupational prestige, and education level) significantly predicted

final levels, change in, and rate of change in depressive symptoms, even after factoring in race. In this study, there was limited variability in financial and educational resources (since all mothers had to be working class) which might explain why there were no main effects of resources. Consistent with previous research, having more social support from family was associated with lower final levels of depressive symptoms across all mothers and this finding persisted after adding race in the model as a predictor. Race effects remained significant after accounting for financial and educational resources and social support such that Black mothers experienced lower final levels of depressive symptoms than Latino mothers.

It is important to note the race effects found in the main effect models, with Latina mothers being more depressed than Black mothers, remained significant even after accounting for other predictors. This finding suggests that there other unmeasured variables related to differences between Black and Latina mothers that need to be considered. The race effects might also have persisted because of the unique work histories among mothers of different racial and ethnic backgrounds (Roehling, Jarvis, & Swope, 2005). Black women have historically been part of the workforce, both involuntarily and voluntarily, for centuries (Blum & Deussen, 1996; Roehling, Jarvis, & Swope, 2005) and in recent decades, White mothers have been accepted into the workforce (Roehling, Jarvis, & Swope, 2005). As a result, Black and White mothers may be more adept at managing the demands of working and taking care of the family while Latina are not accustomed to this same work and family balance.

An exploratory examination of the interactions between race and the predictor variables and ethnic identity and the predictor variables revealed interesting findings. Black mothers with high occupational prestige experienced a rapid decline in depressive symptoms

over time with a rise occurring after they returned to work compared to Latina mothers. There is very little literature about how mothers of color are influenced by occupation prestige. However, this finding may be explained, in part, by considering the unique work histories of Black and Latina women (Roehling, Jarvis, & Swope, 2005). It is possible that because Black mothers have been so entrenched in the workforce, it is more important for them to feel that their work is worthwhile and this may greatly influence their general sense of well-being. Thus, Black mothers with less prestigious jobs might experience more negative outcomes.

Though the interaction between ethnic identity and education just approached significance, we report these findings because so few studies have looked at how ethnic identity might serve as a moderator variable. Mothers with high ethnic identity and more education faired the best, experiencing a steep decline in depressive symptoms over time compared to other mothers. All other groups of mothers experienced similar patterns, though mothers with low ethnic identity and more education saw the least change in symptoms across the transition. These findings again suggest that ethnic identity serves as a buffer to change in and rate of growth of negative outcomes. There is virtually no research exploring the moderating effects of race and ethnic identity on maternal depressive symptoms, pointing to a new direction for future research to take.

<u>Limitations</u>

There were several limitations to this study that should be considered when interpreting the findings. First, this study used a sample of working class, heterosexual mothers. Thus, findings may not be generalizable across other sociocultural contexts. Additionally, though this study included participants from different and racial backgrounds,

41

there was not much heterogeneity within each group. For example, 90% of Latina mothers identified as Puerto Rican so it is possible that findings might not reflect the experiences of mothers of other Latino backgrounds. Another limitation of this study is that all data were based on self-report. Also, though data was available for fathers and secondary caregivers, the present study only focused on mothers. There are far too few studies in the transition to parenthood literature that look at how fathers experience mental health. Future researchers should investigate whether findings on maternal well-being translate to fathers and to other caregivers.

This study was also limited by the fact that there were no measures of other constructs which might account for racial and ethnic differences in depressive symptoms. Though ethnic identity is an important construct to consider, in order to fully understand the why racial and ethnic differences in depressive symptoms exist between mothers, it is key to gather more information about their unique cultural experiences. Collecting measures of discrimination, racial identity, religiosity, and racism, just to name a few will help researchers gain a clearer understanding of how mothers experience depressive symptoms.

Conclusion

Despite the limitations, the present study extends our understanding of how racially and ethnically diverse mothers experience depressive symptoms across the transition to parenthood. The findings support the argument that using racial and ethnic categories as independent variables without taking more substantive constructs into consideration is a faulty methodological strategy. Differences found between racial and ethnic groups are not meaningful on their own. Researchers should directly measure constructs related to being categorized in a racial or ethnic groups, such as racism, discrimination, racial identity, and

ethnic identity, to gain a more accurate understanding of how people differentially experience depressive symptoms and other psychological outcomes.

Additionally, this study indicates that simply examining the main effect of predictors on depressive symptoms does not adequately capture the experiences of new mothers. It is important that researchers also look at how key constructs work in concert to influence maternal depressive symptoms, in so doing allowing for some of the most interesting findings to emerge. The most intriguing results in the present study were found when the moderation model was considered. For example by looking at the interaction between race and ethnic identity, it was clear that having high ethnic identity served as a buffer of depressive symptoms for Latina mothers, but not for mothers of other racial groups. This finding has more practical implications than just knowing that Latino mothers experience depression differently from the rest. Specifically, researchers designing an intervention with Latino mothers would recognize that enhancing ethnic identity should be major component of their program.

The present study also points to the importance of using longitudinal data to understand psychological phenomena over time. While it is important to understand how new mothers experience depressive symptoms at a given point in time (i.e. the level of depressive symptoms), it is equally to important how symptoms changes across time in different ways for mother in unique social and ecological niches. Finally, one of the key lessons learned from this study is the need for researchers to recognize the unique sociocultural experiences of people of different racial and ethnic groups. Many studies group people of color together, with the assumption that they share identical experiences. However, clumping all people of color together can mask important differences between

43

racial and ethnic groups. In the present study for example, differences in how new mother's

experienced depressive symptoms were seen between Black and Latino mothers. If we had

used White mothers as the sole reference group or combined mothers' of color into one

group, we would never have encountered some the most interesting findings of the study.

Table 1: Means and Standard Deviations of Depressive Symptoms by Across the Sample and

by Race

Time Point	M	SD	n
Phase 1			
Full Sample	16.81	9.73	196
Black	17.61	9.70	47
Latino	16.77	10.41	75
White	16.34	9.11	74
Phase 2			
Full Sample	12.58	9.36	168
Black	13.95	8.97	42
Latino	13.70	10.41	61
White	10.65	8.33	65
Phase 3			
Full Sample	12.40	9.05	168
Black	11.44	9.67	36
Latino	13.38	9.47	63
White	11.99	8.33	69
Phase 4			
Full Sample	12.72	9.07	114
Black	10.57	9.70	21
Latino	14.70	10.11	38
White	12.18	7.90	55
Phase 5			
Full Sample	13.19	9.95	132
Black	12.68	11.61	28
Latino	13.83	10.56	46
White	12.93	8.67	58

Table 2: Means and Standard Deviations of Predictor Variables for Full Sample and by Race

Variable	*M*	*SD*	*n*	*F*
Gross Annual Income				
Full Sample	$19,122.01	$1.11003E4	196	3.38*
Black	$19,379.94	$1.02416E4	47	
Latino	$16,726.16	$8833.46393	75	
White	$21,386.41	$1.31457E4	74	
Occupational Prestige				
Full Sample	36.85	8.36	193	1.10
Black	36.55	7.73	46	
Latino	35.93	7.56	73	
White	37.94	9.40	74	
F (Race)				
Education				
Full Sample	1.21	.64	196	10.78***
Black	1.40	.54	47	
Latino	.96	.69	75	
White	1.35	.56	74	
F (Race)				
Social Support- Family				
Full Sample	3.30	.58	182	.68
Black	3.26	.63	41	
Latino	3.26	.55	73	
White	3.36	.58	68	
F (Race)				
Social Support- Friend				
Full Sample	3.29	.53	179	5.37**
Black	3.26	.57	41	
Latino	3.15	.53	70	
White	3.44	.48	68	
F (Race)				
Ethnic Identity				
Full Sample	2.73	.71	128	25.35***
Black	2.99	.62	27	
Latino	3.11	.55	45	
White	2.30	.62	56	
F (Race)				

Significant differences between racial groups as indicated by one-way ANOVA are noted by the *F* row.
***$p < .001$. **$p < .01$. *$p < .05$.

Table 3: Correlations Between Predictor Variables

Variables	1	2	3	4	5	6	7	8	9
1. Gross Annual Income	-								
2. Occupational Prestige	.42***	-							
3. Annual Other Income	-.25***	-.20***	-						
4. Education	.28***	.16*	-.12	-					
5. Social Support- Family	-.03	.04	-.19**	.03	-				
6. Social Support- Friends	.03	.000	-.07	.12	.21**	-			
7. Ethnic Identity- Search	-.03	.04	-.07	-.11	-.10	-.22*	-		
8. Ethnic Identity- Belonging	-.04	.05	-.04	-.02	-.04	-.17	.70***	-	
9. Ethnic Identity	-.03	.06	-.06	-.08	-.08	-.20*	.88***	.95***	-

*** $p<.001$, ** $p<.01$, *$p<.05$

Table 4: Correlations Between Predictor Variables by Race

Variables	1	2	3	4	5	6	7	8	9
Black									
1. Gross Annual Income	-								
2. Occupational Prestige	.17	-							
3. Annual Other Income	-.18	-.30*	-						
4. Education	.12	-.08	.07	-					
5. Social Support- Family	-.003	-.17	-.10	.19	-				
6. Social Support- Friends	.09	-.01	-.12	.12	.21	-			
7. Ethnic Identity- Search	.01	.30	-.23	-.21	-.27	-.49*	-		
8. Ethnic Identity- Belonging	.03	.13	-.13	-.33	-.03	-.24	.60***	-	
9. Ethnic Identity	.04	.22	-.19	-.31	-.14	-.35	.84***	.93***	-
Latino									
1. Gross Annual Income	-								
2. Occupational Prestige	.24*	-							
3. Annual Other Income	-.20	-.09	-						
4. Education	.18	.14	-.02	-					
5. Social Support- Family	-.16	.01	-.06	-.12	-				
6. Social Support- Friends	-.09	-.07	.04	.16	.06	-			
7. Ethnic Identity- Search	-.08	-.04	-.09	-.25	.05	.003	-		
8. Ethnic Identity- Belonging	.03	.06	.07	-.09	.01	.08	.73***	-	
9. Ethnic Identity	-.02	.02	-.02	-.19	.01	.07	.92***	.935***	-
White									
1. Gross Annual Income	-								
2. Occupational Prestige	.59***	-							

	1	2	3	4	5	6	7	8
3. Annual Other Income	-.27*	-.22	-					
4. Education	.39**	.26*	-.27*	-				
5. Social Support- Family	.02	.15	-.37**	.07	-			
6. Social Support- Friends	.003	.01	-.08	-.08	.32**	-		
7. Ethnic Identity- Search	.16	.18	.17	.17	.01	-.14	-	
8. Ethnic Identity- Belonging	.06	.20	.26	.26	.05	-.13	.54***	-
9. Ethnic Identity	.13	.24	.25	.25	.03	-.15	.80***	.93***	-

*** $p<.001$, ** $p<.01$, *$p<.05$

Table 5: Correlations Between Predictor Variables and Depression at Each Time Point

Variables	Time 1 Depression	Time 2 Depression	Time 3 Depression	Time 4 Depression	Time 5 Depression
1. Gross Annual Income	-.10	.004	-.15	-.01	-.04
2. Occupational Prestige	-.06	-.05	-.16*	.04	-.14
3. Annual Other Income	-.08	-.04	.12	-.01	-.03
4. Education	-.08	.07	-.07	.04	-.10
5. Social Support- Family	-.25**	-.21**	-.19*	-.10	-.11
6. Social Support- Friends	-.02	-.08	-.13	-.22*	-.09
7. Ethnic Identity- Search	.10	.09	.06	-.07	.03
8. Ethnic Identity- Belonging	.08	.19*	.01	-.11	-.05
9. Ethnic Identity	.09	.17	.03	-.11	-.02

** $p<.01$, * $p<.05$

Table 6: Correlations Between Predictor Variables and Depression at Each Time Point by

Race

Variables	Time 1 Depression	Time 2 Depression	Time 3 Depression	Time 4 Depression	Time 5 Depression
Black					
1. Gross Annual Income	-.12	-.01	-.10	-.24	.08
2. Occupational Prestige	.07	-.16	-.26	-.18	-.18
3. Annual Other Income	-.18	.06	.30	.12	-.07
4. Education	-.39[**]	.13	.01	.15	-.25
5. Social Support-Family	-.03	-.12	-.31	-.03	-.20
6. Social Support-Friends	.06	.05	-.21	-.27	-.07
7. Ethnic Identity-Search	.07	-.004	.07	-.14	.06
8. Ethnic Identity-Belonging	.21	.26	.02	-.14	.10
9. Ethnic Identity	.18	.17	.04	-.18	.08
Latino					
1. Gross Annual Income	-.07	-.06	-.16	-.16	-.10
2. Occupational Prestige	-.16	-.01	-.21	-.17	-.17
3. Annual Other Income	-.02	-.08	.03	-.11	-.12
4. Education	.05	.02	-.03	.06	-.04
5. Social Support-Family	-.47***	-.30*	-.11	-.14	-.10
6. Social Support-Friends	-.06	-.15	-.08	-.24	-.10
7. Ethnic Identity-Search	.18	.07	-.08	-.35*	.03
8. Ethnic Identity-Belonging	.01	-.09	-.26	-.55[**]	-.24
9. Ethnic Identity	.11	.02	-.17	-.47[**]	-.10
White					
1. Gross Annual Income	-.11	.12	-.14	.21	-.06
2. Occupational Prestige	-.04	.02	-.09	.27[*]	-.12

3. Annual Other Income	-.12	-.12	.09	-.03	.06
4. Education	-.09	.20	-.11	.09	-.07
5. Social Support-Family	-.14	-.13	-.19	-.07	-.08
6. Social Support-Friends	-.03	-.01	-.10	-.10	-.09
7. Ethnic Identity-Search	-.10	-.04	.10	.09	-.05
8. Ethnic Identity-Belonging	-.07	.15	.10	.02	-.13
9. Ethnic Identity	-.11	.08	.10	.03	-.12

*** *p*<.001, ** *p*<.01, *p*<.05

Table 7: Quadratic Unconditional Model of Maternal Depressive Symptoms

Fixed Effect	Coefficient	se	t Ratio	p-value
Mean depression score at final time point	12.40	.72	17.16	<.001
Mean growth rate at final time point	4.99	1.13	4.41	<.001
Mean acceleration	7.47	1.22	6.12	<.001

Random Effect	Variance Component	df	χ^2	p-value
Final status	62.51	164	423.95	<.001
Growth rate	12.25	164	187.43	.10
Acceleration	41.71	164	214.52	.005
Level-1 error	36.40			

Table 8: Final Estimation of Fixed Effects for Depressive Symptoms Using Racial Categories, Resources, and Social Support as a Predictors (With White Mothers as Reference Group)

Predictors	Coefficient	SE	t(df)	p
Maternal depression scores at initial time point				
Intercept	12.17	.99	12.28(188)	<.001
Black	-2.44	1.86	-1.26(188)	.19
Latina	2.04	1.62	1.25(188)	.21
Income	-.02	.02	-1.03(188)	.30
Occupational prestige	.84	2.92	.29(188)	.77
Maternal education	.24	1.13	.21(188)	.83
Social support- family	-.12	.05	-2.43(188)	.02
Social support- friends	.02	.05	.42(188)	.67
Rate of change of depression scores at initial time point				
Intercept	5.51	1.76	2.93(188)	.004
Black	-1.46	3.34	-.44(188)	.6
Latina	.42	2.98	.14(188)	.89
Income	.01	.03	-.19(188)	.85
Occupational prestige	-6.26	5.99	-1.05(188)	.30
Maternal education	-2.53	1.93	-1.31(188)	.19
Social support- family	-.06	.10	-.61(188)	.54
Social support- friends	.08	.11	.71(188)	.48
Acceleration of growth rate of depression scores				
Intercept	7.47	1.90	3.93(188)	<.001
Black	1.80	3.52	.51(188)	.61
Latina	-1.11	3.02	-.37(188)	.71
Income	-.01	.04	-.32(188)	.75
Occupational prestige	-6.21	7.00	-.89(188)	.38
Maternal education	-2.74	2.03	-1.35(188)	.18
Social support- family	-.07	.10	-.73(188)	.47
Social support- friends	.07	.11	.63(188)	.53

Table 9. Final Estimation of Fixed Effects for Depressive Symptoms Using Racial
Categories, Resources, and Social Support as a Predictors (With Latina Mothers as Reference
Group)

Predictors	Coefficient	SE	t(df)	p
Maternal depression scores at initial time point				
Intercept	14.21	1.28	11.10(188)	<.001
Black	-4.48	2.00	-2.23(188)	.03
White	-2.04	1.62	-1.25(188)	.21
Income	-.02	.02	-1.03(188)	.30
Occupational prestige	.84	2.92	.29(188)	.77
Maternal education	.24	1.13	.21(188)	.84
Social support- family	-.12	.05	-2.43(188)	.02
Social support- friends	.02	.05	.42(188)	.67
Rate of change of depression scores at initial time point				
Intercept	5.57	2.32	2.32(188)	.02
Black	-1.88	3.41	-.55(188)	.58
White	-.42	2.98	-.14(188)	.89
Income	-.01	.03	.-.19(188)	.85
Occupational prestige	-6.26	5.99	-1.05(188)	.30
Maternal education	-2.53	1.93	-1.31(188)	.19
Social support- family	-.06	.10	-.61(188)	.54
Social support- friends	.08	.11	.71(188)	.48
Acceleration of growth rate of depression scores				
Intercept	6.35	2.30	2.77(188)	.01
Black	2.92	3.61	.81(188)	.42
White	1.19	3.02	.37(188)	.71
Income	-.01	.04	-.32(188)	.75
Occupational prestige	-6.21	7.00	-.89(188)	.38
Maternal education	-2/74	2.03	-1.35(188)	.18
Social support- family	-.07	.10	-.73(188)	.47
Social support- friends	.07	.11	.63(188)	.53

Figure 1. Average Trajectory of Maternal Depressive Symptoms across the Transition to Parenthood
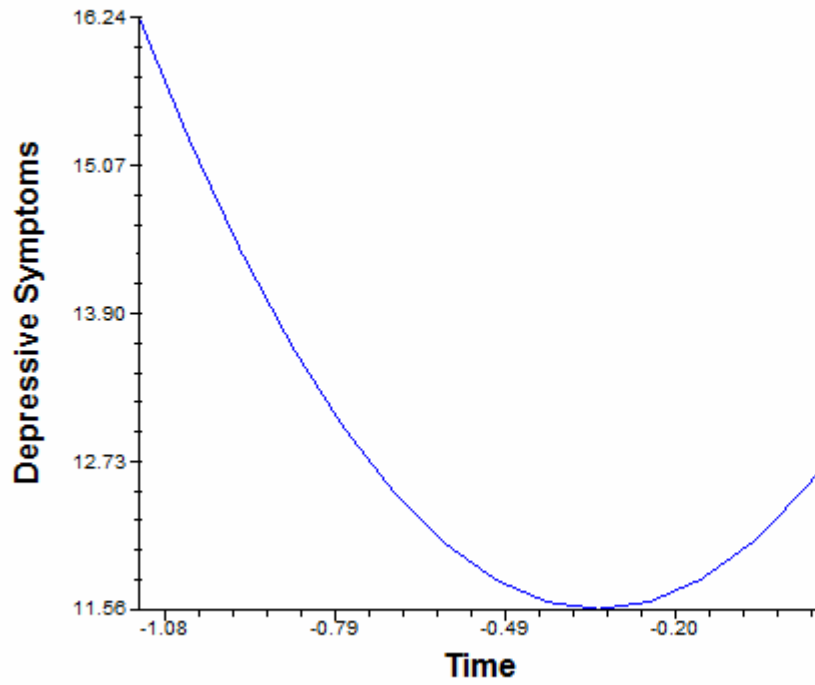
Figure 2. Average Trajectories of Maternal Depressive Symptoms by Race and Ethnicity
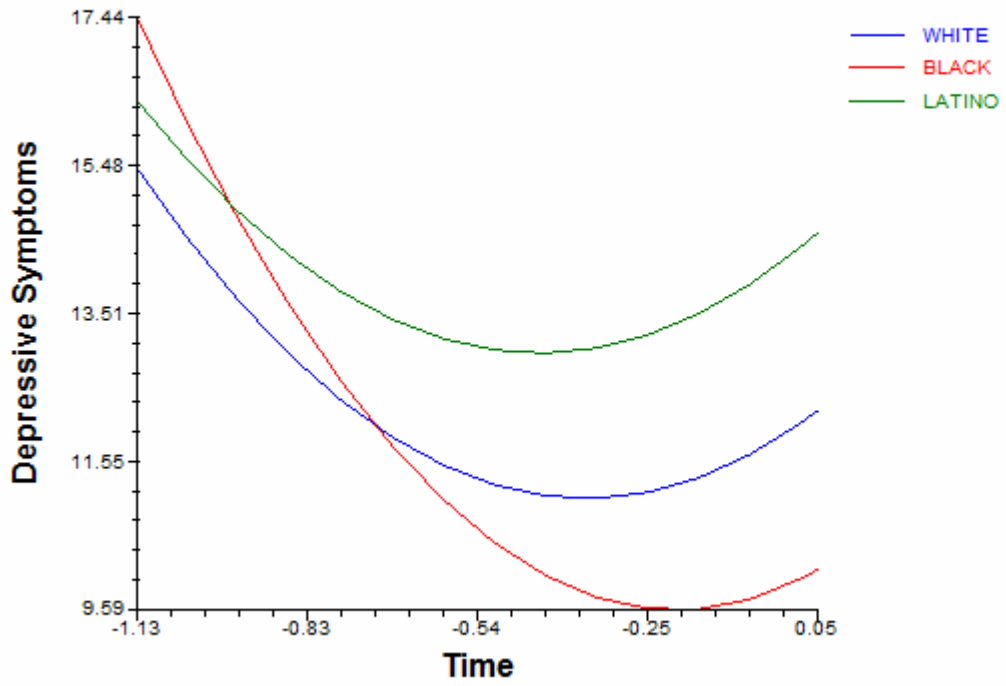
Figure 3. Interaction between Race and Ethnic Identity
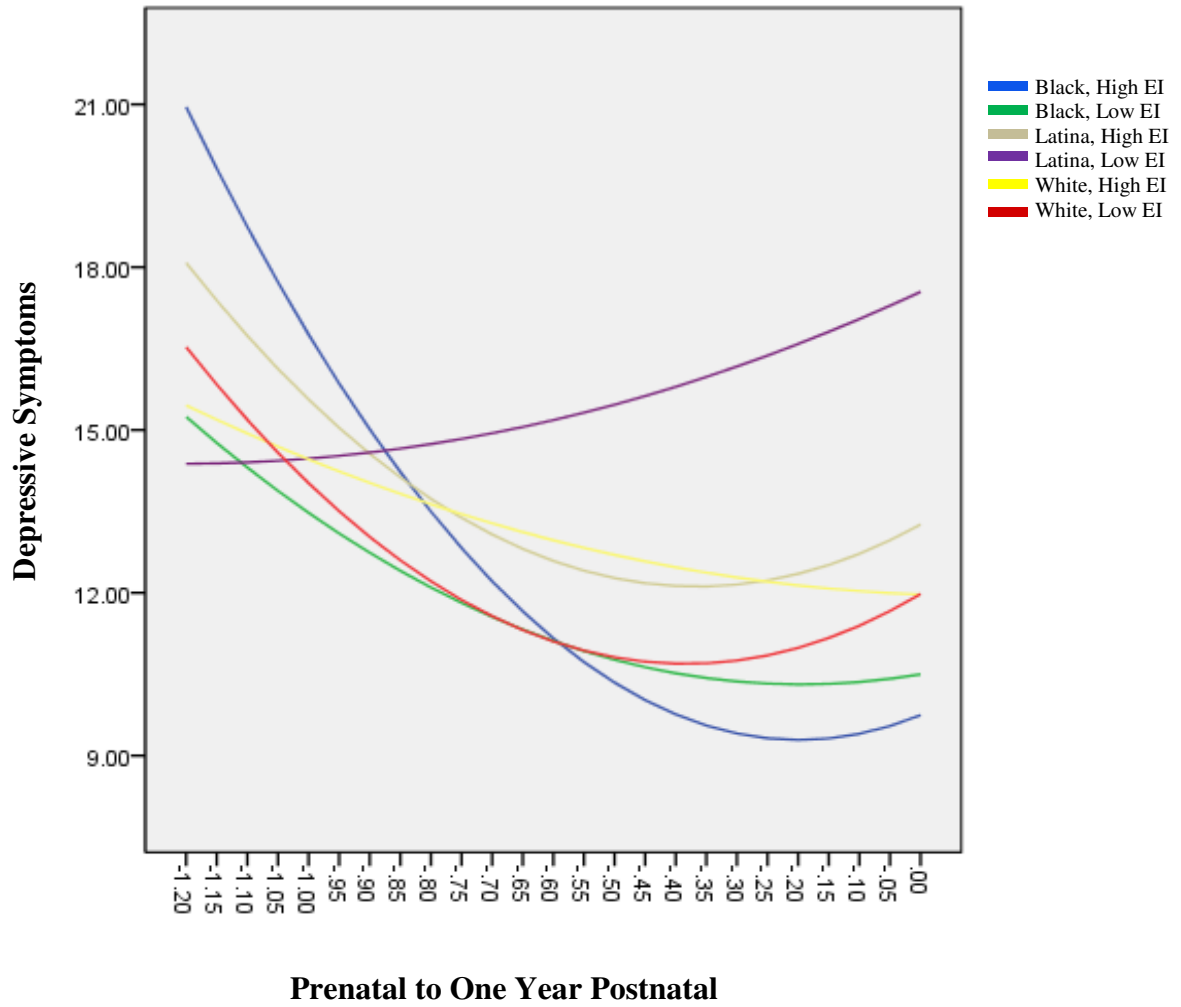

Prenatal to One Year Postnatal

Figure 4. Interaction between Race and Occupational Prestige (SEI) in Predicting Depressive
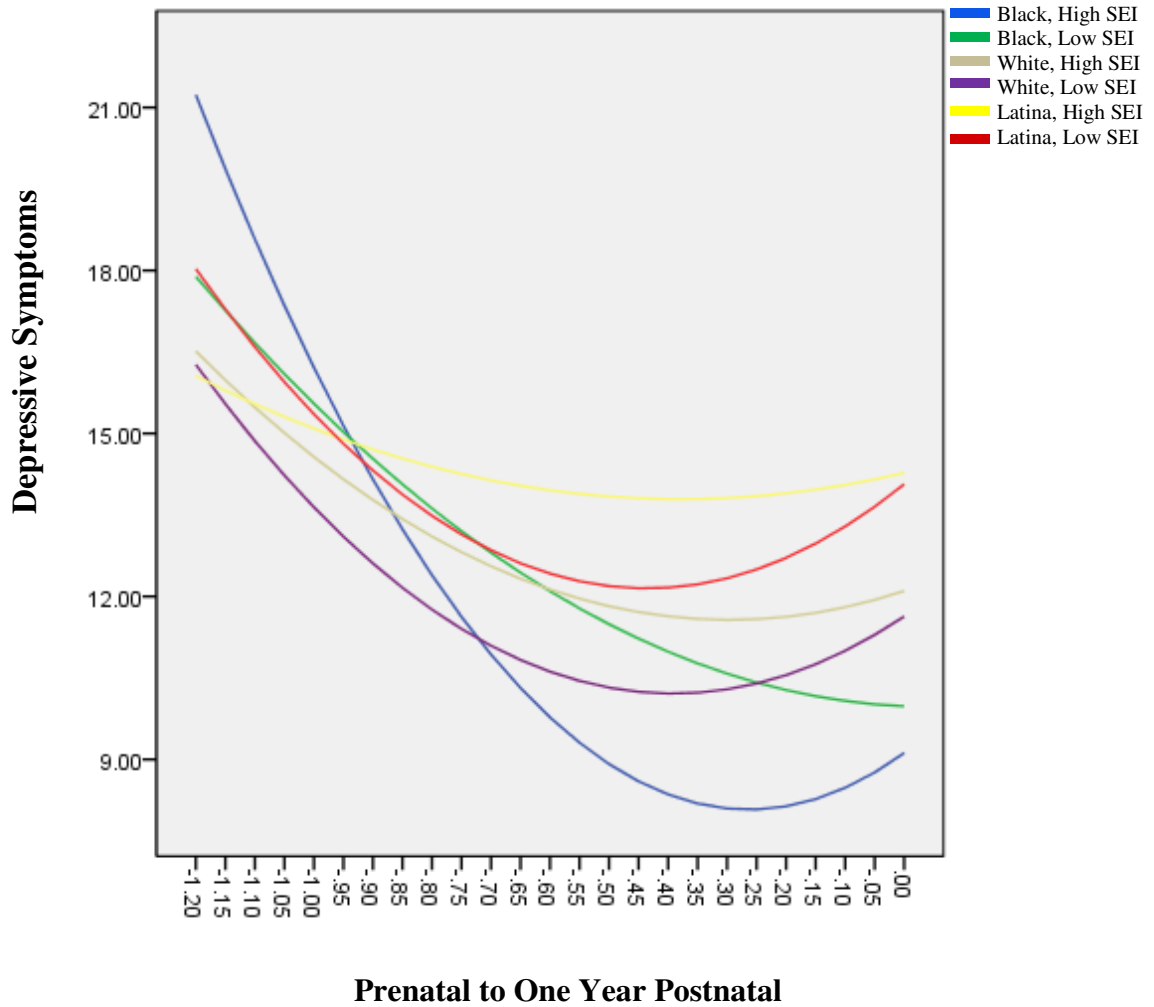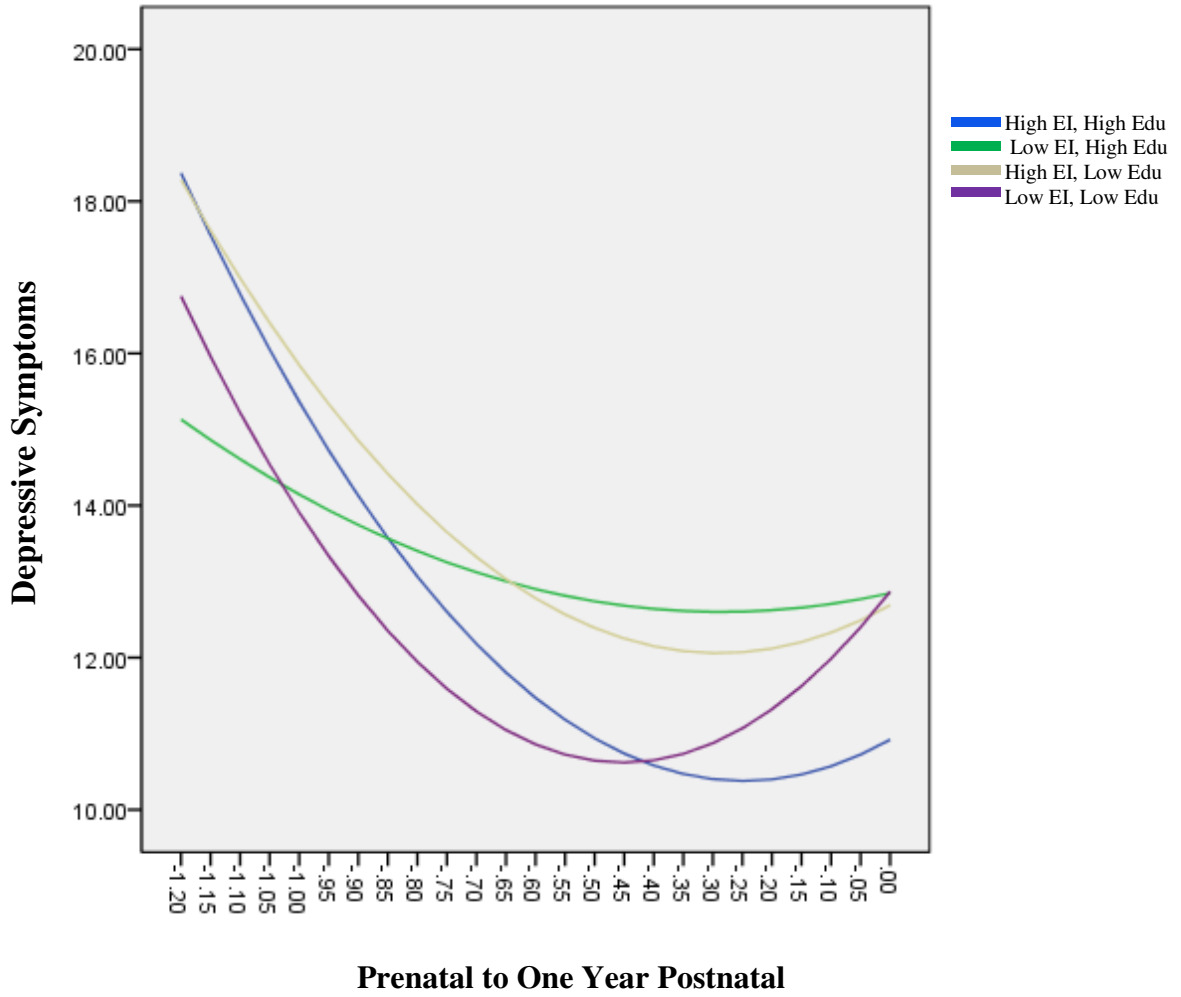
Symptoms

Figure 5: Interaction between Ethnic Identity and Education in Predicting Depressive

Symptoms

APPENDIX

MEASURES

Measure 1: Feelings Inventory
Mother Form
(Radloff, 1975)

Below is a list of the ways you might have felt or behaved recently. Please circle the number
that indicates how often you have felt this way during the past week.

0	1	2	3
Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)

1.	I was bothered by things that don't usually bother me.	0	1	2	3
2.	I did not feel like eating; my appetite was poor	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4.	I felt that I was just as good as other people.	0	1	2	3
5.	I had trouble keeping my mind on what I was doing.	0	1	2	3
6.	I felt depressed.	0	1	2	3
7.	I felt that everything was an effort.	0	1	2	3
8.	I felt hopeful about the future.	0	1	2	3
9.	I thought my life had been a failure.	0	1	2	3
10.	I felt fearful.	0	1	2	3
11.	My sleep was restless.	0	1	2	3
12.	I was happy.	0	1	2	3
13.	I talked less than usual.	0	1	2	3
14.	I felt lonely.	0	1	2	3
15.	People were unfriendly.	0	1	2	3
16.	I enjoyed life.	0	1	2	3
17.	I had crying spells.	0	1	2	3
18.	I felt sad.	0	1	2	3

19.	I felt that people dislike me.	0	1	2	3
20.	I could not get "going."	0	1	2	3

Measure 2: The Multigroup Ethnic Identity Measure (MEIM)
Mother Form
(Phinney, 1992)

Instructions: In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or <u>ethnic groups</u> that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, Caucasian or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

In terms of ethnic group, I consider myself to be _____

1. My ethnicity is:

Asian or Asian American, including Chinese, Japanese, and others ___ (1)
Black or African American ___ (2)
Hispanic or Latino, including Mexican American, Central American, and others ___ (3)
White, Caucasian, Anglo, European American; not Hispanic ___ (4)
American Indian/Native American ___ (5)
Mixed; Parents are from two different groups ___ (6)
Other (Please specify)_____ (__ __)
2. My father's ethnicity is:

Asian or Asian American, including Chinese, Japanese, and others ___ (1)
Black or African American ___ (2)
Hispanic or Latino, including Mexican American, Central American, and others ___ (3)
White, Caucasian, Anglo, European American; not Hispanic ___ (4)
American Indian/Native American ___ (5)
Mixed; Parents are from two different groups ___ (6)
Other (Please specify)_____ (__ __)

3. My mother's ethnicity is:

Asian or Asian American, including Chinese, Japanese, and others ___ (1)
Black or African American ___ (2)
Hispanic or Latino, including Mexican American, Central American, and others ___ (3)
White, Caucasian, Anglo, European American; not Hispanic ___ (4)
American Indian/Native American ___ (5)
Mixed; Parents are from two different groups ___ (6)
Other (Please specify)_____ (__ __)

*4.   How important is your ethnic heritage to you?   Not at all important __   (1)
                                                          Not very important __   (2)
                                                          Neither important or unimportant __   (3)
                                                          Somewhat important __   (4)
                                                          Very important __   (5)

Please indicate the degree to which you agree with each statement.

1	2	3	4
Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree

5.	I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.	1 2 3 4
6.	I am active in organizations or social groups that include mostly members of my own ethnic group.	1 2 3 4
7.	I have a clear sense of my ethnic background and what it means for me.	1 2 3 4
8.	I think a lot about how my life will be affected by my ethnic group membership.	1 2 3 4
9.	I am happy that I am a member of the group I belong to.	1 2 3 4
10.	I have a strong sense of belonging to my own ethnic group.	1 2 3 4
11.	I understand pretty well what my ethnic group membership means to me.	1 2 3 4
12.	In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	1 2 3 4
13.	I have a lot of pride in my ethnic group.	1 2 3 4
14.	I participate in cultural practices of my own group, such as special food, music, or customs.	1 2 3 4
15.	I feel a strong attachment towards my own ethnic group.	1 2 3 4
16.	I feel good about my cultural or ethnic background.	1 2 3 4

*Additional question; not in the MEIM scale

TODAY'S DATE (Date you finished this packet): ___/___/_____

<p style="text-align:center">Measure 3: Perceived Social Support- Family
Mother Form
(Procidano & Heller, 1983)</p>

The following statements refer to feelings and experiences that occur to most people at one time or another in their relationships with family. Please circle the answer you choose for each item.

1	2	3	4
Generally FALSE	More FALSE than TRUE	More TRUE than FALSE	Generally TRUE

1.	My family gives me the moral support I need.	1 2 3 4
2.	I get good ideas about how to do things or make things from my family.	1 2 3 4
3.	Most other people are closer to their family than I am.	1 2 3 4
4.	When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable	1 2 3 4
5.	My family enjoys hearing about what I think.	1 2 3 4
6.	Members of my family share many of my interests.	1 2 3 4
7.	Certain members of my family come to me when they have problems or need advice.	1 2 3 4
8.	I rely on my family for emotional support.	1 2 3 4
9.	There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.	1 2 3 4
10.	My family and I are very open about what we think about things.	1 2 3 4
11.	My family is sensitive to my personal needs.	1 2 3 4
12.	Members of my family come to me for emotional support.	1 2 3 4
13.	Members of my family are good at helping me solve problems.	1 2 3 4
14.	I have a deep sharing relationship with a number of members of my family.	1 2 3 4
15.	Members of my family get good ideas about how to do things or make things from me.	1 2 3 4
16.	When I confide in members of my family, it makes me uncomfortable.	1 2 3 4
17.	Members of my family seek me out for companionship.	1 2 3 4
18.	I think that my family feels that I'm good at helping them solve problems.	1 2 3 4
19.	Other people's family relationships are more intimate than mine.	1 2 3 4
20.	I wish my family were much different.	1 2 3 4

Measure 4: Perceived Social Support- Friends
Mother Form
(Procidano & Heller, 1983)

The following statements refer to feelings and experiences that occur to most people at one time or another in their relationships with friends. Please circle the answer you choose for each item.

1	2	3	4
Generally FALSE	More FALSE than TRUE	More TRUE than FALSE	Generally TRUE

1.	My friends give me the moral support I need.	1 2 3 4
2.	Most other people are closer to their friends than I am.	1 2 3 4
3.	My friends enjoy hearing about what I think.	1 2 3 4
4.	Certain friends come to me when they have problems or need advice.	1 2 3 4
5.	I rely on my friends for emotional support.	1 2 3 4
6.	If I felt that one or more of my friends were upset with me, I'd just keep it to myself.	1 2 3 4
7.	I feel that I'm on the fringe in my circle of friends.	1 2 3 4
8.	There is a friend I could go to if I were just feeling down, without feeling funny about it later.	1 2 3 4
9.	My friends and I are very open about what we think about things.	1 2 3 4
10.	My friends are sensitive to my personal needs.	1 2 3 4
11.	My friends come to me for emotional support.	1 2 3 4
12.	My friends are good at helping me solve problems.	1 2 3 4
13.	I have a deep sharing relationship with a number of friends.	1 2 3 4
14.	My friends get good ideas about how to do things or make things from me.	1 2 3 4
15.	When I confide in friends, it makes me feel uncomfortable.	1 2 3 4
16.	My friends seek me out for companionship.	1 2 3 4
17.	I think that my friends feel that I am good at helping them solve problems.	1 2 3 4
18.	Other people's friend relationships are more intimate than mine.	1 2 3 4
19.	I've recently gotten a good idea about how to do something from a friend.	1 2 3 4
20.	I wish my friends were much different.	1 2 3 4

BIBLIOGRAPHY

Almeida, J., Molnar, B., Kawachi, I., & Subramanian, S. (2009). Ethnicity and nativity status as determinants of perceived social support: testing the concept of familism. *Social Science & Medicine*, *68*(10), 1852-1858.

American Psychological Association (2003). Guidelines on multicultural education, training, research, practice, and organizational change for Psychologists. *American Psychologist*, *58*(5), 377-402.

Avery, D., Tonidandel, S., Thomas, K., Johnson, C., & Mack, D. (2007). Assessing the Multigroup Ethnic Identity Measure for measurement equivalence across racial and ethnic groups. *Educational and Psychological Measurement*, *67*(5), 877-888.

Beck, C. T. (2001). Predictors of postpartum depression: An update. *Nursing Research*, *50*(5), 275-285.

Betancourt, H., & López, S. R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist, 48(6),* 629–637.

Blum, L., & Deussen, T. (1996). Negotiating independent motherhood: Working-class African American women talk about marriage and motherhood. *Gender & Society*, *10*(2), 199-211.

Bronfenbrenner**,** U. (1986).Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22(6),* 723-742.

Bronfenbrenner, U., & Evans, G. (2000). Developmental science in the 21 century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, *9*(1), 115-125.

Brown, T. N., Sellers, S. L., Brown, K. T., & Jackson, J. S. (1999). Race, ethnicity, and

    culture in the sociology of mental health. In C.S. Aneshensal & J.C. Phelan

    (Eds.), *Handbook of the Sociology of Mental Health* (pp. 167-182). Dordrecht,

    Netherlands: Kluwer Academic Publishers.

Centers for Disease Control and Prevention (April 2008). Prevalence of self-reported

    postpartum depressive symptoms - 17 states, 2004-2005. *MMWR: Morbidity &*

    Mortality Weekly Report, *57*(14), 361-366.

Cowan, P. A. (1991). Individual and family life transitions: A proposal for a new

    definition. In P.A. Cowan & M. Hetherington (Eds.), *Family Transitions* (pp. 3-30).

    Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Cowan, C.P., & Cowan, P.A. (1995). Interventions to ease the transition to parenthood:

    Why they are needed and what they can do. *Family Relations, 44(4)*, 412- 423.

Cowan, C. P., & Cowan, P. A. (2000). *When partners become parents: The big life*

    change for couples. Mahwah, NJ: Erlbaum.

Demo, D., & Hughes, M. (1990). Socialization and racial identity among Black

    Americans. *Social Psychology Quarterly*, *53*(4), 364-374.

DeNavas-Walt, Proctor, B.D., & Smith, J. (2007). Income, poverty, and health insurance

    coverage in the United States: 2006. Washington D.C.: U.S. Census Bureau.

    Retrieved May 18, 2008 from http://www.census.gov/prod/2007pubs/p60-233.pdf

Dunlop, D., Song, J., Lyons, J., Manheim, L., & Chang, R. (2003). Racial/ethnic differences

    in rates of depression among preretirement adults. *American Journal of Public*

    Health, *93*(11), 1945-1952.

Franko, D., Striegel-Moore, R., Bean, J., Barton, B., Biro, F., Kraemer, H., et al. (2005). Self-reported symptoms of depression in late adolescence to early adulthood: A comparison of African-American and Caucasian females. *Journal of Adolescent Health*, *37*(6), 526-529.

Goodman, J. (2004). Paternal postpartum depression, its relationship to maternal postpartum depression, and implications for family health. *Journal of Advanced Nursing*, *45(1), 26-35.*

Grieco, E., & Cassidy. R. (March 2001). *Overview of Race and Hispanic Origin: Census 2000 Brief.* Washington D.C.: U.S. Census Bureau.

Helms, J. (2007). Some better practices for measuring racial and ethnic identity constructs. *Journal of Counseling Psychology*, *54(3),* 235-246.

Helms, J.E., Jernigan, M., & Mascher, J. (2005). The meaning of race in psychology and how to change it. *American Psychologist, 60(1),* 27-36

Holzman, C., Eyster, J., Tiedje, L., Roman, L., Seagull, E., & Rahbar, M. (2006). A life course perspective on depressive symptoms in mid-pregnancy. *Maternal & Child Health Journal*, *10*(2), 127-138.

Horwitz, S., Briggs-Gowan, M., Storfer-Isser, A., & Carter, A. (2007). Prevalence, correlates, and persistence of maternal depression. *Journal of Women's Health*, *16(5),* 678-691.

Howell, E., Mora, P., Horowitz, C., & Leventhal, H. (2005). Racial and ethnic differences in factors associated with early postpartum depressive symptoms. *Obstetrics & Gynecology*, *105*(6), 1442-1450.

Howell, E., Mora, P., & Leventhal, H. (2006). Correlates of early postpartum depressive

symptoms. *Maternal & Child Health Journal*, *10*(2), 149-157.

Jang, Y., Chiriboga, D.A., Kim, G., & Philips, K. (2008). Depressive symptoms in four

racial and ethnic groups: The survey of older Floridians (SOF). *Research on*

Aging, 30(4), 488-509.

Kessler, R., Mickelson, K., & Williams, D. (1999). The prevalence, distribution, and

mental health correlates of perceived discrimination in the United States. *Journal of*

Health and Social Behavior, *40*(3), 208-230.

Kosmitzki, C. (1996). The reaffirmation of cultural identity in cross-cultural encounters.

Personality and Social Psychology Bulletin, 22, 238 – 248.

Logsdon, M., &Usui, W. (2006, August). The Postpartum Support Questionnaire:

psychometric properties in adolescents. *Journal of Child & Adolescent*

Psychiatric Nursing, *19(3),* 145-156.

Markus, H. R. (2008). Pride, prejudice, and ambivalence: Toward a unified theory of

race and ethnicity. *American Psychologist, 63(8),* 651-670.

McMahon, S., & Watts, R. (2002, July). Ethnic identity in urban African American youth:

Exploring links with self-worth, aggression, and other psychosocial variables. *Journal*

of Community Psychology, *30*(4), 411-432.

Mossakowski, K. (2003). Coping with perceived discrimination: Does ethnic identity protect

mental health?. *Journal of Health and Social Behavior*, *44*(3), 318-331.

Mossakowski, K.N. (2008). Dissecting the influence of race, ethnicity, and

socioeconomic status on mental health in young adulthood. *Research on Aging,*

30(6), 649-671.

Myers, H., Lesser, I., Rodriguez, N., Mira, C., Hwang, W., Camp, C., et al. (2002). Ethnic

    differences in clinical presentation of depression in adult women. *Cultural Diversity*

    and Ethnic Minority Psychology, *8*(2), 138-156.

Nakao, K.,&Treas, J. (1992). *The 1989 socioeconomic index of occupations: Construction*

    from the 1989 occupational prestige scores. General Social Survey Methodological

    Report No. 74. Chicago: University of Chicago, National Opinion Research Center.

National Institute of Health (2005, December). Understanding postpartum depression:

    Common but treatable.*NIH News in Health,* 3.Retrieved October 8, 2009 from

    http://newsinhealth.nih.gov/pdf/NIHNiH%20December05.pdf.

Orr, S., Blazer, D., James, S., & Reiter, J. (2007). Depressive symptoms and indicators

    of maternal health status during pregnancy. *Journal of Women's Health*, *16(4),*

    535-542.

Pahl, K., & Way, N. (2006). Longitudinal trajectories of ethnic identity among urban Black

    and Latino adolescents. *Child Development*, *77*(5), 1403-1415.

Perren, S., von Wyl, A., Burgen, D., Simoni, H., & von Klitzing, K. (2005). Depressive

    symptoms and psychosocial stress across the transition to parenthood: Associations

    with parental psychopathology and child difficulty. *Journal of Psychosomatic*

    Obstetrics & Gynecology, 26(3), 173–183

Perry-Jenkins, M., Goldberg, A., Pierce, C., & Sayer, A. (2007). Shift work, role overload,

    and the transition to parenthood. *Journal of Marriage and Family*, *69(1),* 123-138.

Phinney, J. (1990). Ethnic identity in adolescents and adults: Review of research.

    Psychological Bulletin, *108*(3), 499-514.

Phinney, J. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7(2),* 156-176.

Phinney, J.S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist, 51(9),* 918-927.

Phinney, J. (2003). Ethic identity and acculturation. *Acculturation: Advances in theory, measurement, and applied research* (pp. 63-81). Washington, DC, US: American Psychological Association.

Phinney, J., & Ong, A. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, *54(3),* 271-281.

Plant, E., & Sachs-Ericsson, N. (2004). Racial and ethnic differences in depression: The roles of social support and meeting basic needs. *Journal of Consulting and Clinical Psychology*, *72*(1), 41-52.

Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family. *American Journal of Community Psychology, 11,* 1-24

Raudenbush, S. W., & Bryk, A. S. (1992).*Hierarchical Linear Models: Applications and Data Analysis Methods*. Newbury Park, CA: Sage.

Radloff, L. S. (1977). The CES–D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*, 385–401.

Rich-Edwards, J., Kleinman, K., Abrams, A., Harlow, B., McLaughlin, T., Joffe, H., &
Gillman, M.W. (2006). Sociodemographic predictors of antenatal and postpartum
depressive symptoms among women in a medical group practice. *Journal of
Epidemiology & Community Health*, *60(3),* 221-227.

Riolo, S., Nguyen, T., Greden, J., & King, C. (2005). Prevalence of depression by
race/ethnicity: Findings from the National Health and Nutrition Examination Survey
III. *American Journal of Public Health*, *95*(6), 998-1000.

Roberts, R., Phinney, J., Masse, L., Chen, Y., Roberts, C., & Romero, A. (1999). The
structure of ethnic identity of young adolescents from diverse ethnocultural groups.
The Journal of Early Adolescence, *19*(3), 301-322.

Roehling, P., Jarvis, L., & Swope, H. (2005). Variations in negative work-family spillover
among White, Black, and Hispanic American men and women: Does ethnicity
matter?. *Journal of Family Issues*, *26*(6), 840-865.

Sachs-Ericsson, N., Plant, E., & Blazer, D. (2005). Racial differences in the frequency of
depressive symptoms among community dwelling elders: The role of socioeconomic
factors. *Aging & Mental Health*, *9*(3), 201-209.

Schwartz, S., Montgomery, M., & Briones, E. (2006). The role of identity in acculturation
among immigrant people: theoretical propositions, empirical questions, and applied
recommendations. *Human Development*, *49*(1), 1-30.

Schwartz, S., Zamboanga, B., Weisskirch, R., & Rodriguez, L. (2009, March). The
relationships of personal and ethnic identity exploration to indices of adaptive and
maladaptive psychosocial functioning. *International Journal of Behavioral
Development*, *33*(2), 131-144.

Segre, L., Losch, M., & O'Hara, M. (2006). Race/ethnicity and perinatal depressed

    mood. *Journal of Reproductive and Infant Psychology*, *24*(2), 99-106.

Skarupski, K., de Leon, C., Bienias, J., Barnes, L., Everson-Rose, S., Wilson, R., et al.

    (2005). Black-White differences in depressive symptoms among older adults over

    time. *The Journals of Gerontology: Series B: Psychological Sciences and Social*

    Sciences, *60*(3), 136-142.

Simons, R., Murry, V., McLoyd, V., Lin, K., Cutrona, C., & Conger, R. (2002).

    Discrimination, crime, ethnic identity, and parenting as correlates of depressive

    symptoms among African American children: A multilevel analysis. *Development*

    and Psychopathology, *14*(2), 371-393.

Stewart, A., Dean, M., Gregorich, S., Brawarsky, P., & Haas, J. (2007). Race/ethnicity,

    socioeconomic status and the health of pregnant women. *Journal of Health*

    Psychology, *12*(2), 285-300.

Surkan, P., Peterson, K., Hughes, M., & Gottlieb, B. (2006). The role of social networks

    and support in postpartum women's depression: A multiethnic urban sample.

    Maternal & Child Health Journal, *10*(4), 375-383.

U.S. Census Bureau (2007). *2005-2007 American Community Survey.* Retrieved October 5,

    2009 from www.census.gov/.

U.S. Census Bureau. (2001). *U.S. Census 2000, Summary Files 1 and 3.* Retrieved October 5,

    2009 from www.census.gov/.

U.S. Census Bureau (2006). American Community Survey 2004 Subject Definitions.

    Retrieved May 18, 2009 from http://www.census.gov/acs/www/Downloads/2004

    /usedata/ Subject_Definitions.pdf.

Vazquez, C., & Clauss-Ehlers, C. (2005). Group psychotherapy with Latinas: A cross-cultural and interactional approach. *NYS Psychologist*, *17*(3), 10-13.

Williams, D. R., Gonzalez, H. M., Neighbors, H., Nesse, R., Abelson, J. M., Sweetmen, J., & Jackson, J.S. (2007). Prevalence and distribution of major depressive disorder in African Americans, Caribbean Blacks, and Non-Hispanic Whites: Results from the National Survey of American Life. *Archives of General Psychiatry, 64*, 305–315.

Williams, D., & Mohammed, S. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, *32*(1), 20-47.

Yasui, M., Dorham, C., & Dishion, T. (2004). Ethnic identity and psychological adjustment: A validity analysis for European American and African American adolescents. *Journal of Adolescent Research*, *19*(6), 807-825.

Yee, A.H., Fairchild, H.H., Weizmann, F., & Wyatt, G.E. (1993). Addressing psychology's problems with race. *American Psychologist, 48(*11)*, 1132-1140.

Zuckerman, M. (1990). Some dubious premises in research and theory on racial differences: Scientific, social, and ethical issues. *American Psychologist, 45(12),* 1297-1303.